# BOTSWANA DEMOGRAPHIC SURVEY REPORT 2017



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### PREFACE

Botswana Demographic Survey 2017 (BDS) is a national sample survey designed to provide information on demographic indicators in Botswana. This is the fourth BDS to be conducted following the 1987, 1998 and 2006 BDS surveys. The BDS 2017 data collection was conducted for a period of about two and half months between 24th August and 30th October 2017. For the first time, the BDS adopted the use of Computer Assisted Personal Interviews (CAPI) to record responses during interviews.

The survey collected information on population characteristics, household characteristics, economic activity, fertility, mortality, migration, family planning, nutritional status, birth registration and non-communicable diseases.

The report has an executive summary section, and the detailed results are presented in eleven (11) chapters. It is my hope that BDS2017 data will fulfill data needs for the sustainable development goals while awaiting the 2021 round of Population census.

Burton S. Mguni Statistician General December 2018

### ACKNOWLEDGEMENTS

The process of data collection, data management, data analysis and report writing is a long tedious process and takes several months of careful planning, consultations and execution. Therefore, throughout the scope of the survey, several individuals and organizations contributed to the success of the project. Statistics Botswana would like to send special appreciation to the following individuals and organizations:

- World Bank: For providing technical guidance and support in implementing Computer Assisted Personal Interviews (CAPI)
- Technical Working Group: For technical guidance in shaping the project from start to finish.
- Project Secretariat: For their commitment and dedication in providing secretarial duties, and diligently carrying all tasks and duties across all phases of the project.
- Different Phase Managers: For their support and guidance to ensure success of the project.
- Quality Controllers: For assuring quality throughout the process.
- System Developers: For the development and technical support of the data entry system.
- Fieldwork teams: The field work teams displayed amazing level of computer literacy by adapting easily and quickly to the use of computer in data collection. Also, all the teams were highly dedicated and the project was completed within the stipulated time schedule.
- Individual respondents: For supporting the national cause, by welcoming enumerators into their homes, sometimes at odd hours and for their patience in answering lengthy questionnaires.

Tapologo B. Baakile Director Socio-Demographic Statistics

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### LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ASDR	Age Specific Death Rates
ASFR	Age Specific Fertility Rates
BDS	Botswana Demographic Survey
CDR	Crude Death Rate
SDG's	Sustainable Development Goals
PHC	Population and Housing Census
AIDS	Acquired Immune Deficiency Syndrome
HIV	Human Immune Deficiency Virus
IUD	Intra Uterine Device
BMI	Body Mass Index
WHO	World Health Organization
CDC	Center for Disease Control
NCD	Non-Communicable Diseases
STI	Sexually Transmitted Infections
NER	Net Enrollment Ratio
SDGs	Sustainable Development Goals
LFPR	Labor Force Participation Rate
TFR	Total Fertility Rate
CBR	Crude Birth Rate
ICC	Intra Cluster Correlation Coefficient
PPS	Probability Proportional to Size
MOS	Measure of Size
PSU	Primary Sampling Unit
EA	Enumeration Area
IMR	Infant Mortality Rate
UMR	Under Five Mortality Rate
NMR	Net Migration Rate
UNIGME	United Nations Inter Agency Group on Child Mortality
	ESTITION



### **EXECUTIVE SUMMARY**

The 2017 Botswana Demographic survey estimated a total population of 2,154,863, of which 1,034,578 are males and 1,120,285 females. This is a 6.4 percent increase compared to the 2011 population and housing census. However, there is a decline in the number of non-Batswana residing in the country. The figure has dropped from 111,846 in 2011 to 85,414 during the survey year.

### Table 1: Botswana Demographic Indicators

Population Characteristics	BDS 1998	Census 2001	BDS 2006	Census 2011	BDS 2017
Enumerated Population	1,588,745	1,680,863	1,773,240	2,024,904	2,154,863
Male	749,000	813,583	851,655	988,957	1,034,578
Female	840,000	867,280	921,585	1,035,947	1,120,285
Non Batswana	42,000	60,716	59,245	111,846	85414
Population Distribution (Percent)					
0-4	12.6	11.6	12.0	12.0	11.7
5-14	27.3	25.0	23.0	21.0	23.1
15-64	54.6	58.2	58.0	62.0	59.8
15-49	47.9	52.0	52.0	55.0	50.4
65+	5.5	5.0	5.0	5.0	5.4
Percentage of Females 15-49	49.4	52.4	53.0	54.0	50.3
Dependency ratio (per 100)	83.2	71.5	68.0	60.0	67.3
Child-women ratio		430.1	443.0	424.0	445.0
Sex Ratio(Males per 100 Females)	89.0	93.8	92.0	96.0	92.3
Percentage Urban	45.0	54.2	60.0	64.0	63.9
Population Density (per km)	2.7	2.9	3.0	3.5	3.7
Crude Birth Rate (per 1000)		28.9	29.7	25.7	26.5
Crude Death Rate (per 1000)	10.1	12.4	29.8	6.3	6.7
General Fertility Rate (per 1000 women aged 15-49)		106.9	108.2	92.2	101.2
Total Fertility Rate (births per )	3.4	3.3	3.2	2.7	3.1
Infant Mortality Rate	51.0	56.0	48.0	17.0	38.0
Under 5 Mortality Rate	67.0	74.0	76.0	28.0	56.0
Life Expectancy at Birth (Years)	62.0	55.6	54.4	68.0	66.2
Mean Age (years)		24.8	25.2	26.2	27.0
Males		24.2	24.1	25.2	25.6
Females		25.3	26.3	26.8	28.3
Median Ages (Years)		20.1	21.9	23.0	24.0
Males		19.4	20.0	22.0	22.0
Females		20.8	22.0	24.0	25.0

### POPULATION AGE STRUCTURE

The BDS 2017 data shows that there has been little or no shift in the population age structure, there was little decrease (from 12% to 11.65%) in the age group 0-4 while age group 5-9 increased from 20% to 23%. Furthermore, the BDS2017 data shows that there were further decreases in the population of working ages while the over 65 population increased slightly from 5% to 5.4% (Table1). Over past surveys, the population aged over 65 has been increasing slowly. This means that, Botswana age structure is shifting from young age structure to ageing age structure thereby diminishing the demographic dividend benefit.

### FERTLITY

The Total Fertility Rate (TFR) has been estimated at around 3 children per women since the 2006 Botswana Demographic Survey (BDS). The constant TFR is mainly attributed to a relatively high mean child bearing age (28) among women and delayed and postponement of marriages. Moreover, crude birth rate has remained high at 26 births per 1000 people since 2011. Although the TFR has been constant over the years, population will likely continue to grow for some time due to the growth momentum from previous high fertility.

### MORTALITY

The Botswana Demographic Survey shows that infant mortality rate (IMR) declined from 48 to 38 deaths per 1000 live births between 2006 and 2017. Furthermore, the under-five mortality declined from 76 to 56 deaths per 1000 live births over the same period. On the other hand, life expectancy at birth increased from 54 to 66.2 years between 2006 and 2017. The overall decline in deaths rate in Botswana can be attributed to the improved economic status, improved accessibility of health care as well as successful reduction in HIV/AIDS related deaths.

### MIGRATION

The bulk of migration movements in Botswana involve inter district while a very small number (less than ten thousand) involved cross boarder movement. Also, the BDS 2017 data shows international migration tend to involve women more (51 percent) than men. The results further indicate that being in some form of union has an influence on the decision to migrate

### FAMILY PLANNING

For BDS2017, family planning focused on the method of contraception used. Female respondents aged 15-49 were asked to state the main method of contraception that they are currently using. The results indicate that most of women (67%) indicated that they have been using male condom. This was followed by injections at 15.4%. Moreover, modern contraceptive prevalence among married women aged 15-49 was estimated at 67.4%

### NUTRITIONAL STATUS

### **Consumption of Fruits and Vegetables**

Fruits and vegetable consumption is an important component of a healthy diet as they are a source of minerals and vitamins which are essential for good health. Inadequate intake can lead to poor health and increased risk of non-communicable diseases (NCDs). Fruits and vegetables may also help to prevent weight gain and reduce the risk of obesity.

The BDS 2017 looked at the extent of fruits and vegetables consumption within the population by asking the respondent how often they consume fruits and vegetables.

The results show that, 43 percent of the population tend consumes vegetables on a daily basis while 22.6 % consume once in a while followed by those who consume vegetables about thrice a week at 21.8 percent. While on the contrary the population consume fruits once in a while at 52.4 %, followed by every day at 17.8 % and once a week at 13.9 %.

### DISABILITY

The results of data on disability shows that among the disabled population sight/visual impairment accounted for the highest proportion of disabilities at 49.4 percent. Impairment of legs and hearing impairment constituted 28.7 and 18.5 percent respectively. The rest of the disabilities were at 10.5 percent and below. It further indicates that the disability of self-care is mostly common among males at 9.7 percent as compared to their female counterparts at 5.8 percent.

### **CHAPTER 1 INTRODUCTION**

### **1.0 BACKGROUND**

The Botswana Demographic Survey 2017 is an inter-censal survey held every 10 years with the main aim of updating the census figures. This is the fourth to have been conducted in Botswana. The survey entails collecting information on population or demographic characteristics. And to update statistics collected during the decennial Population and Housing Census (2011).

Statistics Botswana undertakes sequenced household-based surveys in fixed intervals: Literacy Survey 2013, Agriculture survey 2015, Multi Topic Survey 2015, Demography Survey (1998, 2006); Family Health Survey (1996, 2007); Botswana AIDS Impact Survey (2001, 2004, 2008, 2013). The last Botswana Family Health Survey IV (BFHS IV) was the fourth in a series of the surveys of its nature. The first was conducted in 1984, the second 1988, the third 1996 and the last one in 2007. On the hand the last Botswana Demographic Survey (BDS) was conducted in 2006. The first and second BDS were conducted in 1987 and 1998, respectively.

The specific objectives of the survey are to;

- Assess trends in demographic indicators, in particular fertility, mortality and migration.
- Estimate population size, growth and distribution by gender and age groups
- Provide data on family planning and fertility behavior of the population, therefore enabling policy makers and programmers to evaluate and enhance family planning initiatives.
- Examine basic indicators of child welfare (nutritional status)
- Measure the level of infant and adult mortality

The BDS 2017 was conducted through the use of Computer Assisted Personal Interview (CAPI) for the first time, and also carried out by use of one questionnaire- the household questionnaire.

### **1.1 CONDUCT OF DEMOGRAPHIC SURVEYS**

The Botswana Demographic Survey was conducted in August to October 2017. It is held every 5 years after the Housing and Population Census. This is the fourth BDS to have been conducted in Botswana after the country gained full independence in 1966. Previous BDS surveys were held in 1988, 1998 and 2006.

The Botswana Demographic Survey is carried out within the legal frame work of the Statistics Act 17:01 of the Laws of Botswana. The act empowers the Statistician General to collect statistics and authorise other persons to perform duties necessary to accomplish such collection of statistics.

Furthermore, the survey questionnaire comprised of household questionnaire, individual questionnaire for women aged 15-49 as well as an individual questionnaire for children aged under five years.

### **1.2 ORGANISATION OF THE SURVEY**

The 2017 Botswana Demographic Survey (BDS) was a three month survey conducted from August 2017 to October 2017. It was a national survey, that is, it covered all the Census Districts. The Country/Census Districts were divided into three categories of Cities/&towns, Urban Villages and Rural areas for data collection. Among the census districts, a representative sample of Enumeration Areas (EA) across the three categories of cities/towns, urban villages and rural areas were taken. A sample of 20 households were selected in each of the sampled EAs.

### **1.3 SAMPLE DESIGN**

The sample for the Botswana Demographic Survey 2017 represented and covered the entire population residing in non-institutional dwelling units. A stratified two stage probability sampling design was used. In the first stage, 478 enumeration areas were drawn from the 2011 census sampling frame. One hundred and twenty two EAs were selected in cities & towns, 187 in urban villages and 169 in rural areas. In the second stage a complete listing of households was carried out in all selected EAS. Twenty households were then systematically selected for interviews from a listing of households in the selected EA.

The final sample size for BDS 2017 is summarized as below.

Domains /strata	Final EAs in the sample	Final Households in the sample
Cities/Towns	122	2440
Urban villages	187	3740
Rural villages	169	3380
Total	478	9560

### **1.4 QUESTIONNAIRE**

The survey had one electronic questionnaire which consisted three parts being the household questions, the under-five and for women aged 15-49. The questionnaire covered the following topics:

- Background Characteristics (age, education, religion, etc.)
- Knowledge and use of family planning methods
- Household Characteristics
- Economic Activity
- Birth and National Registration
- Fertility
- Migration
- Mortality
- Disability
- Child Nutrition
- Non communicable diseases

In addition, information was collected about the dwelling itself such as source of water, type of toilet facilities, materials used to construct the house, ownership of various durable goods.

### **1.5 TRAINING**

A total of 190 people were recruited by Statistics Botswana for the main training. The first phase of training was dedicated to training of trainers. Thirty five people were trained as supervisors for two weeks and they were joined in subsequent weeks by 155 people who were trained as interviewers.

Training consisted of lectures on the underlying rationale of the questionnaire content and how to complete the questionnaires. Mock interviews were conducted to allow practice in proper interviewing techniques. Throughout the training, participants were given tests to evaluate their understanding and assess skills in the survey procedures.

### 1.7 DATA COLLECTION AND DATA PROCESSING

Data collection for Botswana Demographic survey lasted three months, ending on 22nd October 2017. There were 27 teams each comprising of one (1) supervisor, four (4) enumerators and two drivers (two vehicles per team).

Each team was assigned 17 or 18 blocks to be completed in two (2) months. The 478 would yield a total sample 9560 households that were targeted for interview. On average each block was scheduled to take three (3) days to be completed with each enumerator assigned five (5) households per block to complete in three (3) days.

The BDS 2017 data was collected using computer assisted personal interviews (CAPI) based on Survey Solutions (SS) platform. During enumeration the data was captured directly onto the tablets by enumerators. Data was then transmitted to the field supervisors and quality controllers who then carried out necessary data validation, editing and coding before sending corrected data to the headquarters. At this level, further validation was carried, with a possibility of returning the record to the supervisor for further correction.

After validation by headquarters, the data was transmitted to the servers where it was merged with other data. The data will then be ready to be exported to any statistical software. Tabulation and data analysis were all done in SPSS Software

### **CHAPTER 2: POPULATION CHARACTERISTICS**

### **2.1 POPULATION DISTRIBUTION**

Population distribution refers to the spread of people over a specified geographical area. It is therefore imperative for the country to be aware of its population's spatial distribution for developmental purposes. It is for this reason that Botswana formulated the National Settlement Policy (1998) to cater for these developments.

Table 2.1 illustrates the pattern of population distribution in Botswana by district. Kweneng East accounted for the highest population size of 13.0 percent, followed by Gaborone with 10.9 percent. A similar pattern was observed in 2011 Population and Housing census, where the two districts recorded 12.7 percent and 11.4 percent respectively. This shows a 0.5 percent decline for the share of Gaborone population and a 0.3 percent increase for the Kweneng East. The districts of Central Serowe/ Palapye, Central Tutume, Ngwaketse and Francistown recorded 8.7, 7.4, 6.3 and 5.0 percent respectively while Ngwaketse West, Orapa, Sowa Town, North East and Ngami West districts recorded 0.7, 0.5, 0.2, 3.0 and 2.9 percent respectively.

It further indicates that in Botswana, most people are in urban villages (43.0 percent), followed by rural villages with 36.1 percent and lastly cities and towns with 20.9 percent. It can be concluded that Botswana's population is predominantly urban, with 63.9 percent of its population residing in urban areas i.e. Cities and towns plus urban villages.

Table 2.1: Percentage distribution of population	n by sex, district	t, residence and	age groups 2017
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	Sex							
Background	Male	•	Fem	Female		Not Stated		al
Characteristics	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Gaborone City	117,277	50.0	117,498	50.0	-	-	234,775	10.9
Francistown City	50,995	47.6	56,233	52.4	-	-	107,228	5.0
Lobatse	13,917	48.8	14,576	51.2	-	-	28,493	1.3
Selebi Pikwe	23,236	47.0	26,224	53.0	-	-	49,460	2.3
Orapa	4,948	49.2	5,114	50.8	-	-	10,062	0.5
Jwaneng	6,885	41.8	9,585	58.2	-	-	16,469	0.8
Sowa Town	1,994	51.3	1,891	48.7	-	-	3,886	0.2
Ngwaketse	64,099	47.1	72,000	52.9	-	-	136,098	6.3
Barolong	28,052	49.1	29,044	50.9	-	-	57,096	2.6
Ngwaketse West	6,661	45.6	7,939	54.4	-	-	14,600	0.7
South East	47,251	47.6	52,042	52.4	68	0.1	99,361	4.6
Kweneng East	136,102	48.5	144,593	51.5	-	-	280,695	13.0
Kweneng West	26,861	49.7	27,153	50.3	-	-	54,014	2.5
Kgatleng	49,123	49.6	50,008	50.4	-	-	99,131	4.6
Serowe Palapye	88,719	47.2	99,107	52.8	-	-	187,826	8.7
Central Mahalapye	58,794	47.1	66,064	52.9	-	-	124,857	5.8
Central Bobonong	37,539	46.1	43,971	53.9	-	-	81,510	3.8
Central Boteti	30,794	49.8	31,057	50.2	-	-	61,851	2.9
Central Tutume	74,114	46.6	84,464	53.2	320	0.2	158,898	7.4
North East	30,687	47.7	33,646	52.3	-	-	64,333	3.0
Ngamiland East	43,801	47.0	49,331	52.9	146	0.2	93,278	4.3
Ngamiland West	27,616	44.5	34,446	55.5	-	-	62,062	2.9
Chobe	14,069	51.4	13,319	48.6	-	-	27,389	1.3
Ghanzi	21,114	48.2	22,707	51.8	-	-	43,821	2.0
Kgalagadi South	17,179	48.9	17,984	51.1	-	-	35,164	1.6
Kgalagadi North	12,494	55.5	10,015	44.5	-	-	22,509	1.0
Total	1,034,321	48.0	1,120,008	52.0	534	0.0	2,154,863	100
Residence								
Cities and Towns	219,253	48.7	231,120	51.3	-	-	450,373	20.9
Urban Villages	431,726	46.6	493,666	53.3	534	0.1	925,926	43.0
Rural	383,343	49.2	395,221	50.8	-	-	778,564	36.1
Total	1,034,322	48.0	1,120,007	52.0	534	0.0	2,154,863	100
Age								
0-14	382,142	51.0	366,623	49.0	-	-	748,765	34.7
15-64	606,080	47.1	681,959	52.9	-	-	1,288,039	59.8
65+	45,559	39.2	70,532	60.8	-	-	116,091	5.4
Not Stated	541	27.5	893	45.4	534	27.1	1,968	0.1
Total	1,034,322	48.0	1,120,007	52.0	534	0.0	2,154,863	100

### 2.1.2: SEX RATIO

Sex ratio is the number of males per 100 females. Nationally, the BDS 2017 results shows that there were 92.3 males per 100 females. The ratio has almost remained constant from the BDS 2006 which estimated a sex ratio of 92. The 2011 Population and housing census of 2011 estimated the sex ratio at 95.5.

Table 2.1.2 presents sex ratio by districts. Jwaneng recorded 71.8 males per a 100 females in this survey compared to 120 in the last population census (2011 PHC). Kgalagardi North got 124.8, as opposed to 102.3 recorded in the last population census. Chobe region and Sowa town both yielded105. The sex ratio in the city of Gaborone remains to be balanced with sex ratio being 99.8, indicating more or less the same with the female population. Sex ratio at the city of Francistown stood at 90.7 while in 2011 population census it was at 94.7.

Moreover, sex ratio in rural areas was highest with 97.0, followed by cities and towns with 94.9 and 87.5 in the urban villages.

However, sex ratio at early childhood ages (0-14) was 104.2 showing a decline when age increases. At age 15-64, the sex ratio was at 88.9 while it was 60.6 at age 65 and above in the BDS 2017.

Background Characteristics	Males	Females	Not Stated	Number	Sex Ratio
District					
Gaborone City	117,277	117,498	-	234,775	99.8
Francistown City	50,995	56,233	-	107,228	90.7
Lobatse	13,917	14,576	-	28,493	95.5
Selebi Pikwe	23,236	26,224	-	49,460	88.6
Orapa	4,948	5,114	-	10,062	96.8
Jwaneng	6,885	9,585	-	16,469	71.8
Sowa Town	1,994	1,891	-	3,886	105.4
Ngwaketse	64,099	72,000	-	136,098	89.0
Barolong	28,052	29,044	-	57,096	96.6
Ngwaketse West	6,661	7,939	-	14,600	83.9
South East	47,251	52,042	68	99,361	90.8
Kweneng East	136,102	144,593	-	280,695	94.1
Kweneng West	26,861	27,153	-	54,014	98.9
Kgatleng	49,123	50,008	-	99,131	98.2
Serowe Palapye	88,719	99,107	-	187,826	89.5
Central Mahalapye	58,794	66,064	-	124,857	89.0
Central Bobonong	37,539	43,971	-	81,510	85.4
Central Boteti	30,794	31,057	-	61,851	99.2
Central Tutume	74,114	84,464	320	158,898	87.7
North East	30,687	33,646	-	64,333	91.2
Ngamiland East	43,801	49,331	146	93,278	88.8
Ngamiland West	27,616	34,446	-	62,062	80.2
Chobe	14,069	13,319	-	27,389	105.6
Ghanzi	21,114	22,707	-	43,821	93.0
Kgalagadi South	17,179	17,984	-	35,164	95.5
Kgalagadi North	12,494	10,015		22,509	124.8
Total	1,034,321	1,120,008	534	2,154,863	92.3
Residence					
Cities and Towns	219,253	231,120	-	450,373	94.9
Urban Villages	431,726	493,666	534	925,926	87.5
Rural	383,343	395,221	-	778,564	97.0
Total	1,034,322	1,120,007	534	2,154,863	92.3
Age					
0-14	382,142	366,623	-	748,765	104.2
15-64	606,080	681,959	-	1,288,039	88.9
65+	45,559	70,532	-	116,091	64.6
Not Stated	541	893	534	1,968	60.6
Total	1,034,322	1,120,007	534	2,154,863	92.3

Table 2.1.2 Sex Ratio by District, residence and age groups 2017

### 2.2: POPULATION AGE- SEX STRUCTURE

The age-sex structures of the 2011 Population and Housing Census and the 2017 Botswana Demographic Survey (BDS) are shown through figure 2.2 below. The two population pyramids are broader based, implying that a larger proportion of Botswana population is very young. Considering both studies, there is a significant decline in the 0-4 age cohort. The 2017 pyramid appears to be narrower at the economically active cohort as compared to the broader shape in the 2011 pyramid for the same age cohort.

Both 2011 PHC and 2017 BDS pyramids show a similar shape for those aged 65 years and above implying an insignificant change for this age group.



### Figure 2.2: Population Pyramid, 2011 and 2017

### 2.3: DISTRIBUTION OF POPULATION BY BROAD AGE GROUPS (0-14, 15-64, 65+)

The age distribution of the population by broad age groups is presented in Table 3.3 below. Botswana has a relatively young population, with 34.7 percent of the total population being children (population aged less than 15 years of age). The working class (15-64) had the highest share of 59.8 percent while the elderly (population aged 65 years and above) yielded 5.4 percent. The 2011 PHC results as illustrated in Table 1 (in the executive summary) above revealed that the 0-14 age group accounted for 32.5 percent, while 62.8 percent and 4.7 percent was observed at 15-64 and 65 and above age groups respectively.

The 2006 BDS results in Table 1 (in the executive summary) above, show a slight difference with age group 0-14 recording 34.8 percent, 59.8 percent observed in age group 15-64, and 5.4 percent observed at age group 65 and above age group. The results of the three studies show that the distribution has not changed significantly over the years.

Table 2.3 Percent distribution by broad age groups, district, sex and residence 2017	Table 2.3 Percent dis	stribution by broad	age groups, district,	sex and residence 2017
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Population Characteristics	0-14	Percent	15-64	Percent	65+	Percent	Not stated	Percent	Total
Gaborone City	58,938	25.1	171,121	72.9	4,401	1.9	315	0.1	234,775
Francistown City	35,448	33.1	69,639	64.9	2,074	1.9	67	0.1	107,228
Lobatse	8,800	30.9	18,638	65.4	1,056	3.7	-	-	28,493
Selebi Pikwe	17,442	35.3	31,033	62.7	984	2.0	-	-	49,460
Orapa	3,680	36.6	6,302	62.6	41	0.4	38	0.4	10,062
Jwaneng	5,384	32.7	11,025	66.9	60	0.4	-	-	16,469
Sowa Town	1,439	37.0	2,447	63.0	-	-	-	-	3,886
Ngwaketse	49,966	36.7	75,332	55.4	10,720	7.9	81	0.1	136,098
Barolong	23,198	40.6	28,967	50.7	4,931	8.6	-	-	57,096
Ngwaketse West	6,142	42.1	7,530	51.6	928	6.4	-	-	14,600
South East	26,665	26.8	69,084	69.5	3,543	3.6	68	0.1	99,361
Kweneng East	84,350	30.1	181,235	64.6	14,749	5.3	362	0.1	280,695
Kweneng West	21,422	39.7	28,773	53.3	3,742	6.9	76	0.1	54,014
Kgatleng	29,041	29.3	62,224	62.8	7,866	7.9	-	-	99,131
Serowe Palapye	70,866	37.7	104,928	55.9	11,852	6.3	180	0.1	187,826
Central Mahalapye	50,046	40.1	66,637	53.4	8,174	6.5	-	-	124,857
Central Bobonong	34,393	42.2	40,822	50.1	6,295	7.7	-	-	81,510
Central Boteti	24,943	40.3	34,043	55.0	2,865	4.6	-	-	61,851
Central Tutume	63,880	40.2	81,694	51.4	12,939	8.1	384	0.2	158,898
North East	25,764	40.0	34,098	53.0	4,275	6.6	196	0.3	64,333
Ngamiland East	34,440	36.9	54,216	58.1	4,422	4.7	200	0.2	93,278
Ngamiland West	25,388	40.9	32,252	52.0	4,422	7.1	-	-	62,062
Chobe	8,763	32.0	17,726	64.7	900	3.3	-	-	27,389
Ghanzi	16,921	38.6	25,363	57.9	1,536	3.5	-	-	43,821
Kgalagadi South	14,797	42.1	19,154	54.5	1,213	3.5	-	-	35,164
Kgalagadi North	6,648	29.5	13,755	61.1	2,106	9.4	-	-	22,509
Total	748,766	34.7	1,288,037	59.8	116,092	5.4	1,968	0.1	2,154,863
Sex									
Male	382,142	36.9	606,079	58.6	45,559	4.4	541	0.1	1,034,321
Female	366,624	32.7	681,957	60.9	70,533	6.3	893	-	1,120,008
Not Stated	-	-	-	-	-	-	534	100	534
Total	748,766	34.7	1,288,037	59.8	116,092	5.4	1,968	0.1	2,154,863
Residence									
Cities and Towns	131,132	29.1	310,205	68.9	8,616	1.9	421	0.1	450,373
Urban Villages	307,694	33.2	569,992	61.6	46,769	5.1	1,471	0.2	925,926
Rural	309,940	39.8	407,840	52.4	60,707	7.8	76	-	778,564
Total	748,766	34.7	1,288,037	59.8	116,092	5.4	1,968	0.1	2,154,863

### 2.4 YOUTH

The Revised National Youth Policy 2010 states that the Government of Botswana recognizes the important role played by youth (15–35 years) in contributing to the national socio-economic development. The government has developed programmes and strategies to improve their livelihoods and their communities.

The youth population accounted for 34.6 percent (744,613) of the total population (2,154,863) in the BDS 2017 with females accounting for 51.6 percent of youth population compared 48.4 percent for males stood.

Further analysis on youth by sex revealed the highest proportion among males at age group 30-35 with 26.9 percent. The other age groups; 15-19, 20-24 and 25-29 yielded 23.2, 24.8 and 23.3 percent of the total male youths respectively. Furthermore, the highest proportion among females was noted at age group 30-35 with 30.3 percent. The remaining age groups 20-24, 25-29 and 15-19 observed proportions of 24.1, 23.6 and 22.1 percent.

Table 2.4 indicate that 14.8 percent of youth population was found in Kweneng East followed by 13.9 percent, 7.9 percent and 6.0 percent in Gaborone, Serowe Palapye and Francistown respectively. The districts with the lowest share of youth below 1.0 percent were Jwaneng (0.8 percent), Orapa (0.5 percent), Sowa Town (0.2 percent) and Ngwaketse West (0.2 percent).

### **18.** BOTSWANA DEMOGRAPHIC SURVEY REPORT 2017

A higher proportion of the youth is found in urban areas (cities/ towns and urban villages) with 71.1 percent compared to 28.9 percent in rural areas.



Table 2.4 Percent distribution by youth age group, districts, sex and residence 2017

	Age Groups									
Background Characteristics	15-19	Percent	20-24	Percent	25-29	Percent	30-35	Percent	Total	Percent
District										
Gaborone City	16,590	16.1	29,147	28.3	28,065	27.2	29,348	28.5	103,150	13.9
Francistown City	10,432	23.3	9,853	22.0	11,397	25.4	13,174	29.4	44,856	6.0
Lobatse	3,015	26.9	2,531	22.6	2,948	26.3	2,722	24.3	11,215	1.5
Selebi Pikwe	4,678	24.8	3,709	19.7	4,534	24.0	5,946	31.5	18,867	2.5
Orapa	669	19.6	659	19.3	569	16.7	1,516	44.4	3,412	0.5
Jwaneng	406	7.1	735	12.8	1,595	27.7	3,013	52.4	5,748	0.8
Sowa Town	432	32.3	233	17.4	335	25.0	338	25.2	1,339	0.2
Ngwaketse	11,869	30.4	9,085	23.3	7,682	19.7	10,393	26.6	39,029	5.2
Barolong	4,265	28.8	2,859	19.3	3,176	21.5	4,495	30.4	14,795	2.0
Ngwaketse West	539	14.2	823	21.7	1,222	32.1	1,217	32.0	3,801	0.5
South East	8,937	21.2	11,955	28.3	9,094	21.5	12,250	29.0	42,236	5.7
Kweneng East	22,065	20.0	30,826	27.9	25,922	23.5	31,678	28.7	110,491	14.8
Kweneng West	4,822	29.1	3,577	21.6	3,016	18.2	5,154	31.1	16,569	2.2
Kgatleng	7,897	23.6	8,817	26.4	7,947	23.8	8,753	26.2	33,414	4.5
Serowe Palapye	15,299	25.9	14,008	23.7	13,178	22.3	16,553	28.0	59,038	7.9
Central Mahalapye	10,071	28.3	8,109	22.8	8,618	24.3	8,741	24.6	35,539	4.8
Central Bobonong	6,131	28.1	4,941	22.6	4,949	22.7	5,795	26.6	21,816	2.9
Central Boteti	4,596	22.4	5,339	26.1	5,409	26.4	5,135	25.1	20,480	2.8
Central Tutume	14,972	34.2	9,066	20.7	7,764	17.7	11,988	27.4	43,790	5.9
North East	4,307	23.6	4,964	27.2	3,246	17.8	5,727	31.4	18,243	2.4
Ngamiland East	7,315	21.3	8,132	23.6	7,150	20.8	11,818	34.3	34,415	4.6
Ngamiland West	4,654	24.2	4,800	25.0	4,790	24.9	4,985	25.9	19,229	2.6
Chobe	930	9.3	2,420	24.1	3,362	33.5	3,311	33.0	10,024	1.3
Ghanzi	3,601	23.7	3,578	23.5	4,032	26.5	3,998	26.3	15,209	2.0
Kgalagadi South	2,476	24.9	2,300	23.1	2,111	21.2	3,068	30.8	9,956	1.3
Kgalagadi North	2,083	26.2	2,274	28.6	1,451	18.2	2,144	27.0	7,952	1.1
Total	173,050	23.2	184,739	24.8	173,563	23.3	213,261	28.6	744,613	100
Sex										
Male	88,098	24.5	92,249	25.6	82,949	23.0	96,982	26.9	360,277	48.4
Female	84,953	22.1	92,491	24.1	90,614	23.6	116,279	30.3	384,337	51.6
Total	173,050	23.2	184,739	24.8	173,563	23.3	213,261	28.6	744,613	100
Residence										
Cities and Towns	36,221	19.2	46,867	24.9	49,443	26.2	56,057	29.7	188,587	25.3
Urban Villages	80,074	23.6	87,084	25.6	77,691	22.9	94,951	27.9	339,801	45.6
Rural	56,755	26.2	50,789	23.5	46,429	21.5	62,253	28.8	216,225	29.0
Total	173,050	23.2	184,739	24.8	173,563	23.3	213,261	28.6	744,613	100

### 2.5: CITIZENSHIP

Table 2.5 below shows total population distribution by citizenship, sex and place of residence. The population of Botswana is constituted by Batswana (96.0 percent) and non-Batswana (4.0 percent). However the 2006 BDS revealed that Batswana accounted for 96.6 percent of the total population, while non-Batswana were at 3.3 percent, indicating a slight increase of non-Batswana by less than 1.0 percent (0.7 percent).

Among Batswana population, males account for 47.7 percent compared to females with 52.3 percent. On the contrary non-Batswana males outnumber their female counterparts with 55.3 percent to 44.1 percent correspondingly. The implication may be that men tend to emigrate to foreign countries than females.

Further observation was made at residence level, showing that majority of Batswana citizens (43.1 percent) reside in urban villages, followed by rural villages and cities and towns with 37.0 and 19.9 percent respectively. The results also show an increase in urban villages population to 43.1 percent as opposed to 34.9 percent observed in BDS 2006. However, a decline (4.2 percent) is observed for citizens in rural areas from 41.2 percent recorded in BDS 2006 to 37.0 percent in 2017 BDS.

The majority (44.3 percent) of Non-Batswana reside in cities and towns while those who reside in urban villages and rural areas accounted for 40.2 and 15.4 percent in that order. A different scenario was observed in the BDS 2006 where majority of non-citizens where in rural areas followed by urban villages and cities and towns recording 40.4, 34.7 and 24.9 percent correspondingly.

Table 2.5: Population by Chizenship, sex and residence 2017										
Population Characteristics	Batswana	Percent	Non Batswana	Percent	Total	Percent				
Sex										
Male	987,098	47.7	47,223	55.3	1,034,321	48.0				
Female	1,082,351	52.3	37,657	44.1	1,120,008	52.0				
Not Stated	-	-	534	0.6	534	-				
Total	2,069,449	96.0	85,415	4.0	2,154,863	100				
Residence										
Cities and Towns	412,506	19.9	37,867	44.3	450,373	20.9				
Urban Villages	891,558	43.1	34,368	40.2	925,926	43.0				
Rural	765,384	37.0	13,180	15.4	778,564	36.1				
Total	2,069,449	96.0	85,415	4.0	2,154,863	100				

### Table 2.5: Population by Citizenship, Sex and Residence 2017

### 2.6: ORPHAN-HOOD

The Department of Social Protection defines orphans as children below the age of 18 years who has lost either one parent (single parent) or both parents (if they were married), whether they are biological or adoptive parents. However, the BDS 2017 limitation towards analyzing orphan-hood is that the study did not establish whether both parents were married. The questionnaire sought to estimate adult mortality, which was used to analyze orphan-hood.

According to the Social Protection Report 2013 based on Assessment of the Orphan Care Programme, Botswana adopted the National Guidelines on the Care of Orphans and Vulnerable Children in 2008 while the National Assembly adopted the Children's Act in 2009. Together with National Plan of Action for Orphans and Vulnerable Children 2010-2016 these documents provide a broad framework supporting and guiding stakeholders in the planning and delivery of comprehensive, high-quality services to all orphans and vulnerable children.

Table 2.6 show that 1.1 percent of all children aged 17 years and below had lost both parents, 3.8 percent lost their mother, while 8.7 percent lost their father.

In cities and towns children who lost their mother constituted 0.5 percent, those who lost their father were 1.2 percent while those who lost both their parents were 0.1 percent. In urban villages those who lost their mother recorded 1.6 percent, while those who lost their father were 3.8 percent, and those who lost both parents yielded 0.5 percent. In rural areas those who lost their mother and father recorded 1.6 and 3.7 percent respectively while those who lost both parents were 0.5 percent.

## Table 2.6: Percentage Distribution of Population Aged 17 and below with at least One parent Dead by Age Group, Sex and residence 2017

		Mother Alive				Father Alive				Both Parents Alive			
Population Characteristics	Total Population Aged 0-17	Yes	Percent	No	Percent	Yes	Percent	No	Percent	Yes	Percent	No	Percent
Age groups													
0-4	250,942	249,892	29.1	1,049	0.1	238,840	27.8	6,734	0.8	238,115	27.7	104	0.0
5-9	262,698	255,924	29.8	6,774	0.8	236,523	27.5	16,512	1.9	232,012	27.0	1,680	0.2
10-14	235,126	221,654	25.8	13,472	1.6	192,275	22.4	30,312	3.5	185,476	21.6	4,203	0.5
15-17	110,334	99,176	11.5	11,014	1.3	82,854	9.6	21,604	2.5	77,176	9.0	3,868	0.5
Total	859,100	826,646	96.2	32,310	3.8	750,493	87.4	75,163	8.7	732,779	85.3	9,856	1.1
Sex													
Male	438,367	422,116	49.1	16,167	1.9	381,861	44.4	39,586	4.6	373,439	43.5	5,522	0.6
Female	420,732	404,530	47.1	16,143	1.9	368,632	42.9	35,577	4.1	359,340	41.8	4,333	0.5
Total	859,100	826,646	96.2	32,310	3.8	750,493	87.4	75,163	8.7	732,779	85.3	9,856	1.1
Residence													
Cities and Towns	152571	148,208	17.3	4,364	0.5	138,848	16.2	10,687	1.2	136,229	15.9	1,264	0.1
Urban Villages	359335	345,115	40.2	14,162	1.6	309,359	36.0	32,957	3.8	301,571	35.1	3,971	0.5
Rural	347193	333,324	38.8	13,785	1.6	302,286	35.2	31,519	3.7	294,980	34.3	4,620	0.5
Total	859100	826,646	96.2	32,310	3.8	750,493	87.4	75,163	8.7	732,779	85.3	9,856	1.1

### 2.7: EDUCATION

Government of Botswana's many responsibilities includes ensuring that every child has access to basic education. In discharge of this mandate, in 1994 it adopted the Revised National Policy on Education, whose goal is to increase access and equity to quality education for all and that every child should attain at least 10 years of basic education. Consequently basic education is considered a basic right of every Motswana child.

### 2.7.1 PRIMARY AND SECONDARY SCHOOL NET ENROLLMENT RATIO

The study collected information on primary school enrolment. One of the indicators of primary school enrolment estimated was the net enrollment ratio (NER). The NER for primary school is the percentage of the primary-school age (6-12 years) population that is attending primary school, whereas the NER for secondary school is the percentage of the secondary -school age (13-17 years) population that is attending secondary school.

It is worth noting that 90.2 percent of children of primary school age in Botswana attended primary school Table 2.7.1 shows an increase in the primary school NER over the years with the Botswana Family Health Survey IV of 2007 results yielding 86.9 percent. This indicates that access to education is increasing as per the Revised National Policy on Education 1994 goal.

A comparison by residence shows the Primary school net enrollment ratio of 90.3 percent in cities and towns, 91.0 percent urban villages while rural areas stood at 89.3 percent.

On the other hand the age with the highest primary net enrollment ratio is age 9 with 98.6 percent, followed by age 10 and 11 with 98.4 and 98.2 percent.

Other ages 8, 7 and 12 observed NER of 96.2, 96.1 and 93.8 percent in that order. The lowest Net enrollment ratio was evidenced at age 6 with 52.9 percent, an indication that not all children in this age are likely to have started going to primary school.

Moreover, Secondary School Net Enrolment ratio yielded lower ratio (51.2 percent) than Primary school Net Enrollment Rate.

Furthermore, the secondary school age with the highest net enrollment ratio was noticed at age 16 with a total of 81.7 percent, followed by ages 15, 17, 14 and 13 with 74.6, 68.5, 36.7 and 2.7 percent respectively. The least NER at age 13 indicates that not all children in this age are likely to have progressed to secondary school, as some are still in primary school.

Table 2.7.1: Percentage of Children of Primary and Secondary School Age Attending Primary School by Sex, Residence and Age - 2017

		Se	x			
		Male		Female		Total
Background Characteristics	Number	Net Enrollment Rate	Number	Net Enrollment Rate	Number	Net Enrollment Rate
		Priı	mary School			
Residence						
Cities and Towns	27,718	89.6	26,054	91.0	53,773	90.3
Urban Villages	65,766	90.9	65,737	91.1	131,504	91.0
Rural	68,944	89.3	66,533	89.3	135,477	89.3
Total	162,429	90.0	158,325	90.3	320,753	90.2
Age						
6	13,998	52.9	14,592	52.9	28,590	52.9
7	26,969	95.7	25,931	96.5	52,899	96.1
8	26,079	95.6	20,934	97.0	47,013	96.2
9	22,657	99.0	22,512	98.2	45,169	98.6
10	24,606	98.1	24,700	98.7	49,306	98.4
11	22,692	96.6	25,667	99.7	48,359	98.2
12	25,428	93.9	23,989	93.7	49,417	93.8
Total	162,429	90.0	158,325	90.3	320,753	90.2
		Seco	ondary School			
Residence						
Cities and Towns	9,020	52.2	12,225	63.5	21,245	58.2
Urban Villages	22,606	50.5	26,209	59.6	48,814	55.0
Rural	14,134	37.4	14,826	48.8	28,961	42.5
Total	45,760	45.9	53,260	56.9	99,019	51.2
Age						
13	574	2.4	559	3.0	1,133	2.7
14	5,130	25.6	9,833	47.4	14,963	36.7
15	13,618	68.4	15,591	81.0	29,209	74.6
16	15,448	80.8	15,105	82.8	30,553	81.7
17	10,990	64.0	12,171	73.3	23,161	68.5
Total	45,760	45.9	53,260	56.9	99,019	51.2

### 2.7.2 SCHOOL ATTENDANCE

At national level, results indicate that 56.0 percent of the population had left school, 28.9 percent were still attending school while only 15.1 percent never attended school as shown through Figure 2.7.2 below. In Cities and towns the proportion of those who left school was highest at 67.0 percent, followed by those still at school with 26.5 percent and those who never attended with 6.4 percent of the total population in cities and towns.

A similar trend was observed in urban villages, where those who reportedly left school were highest at 58.4 percent followed by those still at school and never attended with 29.1 and 12.0 percent respectively.

Likewise in rural areas the highest proportion was noted among those who had left school followed by those who were still at school and never attended with 46.7, 30.0 and 23.3 percent, respectively.



### 2.7.3: EARLY CHILDHOOD EDUCATION

Early childhood care and education policy in Botswana was implemented in 2001 to ensure development of children at early ages. Table 2.7.3 shows the number and proportion of children aged 36 to 59 months by attendance of organized early childhood education by place of residence. Almost three quarters (74.1 percent) of children within that age group had never attended early childhood education and 24.1 percent were still attending school.

Table 2.7.3 further shows variation by place of residence. The results indicate that more children in urban areas attended early childhood education compared to those in rural areas. Forty three percent (43.5 percent) of children in cities or towns, were reportedly still at school while 3.4 percent had left school. In rural areas, 89.5 percent had never attended organized early childhood education compared to 53.1 percent in cities and towns and 68.5 percent in urban areas.

Early Childhood Education	Still at school	Yes left	Never attended	Total
Place of Residence				
Cities/Town	43.5	3.4	53.1	18392
Urban Village	29.4	2.1	68.5	38676
Rural	9.7	0.8	89.5	38887
Total	24.1	1.8	74.1	95955

### Table 2.7.3 Percentage Distribution of children aged 36-59months attending organized early childhood education 2017

### 2.8: LANGUAGE SPOKEN AT HOME

Information on the language most spoken in the household was collected from all persons aged two years and above. Figure 2.8 below shows that Setswana was the most spoken language reported by 76.6 percent of the population, followed by Kalanga with 6.2 percent, Shekgalagari with 3.7 percent and English with 3.1 percent. Other languages recorded less than 2.0 percent.



### 2.9: RELIGION

The Constitution of Botswana provides for freedom of religion, and the government generally respected this right in practice hence there is no prescribed state religion in Botswana. It specifically protects the rights of all citizens to have a religion of their choice.

Figure 2.9 below illustrates percentage distribution of population aged 12 years and over by religion in Botswana. It shows that an overwhelming majority of population (86.7 percent) aligned themselves with Christianity while (10.2 percent) reported that they did not have any religion and Badimo recorded 2.2 percent. It is also worth noting that Islam and Hinduism recorded 0.3 percent and 0.2 percent respectively. The results show a significant rise of Christianity from 62.7 percent to 86.7 percent between BDS 2006 and BDS 2017. Over this period, "Badimo" as a religion has been stagnant remaining at the same percentage of 2.2 percent while those who said they do not follow any religion increased by less than 2.5 percent. Insignificant differences were shown in all other religions.



Further analysis indicate that within Christianity, age group 20-24 constituted a larger percentage of 11.8 percent followed by those aged 30-34 at 11.6 percent. The trend then decreases when age increases as depicted in Table 2.9 below.

Among the Christian population, 54.1 percent are never married, followed by those who are reportedly living together (21.3 percent), married (19.1 percent). Those who were 'ever married' (widowed, separated and divorced) recorded less than 5.0 percent each.

Majority (43.2 percent) of those who proclaimed to have no religion, were reportedly never married, followed by those who were living together (37.6 percent), while 14.0 percent of people in this category were reported to be married. Other marital status recorded below 10.0 percent.

Another striking observation is that close to two thirds (61.9 percent) of those who worshipped Badimo were never married, followed by those who were living together with 24.1 percent and those who were married with 10.8 percent.

In contrast to the above, two thirds (67.4 percent) of those who reported Islam as their region where reportedly married followed by 28.5 percent who were never married. Other reported marital statuses reported rates below 5.0 percent. It is worth noting that the highest proportion of married category was reported among the Hindu population with 83.3 percent, followed by 16.7 percent who were reportedly never married. The table also shows that Bahai reported 58.7 percent to be never married, while 22.4 percent were living together and 18.9 percent were divorced.

Table 2.9: Percentage distribution of the population by Religion, A	Age group, sex and Marital Status 2017
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								Reli	gion								
Background Characteristics	Christianity	Percent	Islam	Percent	Bahai	Percent	Hinduism	Percent	Badimo	Percent	No Religion	Percent	Other	Percent	Not stated	Percent	Total
Age group																	
12-14	120,497	9.0	392	7.4	-	-	198	8.1	1,574	4.6	12,633	8.1	129	3.6	343	12.9	135,766
15-19	152,296	11.4	118	2.2	-	-	140	5.7	1,460	4.3	18,270	11.7	113	3.2	653	24.6	173,050
20-24	157,957	11.8	339	6.4	113	28.1	202	8.3	2,921	8.6	22,754	14.5	236	6.6	218	8.2	184,739
25-29	150,721	11.3	546	10.3	71	17.7	443	18.2	3,796	11.2	17,861	11.4	126	3.5	-	-	173,563
30-34	155,269	11.6	1,135	21.4	-	-	198	8.1	4,270	12.6	18,688	11.9	798	22.5	-	-	180,358
35-39	136,273	10.2	596	11.2	-	-	198	8.1	3,617	10.6	15,195	9.7	853	24.0	230	8.7	156,962
40-44	110,430	8.3	486	9.2	90	22.4	200	8.2	3,617	10.6	12,056	7.7	396	11.2	767	28.9	128,043
45-49	77,753	5.8	412	7.8	-	-	332	13.6	2,092	6.2	8,369	5.3	274	7.7	79	3.0	89,312
50-54	74,363	5.6	364	6.9	52	13.0	131	5.4	2,876	8.5	7,342	4.7	185	5.2	218	8.2	85,530
55-59	55,302	4.1	160	3.0	-	-	267	11.0	1,605	4.7	6,362	4.1	-	-	-	-	63,696
60-64	45,327	3.4	632	11.9	-	-	65	2.7	1,779	5.2	4,725	3.0	254	7.2	-	-	52,783
65-69	32,186	2.4	65	1.2	-	-	-	-	1,137	3.3	3,875	2.5	31	0.9	146	5.5	37,441
70-74	22,401	1.7	-	-	76	18.9	62	2.5	967	2.8	2,588	1.7	153	4.3	-	-	26,247
75-79	16,979	1.3	65	1.2	-	-	-	-	876	2.6	2,399	1.5	-	-	-	-	20,319
80-84	10,722	0.8	-	-	-	-	-	-	622	1.8	1,129	0.7		-	-	-	12,473
85-89	8,/1/	0./	-	-	-	-	-	-	435	1.3	1,420	0.9	-	-	-	-	10,5/2
90-94	4,906	0.4	-	-	-	-	-	-	-	-	538	0.3	-	-	-	-	5,444
95+	2,/8/	0.2	-	-	-	-	-	-	336	1.0	4/3	0.3	-	-	-	-	3,596
lotal	1,334,885	86.7	5,312	0.3	404	0.0	2,435	0.2	33,979	2.2	156,677	10.2	3,549	0.2	2,653	0.2	1,539,895
District	1// 410	10.5	0		105	45 7	1.07/	01.1	0.000	0 5	0.070		1 507	12.0	217	11.0	105 5/0
City	72.004	12.5	0	-	100	45.7	1,770	01.1	2,077	0.5	7,700	0.4	520	43.0	70	2.0	70 744
town City	10,124	5.4	94	1.8	90	22.4	-	-	33/	1.0	5,603	3.6	538	15.2	/9	3.0	/8,/46
	19,136	1.4	65	1.2	-	-	-	-	389	1.1	1,/30	1.1	-	-	-	-	21,320
Selebi Pikwe	31,099	2.3	600	11.3	-	-	62	2.5	/03	2.1	3,117	2.0	-	-	-	-	35,581
Orapa	6,796	0.5	-	-	-	-	-	-	43	0.1	125	0.1	-	-	-	-	6,964
Jwaneng	11,096	0.8	-	-	-	-	60	2.5	185	0.5	450	0.3	-	-	-	-	11,792
Sowa Town	2,686	0.2	-	-	-	-	-	-	32	0.1	114	0.1	-	-	-	-	2,832
Ngwake- tse	79,983	6.0	173	3.3	-	-	-	-	1,462	4.3	14,264	9.1	58	1.6	-	-	95,939
Barolong	33,278	2.5	-	-	-	-	-	-	607	1.8	3,609	2.3	50	1.4	50	1.9	37,594
Ngwake- tse West	7,702	0.6	-	-	-	-	-	-	252	0.7	1,468	0.9	-	-	-	-	9,422
South East	73,515	5.5	-	-	-	-	-	-	387	1.1	3,114	2.0	131	3.7	803	30.3	77,950
Kweneng East	188,344	14.1	483	9.1	52	13.0	-	-	3,469	10.2	16,797	10.7	445	12.5	1,056	39.8	210,646
Kweneng West	28,203	2.1	-	-	76	18.9	-	-	1,514	4.5	6,223	4.0	48	1.3	72	2.7	36,136
Kgatleng	67,957	5.1	155	2.9	-	-	73	3.0	1,441	4.2	6,273	4.0	-	-	-	-	75,899
Serowe Palapye	99,874	7.5	498	9.4	-	-	-	-	7,399	21.8	20,446	13.0	261	7.4	-	-	128,478
Central Mahala- pye	69,950	5.2	256	4.8	-	-	265	10.9	2,905	8.5	10,490	6.7	95	2.7	-	-	83,960
Central Bobonong	41,754	3.1	-	-	-	-	-	-	1,376	4.0	10,003	6.4	-	-	-	-	53,133
Central Boteti	30,939	2.3	-	-		-	-	-	2,718	8.0	7,752	4.9	-	-	63	2.4	41,471
Central Tutume	92,345	6.9	58	1.1	-	-	-		1,832	5.4	12,807	8.2	57	1.6	67	2.5	107,165
North East	38,587	2.9	-	-	-	-	-	-	492	1.4	3,332	2.1	-	-	-	-	42,412

Table 2.9 continued: Percentage distribution of the population by Religion, Age group, sex and Marital Status 2017

								Reli	gion								
Background Characteristics	Christianity	Percent	Islam	Percent	Bahai	Percent	Hinduism	Percent	Badimo	Percent	No Religion	Percent	Other	Percent	Not stated	Percent	Total
Ngami- land East	56,596	4.2	93	1.8	-	-	-	-	584	1.7	7,610	4.9	-	-	-	-	64,883
Ngami- land West	37,257	2.8	-	-	-	-	-	-	538	1.6	3,073	2.0	132	3.7	-	-	41,001
Chobe	19,001	1.4	159	3.0	-	-	-	-	164	0.5	1,227	0.8	-	-	124	4.7	20,675
Ghanzi	24,023	1.8	53	1.0	-	-	-	-	1,731	5.1	3,922	2.5	144	4.1	-	-	29,874
Kgalagadi South	20,857	1.6	-	-	-	-	-	-	175	0.5	2,050	1.3	65	1.8	-	-	23,147
Kgalagadi North	15,490	1.2	328	6.2	-	-	-	-	345	1.0	1,118	0.7	-	-	24	0.9	17,305
Total	1,334,885	86.7	5,312	0.3	404	-	2,435	0.2	33,979	2.2	156,677	10.2	3,549	0.2	2,653	0.2	1,539,895
Marital Status																	
Married	254,679	19.1	3,578	67.4	-	-	2,029	83.3	4,769	14.0	16,868	10.8	1,507	42.5	293	11.0	283,723
Never Married	722,693	54.1	1,512	28.5	237	58.7	406	16.7	14,683	43.2	96,955	61.9	1,501	42.3	439	16.5	838,426
Living Together	284,024	21.3	164	3.1	90	22.4	-	-	12,789	37.6	37,684	24.1	395	11.1	67	2.5	335,213
Separated	2,722	0.2	58	1.1	-	-	-	-	-	-	475	0.3	-	-	-	-	3,255
Divorced	16,058	1.2	-	-	76	18.9	-	-	265	0.8	977	0.6	-	-	-	-	17,377
Widowed	54,432	4.1	-	-	-	-	-	-	1,474	4.3	3,537	2.3	65	1.8	-	-	59,508
Not stated	276	0.0	-	-	-	-	-	-	-	-	180	0.1	80	2.3	1,855	69.9	2,392
Total	1,334,885	86.7	5,312	0.3	404	-	2,435	0.2	33,979	2.2	156,677	10.2	3,549	0.2	2,653	0.2	1,539,895
Sex																	
Male	586,166	43.9	3,162	59.5	351	87.0	1,295	53.2	22,395	65.9	104,679	66.8	2,732	77.0	1,515	57.1	722,295
Female	748,719	56.1	2,150	40.5	52	13.0	1,140	46.8	11,584	34.1	51,998	33.2	817	23.0	1,139	42.9	817,600
Total	1,334,885	86.7	5,312	0.3	404	0.0	2,435	0.2	33,979	2.2	156,677	10.2	3,549	0.2	2,653	0.2	1,539,895

### 2.10: MARITAL STATUS

Figure 2.10 shows that for population aged 12 years and over, 54.4 percent reported as never married. This shows a decrease from 64.2 percent in 2006 BDS. The living together category has increased from 11.4 percent in 2006 to 21.8 percent in 2017. Those who were reportedly married were estimated at 18.4 percent compared to 18.2 percent in 2006. In both studies, the 'ever married' (widowed, divorced and separated) recorded less than 5.0 percent each.



### **CHAPTER 3 FERTILITY**

Fertility for Botswana Demographic Survey 2017 was estimated based on the number of women in the child bearing years and the observed age specific fertility rates. The BDS 2017 data yielded estimates which are comparable and consistent with data from other surveys and censuses. Total fertility rate was estimated using the total population and female population in child bearing ages by five year age groups as well as the crude birth rates.



The age specific fertility rates indicate that, across all strata, births were few at young ages (15-19), number of births per woman then increase gradually until they reach a peak at ages 25-29, after which they start to decline. It is however notable that the age specific birth rates are slightly higher in rural districts, followed by urban areas and cities respectively, as indicated through Figure: 5.0 above.



### 3.1 FERTILITY DECLINE AND POLICY IMPLICATIONS

According to the Theory of Demographic Transition, at beginning, a population will experience high birth and death rates, the death rates will then decline rapidly while births will remain stable. This means that, population will initially grow rapidly for a period of time, and level off at some point. The population will then remain stable before eventually beginning to decline (logistic growth). Available fertility data indicates that, in Botswana, the fertility rates started to stabilize around year 2001. Figure 3.1 above indicates that the total fertility rates (TFR) declined from above 6.5 children per woman to 3.1 children per woman during the 2017

### **28.** BOTSWANA DEMOGRAPHIC SURVEY REPORT 2017

Botswana Demographic Health Survey. The above chart (Figure 3.1) further shows that the TFR started to hover around 3 children per woman since 1998 BDS and has remained there up to 2017 BDS. This means that, Botswana population is still in the second stage of demographic transition, whereby, the mortality declines while fertility remains stable.

	1971	1981	1991	2001	2006	2011	2017
15-19	0.096	0.102	0.054	0.053	0.051	0.038	0.050
20-24	0.278	0.260	0.134	0.171	0.167	0.132	0.165
25-29	0.276	0.250	0.134	0.202	0.199	0.132	0.198
30-34	0.243	0.234	0.119	0.130	0.126	0.112	0.124
35-39	0.198	0.190	0.102	0.069	0.065	0.086	0.064
40-44	0.138	0.134	0.064	0.026	0.025	0.043	0.024
45-49	0.071	0.084	0.036	0.003	0.003	0.014	0.003
TFR	6.5	6.6	4.2	3.3	3.2	2.7	3.1

### Table 3.1 Reported Age Specific Fertility Rates and Total Fertility Rates 2017

Furthermore, although fertility in the younger age groups has been declining, fertility in the older ages has remained fairly stable or increased slightly. Therefore, it can be postulated that fertility decline in Botswana can be attributed to postponement of births or late marriages.

Although there has been lots of debates regarding the actual level of fertility in Botswana, available data indicate that the levels of fertility has actually started to stall at around three (3) children per woman. This would further results in more people been available for productive labour force. However, the results show that the high number of people in the working ages in Botswana does not translate into increased benefit to the country due to high level of unemployment among the youths.

Moreover, the high levels of unemployment is attributed to inadequate human skill capital. Therefore, in order to maximize the demographic dividend benefit to the country, there is a need to improve the quality of education as well as to intensify efforts to diversify the country's economy.

### CHAPTER 4 MORTALITY

### 4.1 INFANT MORTALITY AND CHILD MORTALITY

Mortality for Botswana Demographic survey 2017 was estimated indirectly using the average number of children ever born and the proportion of children surviving. This procedure assumes that there were no notable declines in both fertility and mortality. Although previous data indicates that there has some decline in both fertility and mortality, for BDS2017, the procedure gives reliable estimates with are comparable with mortality indicators from previous surveys.

It should, however, be noted that, the indirect estimation approach was not used for the 2011 PHC data since the procedure gave biased results mainly to due errors in reporting of children ever born during census enumeration. Therefore, infant mortality was estimated using direct method.

A further of comparison of childhood mortality was done using indirect estimation techniques based on the 2011 Population and Housing Census and the BDS2017. Both the 2011 PHC and the BDS 2017 indicators were further compared with indicators computed by United Nations Inter agency Group on Child Mortality Estimation (UN IGME). The UN IGME estimates are based the Bayesian linear regression provides probabilistic approach to finding a distribution over the parameters.

Moreover, since children born to young mothers (15-19 and 20-24) are usually affected by higher mortality than children born to older mature mothers (above 25 years), final infant mortality estimates for BDS2017 were derived by averaging estimates from women aged 25-29 and women aged 30-34 which gave an estimated infant mortality of 38 deaths per 1000 live births. Moreover, the estimates were computed using Q5 software, and estimates were picked from Coale-Demeny Model Life Tables (West).

Table 4.1 below shows that the estimate of infant mortality for BDS 2017 (40 deaths per 1000) is within the UN IGME medium range.

Time location	PHC 2011	BDS 2017	UNIGME Low	UNIGME Medium	UNIGME High				
1996	43.4		43.6	50.6	58.1				
1997			43.8	51.5	59.5				
1998			43.4	52.0	60.5				
1999	44.0		42.9	52.8	61.8				
2000			41.0	52.2	61.8				
2001			38.8	51.4	61.5				
2002	47.6		36.5	50.4	61.2				
2003		32.2	34.0	49.3	60.7				
2004			31.5	47.9	60.3				
2005	49.2		27.7	44.2	56.9				
2006		43.0	25.8	42.9	56.7				
2007	53.5		25.1	43.4	58.9				
2008			24.0	42.8	59.8				
2009	58.1	33.3	22.7	41.5	59.5				
2010			21.5	40.1	58.7				
2011	17.0[1]	36.1	21.1	40.3	61.0				
2012			19.9	38.8	60.4				
2013		30.8	18.4	36.7	58.6				
2014			17.7	35.9	59.2				
2015		17.9	16.5	33.9	57.5				
2016			15.5	32.6	56.9				
2017		40.4[2]							

Table 4.1: Estimates of Probabilities of Dving before reaching age 1 ('000) 2017

The figure was estimated using direct estimation
 NB, The BDS 2017 figures on the above table have not been adjusted. The adjusted figure for IMR was 38

### 4.2 Trends in Child Mortality



Figure 4.2 above shows that both infant mortality and under five have been declining from high levels in 2006. Furthermore, infant and under mortality five mortality increased again in 2015. This changing patterns of childhood mortality can be attributed to the recurring diarrhea out breaks in the country.



Figure 4.2.1 above indicates that infant mortality rate, that is, the probability of dying between ages 0 and 1, declined from as high as 97 deaths per 1000 in 1971 to 38 deaths per 1000 live births in 2017. Regarding the probability of dying by age 5 (under five mortality), the number of deaths per 1000 live births declined from 152 deaths in 1971 to 48 deaths in 2017. It should however be noted that both the infant the under-five mortality were lowest in during the 2011 Population and Housing Census (17 and 28 respectively). The relative low levels of childhood mortality in 2011 can partly be attributed to the change in the traditional approach of estimating mortality indirectly.

The revised National Population Policy has a target to reduce infant mortality from 46.5 deaths per 1000 live births in 2007 to less than 23 deaths per 1000 live births by 2020. The Policy seeks to reduce under five mortality from 68 deaths per 1000 live births to less than 29 deaths by 2020. And to further to increase life expectancy from 50.7 years in 2001 to at least 67.7 years. Available data shows that there has been remarkable declines in both infant and adult mortality over the years, mainly due to reductions in the HIV/AIDS mortality. This shows that the Botswana is on course to achieve the targets of the revised National Population Policy.

### **4.3 ADULT MORTALITY**

The estimation of adult mortality was based on orphan-hood method. Orphan-hood method requires data on the average number of children ever born as well as the survivorship status of the parents (father and mother). When using this method, one must be cautious since the data on parental survival can only be collected from respondents who are still alive. Thus, adults who have no surviving children cannot be captured. Furthermore, parents who with more than one surviving children are likely to be over represented. Therefore, in applying this method, it is assumed that survival of parent is not related to the number of children born.



Figure 4.3 above shows that, although male and female respondents reported differently about survivorship of their parents, it is clear that they both reported similar pattern of adult mortality. The chart above further shows that the male respondents reported high mortality of their mothers while women also reported relatively high mortality of their fathers. Although this maybe a reflection of the true situation, it might also indicate biasness in reporting of parental survivorship. Therefore, this results must be interpreted with caution.

The results indicate that there was an upsurge in the levels of adult mortality in 2002 up to 2004, adult mortality then leveled off and began to decline in 2005. A similar trend of increase in mortality was also captured during the BDS 2006 particularly among women of child bearing ages and men. This was mainly attributed to the HIV AIDs pandemic.

### **4.4 PATTERNS IN ADULT MORTALITY**

In estimating patterns of adult mortality, a direct approach was used. The direct approach estimation of mortality requires population by age and sex as well as total deaths that occurred twelve months to the survey. This method assumes that there were no errors in the reporting of age and that reporting of deaths is complete. It is however worth noting that the sample survey data has its own challenges. Since death is a rare event, sometimes the number of deaths recorded, particularly in small districts are so minute that they cannot be used to make meaningful statistical computations. Therefore, BDS 2017 data does not allow computations of mortality indicators at district level.

Table 4.4	Summary	Demographic	Indicators b	oy Strata 2017
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Item	National	Cities	Urban	Rural
Life expectancy	71.6	66.8	58.4	71.3
Crude birth rate *	26.5	27.2	26.1	26.4
Crude death rate *	6.7	5.2	11.5	8.6
Rate of natural increase (%)	1.857	-0.213	-0.767	1.918
Total deaths	15,163	1,706	6,765	6,707

Table 4.4 above shows that during the BDS 2017, the lowest of number (1706) of deaths were recorded in the cities while the urban and rural areas recorded roughly equal number of deaths (6065 and 6707 respectively). Furthermore, the highest crude death (11.5 deaths) was recorded in urban areas, followed by rural and cities with 8.6 and 5.1 respectively.

Although it may be true that there were few number of deaths in the cities, it is also possible that low number of deaths in the cities may be related to high number of non-contacts in the cities during enumeration.

### **CHAPTER 5 MIGRATION**

Migration is defined as a move from one area to the other during a given interval. Such movement must involve crossing a recognised administrative boundary. The area from which a move is made is the area of origin, whereas the area in which a move terminates is the area of destination. Migration movement can be internal or across international boundary.

Internal Migration refers to movements within the country, across administrative district while international migration involves moving from one country to another.

Further, migrant is a person who changes his or her usual place of residence by crossing an administrative boundary and residing in a new area for a specified period of time.

Migration is measured using the formula below

### M=Mij/ Pi

Where **M**= number of migrants **P**= total population **i**= source (place of residence one year ago) and **j**= destination (place of enumeration)

### Migration interval

Migration can be analysed in various ways depending on how data is captured with reference to the specified periods of time. The interval maybe definite; one year, five years or indefinite that is looking at the lifetime of the population at a given time. A lifetime migrant is a person whose area of residence at the survey date differs from the place of birth. For this report, the focus will be the one year migration period, mainly because the use of place of birth (lifetime migration) tends to underestimate the number of migrants.

The terms in-Migrant and out-Migrant are associated with internal migration. An in-migrant is a person who comes to live in an area by crossing an administrative boundary inside the same country. An out-migrant is a person who leaves an administrative area to live in another administrative area of the same country.

Moreover, net-migration refers to the balance between in-migration and out-migration, according to the direction of the movement. And such movement may be characterized by net in-migration or net out-migration. When the flow is coming in, it is indicated by a plus (+) sign and when the flow is getting out, the balance is indicated by a minus (-) sign (Shryock et al, 1976).

### **5.1 INTERNAL MIGRATION**

The assessment was based on the information on place of current usual residence and place of usual residence one year ago.

### 5.1.1 NET MIGRATION

This is the balance of movements in opposing directions, or simply the difference between in-migration and out-migration defines net migration. The table below presents net migration by districts. The highest net inmigration is noticed in Kweneng East (10,534), followed by Central Serowe/Palapye (3,990), North East (3,587), South East (3,301) and Central Tutume (3,007). The highest net out-migration was recorded in Gaborone (-12,210), followed by Selebi-Phikwe (-7,602), Francistown (-5,853), Central Mahalapye (-3,660).

Districts	Out Migrants	In Migrants	Net Migration
Gaborone	29,673	17,463	-12,210
Francistown	13,810	7,957	-5,853
Lobatse	2,923	2,817	-106
Selibe Phikwe	10,997	3,395	-7,602
Orapa	1,510	957	-553
Jwaneng	2,894	2,246	-648
Sowa Town	331	339	8
Ngwaketsi	7,156	7,416	260
Barolong	2,645	3,385	740
Ngwaketse West	1,218	832	-386
South East	6,158	9,459	3,301
Kweneng East	9,176	19,710	10,534
Kweneng West	2,364	2,750	386
Kgatleng	5,894	7,374	1,480
Central Serowe Palapye	10,360	14,350	3,990
Central Mahalapye	9,131	5,471	-3,660
Central Bobonong	4,488	5,177	689
Central Boteti	3,920	6,175	2,255
Central Tutume	5,417	8,424	3,007
North East	3,176	6,763	3,587
Ngamiland East	5,091	6,164	1,073
Ngamiland West	2,982	2,113	-869
Chobe	1,464	3,032	1,568
Ghanzi	2,174	2,194	20
Kgalagadi South	2,195	1,130	-1,065
Kgalagadi North	1,424	2,297	873
Total	148,571	149,390	819

### Table 5.1.1 Population Net Migration by Districts 2017

### **5.2 MIGRATION AND MARITAL STATUS**

The results show that the "never married" migrants were 60.4 percent followed by living together (25.4 percent) and migrants who reported to be married (12.0 percent). This indicates that being in any form of union has an impact on decision to migrate. The results further reveal that being out of union minimises chance of migrating.

		Migration	status		
Marital Status	Non migrants	Percent	Migrants	Percent	Total
Married	262,659	19.1	18,406	12.0	281,065
Never Married	741,964	53.8	92,263	60.4	834,227
Living Together	295,665	21.5	38,805	25.4	334,470
Separated	3,146	0.2	109	0.1	3,255
Divorced	16,056	1.2	1,014	0.7	17,070
Widowed	57,160	4.1	2,261	1.5	59,421
Not stated	1,228	0.1	-	-	1,228
Total	1,377,878	100	152,858	100	1,530,736

### Table 5.2 Percentage Distribution of the Population by Migration Status and Marital Status 2017

### **5.3 MIGRATION AND RELIGION**

Table 5.3 below shows the majority of migrants were Christians (89, 7%), followed by those that do not associate themselves with any religion (7.6%) and those that believe in Badimo at (2.5%). Other religions recorded were not captured during the survey.

### Table 5.3 Percentage Distribution of the Population by Migration Status and Religion 2017

Religion	Non migrants	Percent non migrant	Migrants	Percent Migrants	Total
Christianity	1,191,050	86.4	137,188	89.7	1,328,238
Islam	5,053	0.4	129	0.1	5,182
Bahai	404	0.0	-	-	404
Hinduism	2,234	0.2	-	-	2,234
Badimo	30,197	2.2	3,782	2.5	33,979
No Religion	144,537	10.5	11,553	7.6	156,090
Other, specify	2,915	0.2	206	0.1	3,121
Not stated	1,490	0.1	-	-	1,490
Total	1,377,880	100	152,858	100	1,530,738

### **5.4 MIGRATION AND SCHOOL ATTENDANCE**

The table below indicate that education is associated with the propensity to migrate. Migrants who and have been to school and have since left school were at the peak (68.5percent) followed by those who are still at school (19.8percent) and those who never attended (11.7percent).

### Table 5.4 Percentage Distribution migrants Population by School Attendance 2017

Education	Non Migrants	Percent Non Migrants	Migrants	Percent Migrants	Total
Still at school	557,260	30.1	37,458	19.8	594,718
Yes, left	1,008,209	54.5	129,293	68.5	1,137,502
Never attended	285,593	15.4	22,033	11.7	307,626
Not stated	136	0.0	-	-	136
Total	1,851,198	100	188,784	100	2,039,982

### **5.5 MIGRATION AND AGE**

The results show that the population aged 15-39 tend to migrate more than other age groups. The highest proportion of migrants is noticed among age group 20-24 (1.7percent) followed by 25-29 (1.4percent), 15-19 and 30-34 (1.0percent) respectively. Other age groups (0-14 and above 65) contributed less than 1 percent of the total migrants. This therefore means that, children of school going ages and the elderly are usually less likely to migrate.

Table 5.5 Percentage Distribution of the Population by Migration Status and Age 2017

Age Group	Non Migrants	% Non-Migrants	Migrants	% Migrants	Total
0-4	133,366	6.5	14,474	0.7	147,840
5-9	245,344	12.0	16,765	0.8	262,109
10-14	222,410	10.9	12,566	0.6	234,976
15-19	151,465	7.4	20,259	1.0	171,724
20-24	147,135	7.2	35,402	1.7	182,537
25-29	144,425	7.1	27,922	1.4	172,347
30-34	158,111	7.8	20,815	1.0	178,926
35-39	141,731	6.9	14,380	0.7	156,111
40-44	117,562	5.8	9,459	0.5	127,021
45-49	83,332	4.1	5,893	0.3	89,225
50-54	81,217	4.0	3,830	0.2	85,047
55-59	61,101	3.0	2,460	0.1	63,561
60-64	50,832	2.5	1,710	0.1	52,542
65-69	36,887	1.8	554	-	37,441
70-74	25,789	1.3	382	-	26,171
75-79	19,811	1.0	508	-	20,319
80-84	11,745	0.6	728	-	12,473
85-89	10,066	0.5	507	-	10,573
90-94	5,272	0.3	172	-	5,444
85+	3,596	0.2	-	-	3,596
Total	1,851,197	90.7	188,786	9.3	2,039,983

### **5.6 INTERNATIONAL MIGRATION**

### 5.6.1 IMMIGRANTS BY SEX

The results show that the country received a slightly higher proportion of female migrants (51.4percent) compared to their male counterparts (48.6percent). The highest proportion of immigrants were from Zimbabwe (50.5percent), followed by South Africa (21.6 percent) and Namibia (6.0percent). Immigrants from other countries recorded proportions lower than 5 percent with Croatia and Zambia both recording the lowest proportions (0.9percent).

	Sex					
Country of Origin	Male	Percent	Female	Percent	Total	Percent
Malawi	86	35.4	157	64.6	243	2.6
Mozambique	124	50.0	124	50.0	248	2.7
Namibia	260	46.5	299	53.5	559	6.0
South Africa	1,129	56.0	887	44.0	2,016	21.6
Zambia	87	100	-	-	87	0.9
Zimbabwe	2,169	46.0	2,549	54.0	4,718	50.5
Tanzania	133	44.5	166	55.5	299	3.2
Kenya	164	100	-	-	164	1.8
China	115	100	-	-	115	1.2
India	-	-	202	100	202	2.2
Srti Lanka	189	100	-	-	189	2.0
Israel	87	100	-	-	87	0.9
Russia	-	-	87	100	87	0.9
United Kingdom	-	-	252	100	252	2.7
Crotia	-	-	82	100	82	0.9
Total	4,543	48.6	4,805	51.4	9,348	100

 Table 5.6.1: Percentage Distribution of Immigrants by Country of Origin 2017
### 5.6.2 IMMIGRANTS BY SEX AND AGE

International migration is dominated by females (51.0percent) compared to males (49.0 percent). The peak ages of immigrants was 20-24 years (21.9percent), followed by 30-34 (15.2percent), 15-19 (13.8percent) and 25-29 (12.9percent).

Age-group	Male	Percent	Female	Percent	Total
0-4	371	53.2	327	46.8	698
5-9	250	42.4	340	57.6	590
10-14	151	100	-	-	151
15-19	298	22.9	1,005	77.1	1,303
20-24	899	43.6	1,162	56.4	2,061
25-29	501	41.2	715	58.8	1,216
30-34	757	52.9	674	47.1	1,431
35-39	429	61.2	272	38.8	701
40-44	281	60.0	187	40.0	468
45-49	87	100	-	-	87
50-54	201	75.6	65	24.4	266
55-59	134	100	-	-	134
60-64	183	75.6	59	24.4	242
70-74	76	100	-	-	76
Total	4,618	49.0	4,806	51.0	9,424

Table 5.6.2 : Percentage Dis	tribution of Immigrants by Age and Sex 2017
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Country of Origin	Still at school	Yes, left	Never attended	Not stated
Malawi	-	100	-	-
Mozambique	-	100	-	-
Namibia	18.4	49.0	18.4	14.2
South Africa	7.1	83.5	9.4	-
Zambia	-	100	-	-
Zimbabwe	7.5	79.2	13.4	-
Tanzania	30.4	44.5	25.1	-
Kenya	-	100	-	-
China	-	100	-	-
India	-	100	-	-
Sri Lanka	-	100	-	-
Israel	-	100	-	-
Russia	-	100	-	-
United Kingdom	-	100	-	-
Croatia	-	100	-	-
Unknown	-	100	-	-
Total	7.2	81.5	10.5	0.7

### Table 5.6.3: Percentage Distribution of Migrants by School Attendance 2017

Table 5.6.3 above shows majority of migrants who were still at school came from Tanzania (30.4percent) and from Namibia (18.4 percent). Moreover, 81.5 percent of all migrants in Botswana had left school while only 10.5 percent of migrants in Botswana hade never attended school. It must be noted that majority the migrants who have never attended school came from Tanzania, followed by those from Namibia and Zimbabwe with 18.4 percent and 13.4 percent respectively.

### **CHAPTER 6 HOUSEHOLD CHARACTERISTICS**

This chapter provides information on the characteristics of the households in Botswana, which is a useful measure for evaluating the welfare and socio-economic wellbeing of the population. It provides information on a range of housing characteristics such as construction material of housing units, number of rooms, housing structures and tenure of housing unit. It also includes information on average household size, sources of energy, water supply, sanitation and refuse disposal.

### 6.1 AVERAGE HOUSEHOLD SIZE

**Table 6.1** below provides information on the average household size in the districts and place of residence. If further indicates that the average household size in Botswana during the BDS 2017 was 3.3 persons per household. The average household size is slightly lower than the one recorded in the BDS 2006 which was 4.2 persons per household.

Ngwaketse West had the largest household size of 4.1 persons per household followed by Central Bobonong, Ngamiland West both with 4.0 persons per household. Small households are common in Gaborone and Lobatse (2.7 and 2.4 persons per household respectively). A comparison between places of residence shows that cities towns (2.9) have slightly smaller households' sizes than urban villages (3.5) and rural villages (3.4).

	Total Population	Number of households	Average Household Size
District			
Gaborone	234775	85589	2.7
Francistown	107228	34641	3.1
Lobatse	28493	9674	2.9
Selebi Pikwe	49460	16193	3.1
Orapa	10062	3235	3.1
Jwaneng	16469	6855	2.4
Sowa Town	3886	1236	3.1
Ngwaketse	136098	38183	3.6
Barolong	57096	16646	3.4
Ngwaketse West	14600	3587	4.1
South East	99361	31920	3.1
Kweneng East	280695	87822	3.2
Kweneng West	54014	15275	3.5
Kgatleng	99131	29065	3.4
Serowe Palapye	187826	54661	3.4
Central Mahalapye	124857	34591	3.6
Central Bobonong	81510	20587	4.0
Central Boteti	61851	16438	3.8
Central Tutume	158898	44618	3.6
North East	64333	18207	3.5
Ngamiland East	93278	24893	3.7
Ngamiland West	62062	15577	4.0
Chobe	27389	9941	2.8
Ghanzi	43821	13378	3.3
Kgalagadi South	35164	9181	3.8
Kgalagadi North	22509	7813	2.9
Place of Residence			
Cities and towns	450373	157423	2.9
Urban Villages	925926	265701	3.5
Rural Villages	778564	226681	3.4
Total	2154863	649806	3.3

### Table 6.1: Average household size by district and place of residence 2017

### **6.2 HOUSING CHARACTERISTICS**

### 6.2.1: TYPE OF HOUSING UNIT

**Table 6.2.1** below presents information on the type of housing units by districts. The data shows that detached houses are the most common type of housing units with 48.3 percent followed by rooms and mixed structures at 25.4 percent and 10.4 percent respectively. Traditional structures, semi- detached houses, town houses/ terrace, flats/apartments, structures which are part of a commercial building and movable housing units accounted for the remaining 15.9 percent. In comparison to the BDS 2006, the proportion of traditional structures has decreased from 13.2 percent to 7.8 percent. The table further reveals that detached houses and semi-detached houses are common in urban districts of Orapa, Sowa Town and Jwaneng

	Type of housing unit											
District	Tradițional structure (Lolwapa)	Mixed structures	Detached house	Semi- detached	Town house / Terraced	Flats, Apartment	Part of commercial building	Movable	Shack	Rooms	Not stated	Tota
Gaborone	-	0.7	59.0	2.6	0.2	5.9	-	-	0.4	31.1	0.1	100
Francistown	-	1.9	48.7	4.9	0.2	1.8	-	-	0.2	42.3	-	100
Lobatse	0.6	0.6	48.8	13.1	-	9.2	-	-	-	27.8	-	100
Selebi Pikwe	0.5	3.6	50.1	5.9	-	5.3	-	-	-	34.5	-	100
Orapa	-	-	46.5	46.0	-	5.1	-	-	-	2.4	-	100
Jwaneng	-	1.1	78.0	10.1	-	-	-	-	1.1	9.8	-	100
Sowa Town	-	-	73.3	24.0	-	-	-	-	-	2.7	-	100
Ngwaketse	8.1	13.8	53.4	2.7	-	-	-	0.4	4.6	16.9	-	100
Barolong	9.1	11.9	49.7	2.3	-	0.4	-	0.5	4.9	21.2	-	100
Ngwaketse West	20.0	14.0	48.0	-	-	-	-	-	1.0	17.1	-	100
South East	0.5	3.2	55.3	6.1	-	4.0	-	-	2.1	28.7	-	100
Kweneng East	4.5	10.8	42.4	2.3	0.1	1.0	-	0.2	1.3	37.3	0.1	100
Kweneng West	22.4	18.6	34.7	2.0	-	1.2	-	0.3	10.5	9.8	0.5	100
Kgatleng	3.2	11.8	62.7	1.0	0.5	0.5	-	0.4	2.9	16.9	-	100
Serowe Palapye	9.2	12.0	49.6	2.7	-	-	-	-	3.4	23.1	-	100
Central Mahalapye	10.0	15.4	56.3	2.2	-	0.8	-	0.2	2.1	13.0	-	100
Central Bobonong	12.4	19.6	48.5	0.3	-	0.5	-	-	1.2	17.6	-	100
Central Boteti	25.9	11.5	24.8	5.7	-	-	-	0.4	0.7	31.1	-	100
Central Tutume	14.9	22.9	34.0	6.5	-	1.9	0.3	-	0.9	18.7	-	100
North East	5.1	25.7	48.8	3.2	-	0.9	-	-	0.5	15.7	-	100
Ngamiland East	10.6	9.3	40.5	2.4	-	1.1	-	1.0	4.7	30.4	-	100
Ngamiland West	40.3	16.7	26.0	3.7	-	-	-	1.2	1.6	10.5	-	100
Chobe	2.5	8.0	45.3	4.7	-	3.1	-		1.0	35.4	-	100
Ghanzi	16.1	13.4	48.2	1.9	-	-	-	1.4	3.8	15.2	-	100
Kgalagadi South	16.4	5.0	43.4	2.0	-	-	-	2.9	11.4	18.8	-	100
Kgalagadi North	15.8	4.1	42.0	0.7	-	-	-	2.9	7.8	26.8	-	100
Total	7.8	10.4	48.3	3.6	0.1	1.9	-	0.3	2.2	25.4	-	100
Number	50,825	67,499	313,814	23,519	514	12,149	115	1,837	14,445	164,852	237	649,806

Table 6.2.1 : Percentage distribution of households by type of housing unit and district 2017

### 6.2.2 TENURE OF HOUSING UNIT

Table 6.2.2 below presents information on the type of housing unit and how it was acquired. The table further reveals that the highest proportion of housing units are self-built (47.5 percent) followed by houses rented from individuals and free housing units (26.5 and 9.8 percent respectively). The remaining tenancy status had a share of less than 10 percent. Further, most of the traditional structures (85.4 percent), mixed structures (76.8 percent), townhouses/terraces (59.6 percent), detached houses (51.6 percent), and shacks (48.6 percent) are self-built. Renting was common for flats/apartments, semi-detached houses, rooms and part of a commercial buildings whereas movable structures are mostly occupied by households not owning their housing unit but not paying any rent either such as at cattle post areas or people on construction site.

Table 6.2.2 : Percentage distribution of households by type of housing unit and tenure of housing 2017

		Type of housing unit										
Tenure of housing unit	Traditional structure (Lolwapa)	Mixed structures	Detached house	Semi- detached	Town house / Terraced	Flats, Apartment	Part of commercial building	Movable	Shack	Rooms	Not stated	Total
Self-Built	85.4	76.8	51.6	-	59.5	0.6	-	27.3	48.6	26.5	-	47.5
Inherited (Own- er-occupied)	5.7	9.0	4.6	-	-	-	-	-	2.7	4.2	-	4.7
Purchased (Owner-occu- pied)	0.1	0.7	3.5	0.6	25.9	3.6	-	10.5	0.4	0.2	-	2.0
Rent: BHC	-	-	1.2	3.3	-	5.3	-	-	-	0.1	-	0.8
Rent: Govern- ment	-	0.4	4.1	28.8	-	25.6	-	-	-	0.4	-	3.6
Rent: Council	-	0.1	2.5	7.4	-	17.8	-	-	-	0.4	-	2.0
Rent: Individual	0.2	6.4	20.4	27.2	14.6	21.0	100	-	3.0	57.2	-	26.5
Rent: Company	-	0.1	1.3	7.8	-	10.7	-	-	3.2	1.2	-	1.5
Rent: VDC	-	0.1	0.8	1.5	-	-	-	-	-	1.0	-	0.7
Free (Inc. Job related)	8.4	5.1	9.2	22.9	-	15.3	-	62.2	40.4	7.7	-	9.8
Donated	-	0.8	0.4	-	-	-	-	-	1.1	0.2	-	0.3
Don't know	0.3	0.4	0.2	0.6	-	-	-	-	0.6	0.6	-	0.4
Not stated	-	0.1	0.1	-	-	-	-	-	-	0.4	100	0.2
Total	100	100	100	100	100	100	100	100	100	100	100	100
Number	50,825	67,499	313,814	23,519	514	12,149	115	1,837	14,445	164,852	237	649,806

### 6.3 NUMBER OF ROOMS

In this survey, the number of rooms are those used as living rooms or for sleeping, including any other room such as garage, kitchen as long as they are used for sleeping. Table 6.3 provides information on the number of rooms by type of housing units. It indicates that the dominating houses are of one room type (33.7 percent) followed by structures with 2 rooms and 3 rooms (24.3 percent and 20.5 percent respectively). Households using 8 rooms or more recorded the least number with less than ten percent. Overall, the proportion of housing units decreases as the number of rooms increases. Furthermore the results also indicates that the one room houses are more likely to be rooms at 52.1 percent while detached houses are dominating in all the remaining categories.

Table 6.3 : Percentage distribution of housing units by type of housing unit and number of rooms 2017

								Num	ber of roc	ms									
	1 roo	m	2 roor	ms	3 rooi	ns	4 roo	ms	5 roo	ms	6 roo	ms	7 roc	ms	8+ ro	oms	N Stat	ot ed	Total
Type of housing unit	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number
Traditional structure (Lolwapa0)+	28,799	13.2	13,719	8.7	5,599	4.2	1,920	2.4	526	1.7	77	0.5	108	1.6	78	1.7	-	-	50,825
Mixed structures	11,928	5.4	19,293	12.2	14,401	10.8	10,065	12.3	5,237	16.5	3,860	26.2	1,463	21.8	1,252	28.0	-	-	67,499
Detached house	45,089	20.6	80,350	50.9	87,327	65.4	61,267	75.1	23,540	74.3	8,777	59.5	4,744	70.6	2,719	60.9	-	-	313,814
Semi- detached	3,836	1.8	7,549	4.8	9,090	6.8	2,627	3.2	236	0.7	180	1.2	-	-	-	-	-	-	23,519
Town house / Terraced	-	-	-	-	-	-	75	0.1	-	-	133	0.9	104	1.5	202	4.5	-	-	514
Flats, Apartment	470	0.2	3,085	2.0	6,692	5.0	1,529	1.9	231	0.7	142	1.0	-	-	-	-	-	-	12,149
Part of commercial building	115	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	115
Movable	1,593	0.7	219	0.1	-	-	24	-	-	-	-	-	-	-	-	-	-	-	1,837
Shack	13,075	6.0	1,228	0.8	141	0.1	-	-	-	-	-	-	-	-	-	-	-	-	14,445
Rooms	114,047	52.1	32,555	20.6	10,199	7.6	4,033	4.9	1,924	6.1	1,583	10.7	296	4.4	214	4.8	-	-	164,852
Not stated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	237	100	237
Total	218,952	33.7	157,999	24.3	133,450	20.5	81,541	12.5	31,695	4.9	14,752	2.3	6,715	1.0	4,465	0.7	237	0	649,806

### 6.4 MATERIAL OF CONSTRUCTION OF THE MAIN HOUSE

The material of construction of a housing unit can be used to measure the quality of a housing unit. Materials of poor quality may expose occupants to harsh weather conditions and diseases. Table 6.4 below shows the percentage distribution of housing units by construction material according to place of residence.

Table 6.4 : Percentage	distribution of housing	units by construction materia	l of housing: Wall, Floor, Roof 2017
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	Cities a	ind Towns	Urban	Villages	Rural \	/illages	Total		
Construction Material	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	
Type of Wall									
Modern bricks/blocks	156,042	99.1	259,931	97.8	152,152	67.1	568,125	87.4	
Mud bricks/blocks	476	0.3	2,874	1.1	33,597	14.8	36,948	5.7	
Mud and poles/cow dung/thatch/reeds	-	-	1,349	0.5	24,051	10.6	25,400	3.9	
Poles and reeds/straw	-	-	126	-	1,678	0.7	1,804	0.3	
Corrugated Iron/Zinc/Tin	318	0.2	634	0.2	10,495	4.6	11,448	1.8	
Asbestos	356	0.2	179	0.1	238	0.1	773	0.1	
Wood	68	-	164	0.1	870	0.4	1,102	0.2	
Stone	-	-	-	-	323	0.1	323	-	
Other (Specify)	76	-	365	0.1	3,205	1.4	3,646	0.6	
Not stated	87	0.1	78	-	72	-	237	-	
Type of Floor									
Cement	87,897	55.8	171,335	64.5	139,356	61.5	398,589	61.3	
Mud/Mud and Dung	136	0.1	2,383	0.9	48,335	21.3	50,853	7.8	
Wood	143	0.1	342	0.1	660	0.3	1,146	0.2	
Brick/stones	187	0.1	-	-	298	0.1	484	0.1	
Tile	68,591	43.6	91,000	34.2	31,206	13.8	190,796	29.4	
Other (Specify)	383	0.2	562	0.2	6,755	3.0	7,700	1.2	
Not stated	87	0.1	78	-	72	-	237	-	
Type of Roof									
Slate	742	0.5	417	0.2	82	-	1,241	0.2	
Thatch/Straw	115	0.1	3,491	1.3	38,058	16.8	41,664	6.4	
Roof Tiles	35,972	22.9	45,714	17.2	13,352	5.9	95,037	14.6	
Corrugated Iron/Zinc/Tin	117,029	74.3	213,930	80.5	171,905	75.8	502,864	77.4	
Asbestos	2,698	1.7	371	0.1	131	0.1	3,200	0.5	
Concrete	687	0.4	1,287	0.5	580	0.3	2,554	0.4	
Other (Specify)	94	0.1	412	0.2	2,501	1.1	3,007	0.5	
Not stated	87	0.1	78	-	72	-	237	-	
Total	157,423	100	265,701	100	226,681	100	649,806	100	

### 6.4.1 TYPES OF WALL MATERIAL

Nationally, the most common type of material for constructing walls is modern bricks/blocks at 87.4 percent, a slight increase compared to 79.9 percent in 2006 BDS. About 5.7 percent of housing units were built using mud bricks/blocks followed by 3.9 percent of housing units built using mud and poles, cow dung, thatch or reeds. The materials for constructing walls varies by place of residence. Significant proportions were recorded in Cities /Towns and urban villages at 99.1 percent and 97.8 percent respectively. However, rural areas recorded the lowest proportion at 67.7 percent.

### 6.4.2 TYPES OF FLOOR MATERIAL

There were five types of floor materials used in Botswana namely cement, tiles, wood, Mud / mud and dung, Bricks / stones. Cement is commonly used as floor material at 61.3 percent followed by tiles 29.4 percent .The lowest proportion of housing unit used bricks or stone recording about 0.1 percent.Most housing units in Cities/Towns used cement as a flooring material at 55.8 percent while 43.6 percent of housing unit used floor tiles. Urban villages recorded 64.5 percent of cement floors and 34.2 percent of floor tiles. Nonetheless, in rural villages, cement floor (61.5 percent) is followed by mud/Mud and dung floors at 21.3 percent while tiles recorded 13.8 percent. Other types of floor materials in all place of residence recorded less than 0.5 percent.

### 6.4.3 TYPES OF ROOFING MATERIAL

The most common material for roofing was corrugated Iron/Zinc /Tin with 77.4 percent housing units. About fifteen percent of housing units used tiles for roofing and 6.4 percent used thatch/Straw In addition, the results show variations of roofing materials by place of residence. Corrugated iron/zinc/tin is mostly used in all types

of residence; Cities/Town (77.3%), Urban Villages at 85.1 percent and rural villages at 75.8 percent. Meanwhile, roof tiles is the second used roof material at 22.9 percent in cities/Towns whereas in urban villages only 17.2 percent used the roofing tile. It is worth noting that the second most used roof material in rural villages is thatch at 16.8 percent.

### **6.5 SOURCES OF DRINKING WATER**

Sustainable Development Goal 6 seeks to ensure availability and sustainable management of water and sanitation for all. Botswana as a signatory to SDGs is committed to ensuring availability and access to clean and safe water to its people. Table 6.5 below presents information on the principal source of water supply, persons collecting water and time taken to obtain water (round trip). The result shows that a significant proportion of 46.2 percent of households draw water in their yards (piped outdoors) followed by piped indoor taps and communal water taps with 28.9 percent and 8.4 percent respectively.

Most households in cities and towns use piped indoor taps at 48.4 percent and 45.7 percent use taps in the yard (piped outdoors). The results show that about 2.4 percent of households use bottled water from stores and about 0.6 percent use water from bowsers or tankers. In urban villages, 58.1 percent of households use taps in their yards (piped outdoors) followed by piped indoor taps at 32.0 percent whereas 2.7 percent use communal taps. In rural areas 32.5 percent of households draw water from taps in their yards followed by communal water taps at 21.0 percent and boreholes at 12.1 percent. Notwithstanding, rural areas show that 11.5 percent of households draw water from piped indoor.

It is worth noting that males are responsible for collecting water compared to female, about 53.3 percent of adult males are responsible for collecting water whereas 42.5 percent of adult females collects water. Male children (2.3 percent) are more likely to collect water compared to female children (1.8 percent).

The survey question sought to find how long it takes for a round trip to fetch water. A significant proportion (77.8 percent) of people in Botswana get drinking water from their premises. Those who get water in less than fifteen minutes recorded 7.6 percent and about 4.4 percent get water between fifteen minutes and thirty minutes. The remaining population get water in more than one an hour. Furthermore, the results show that the time taken to fetch water varies by place of residence. Rural areas recorded the lowest proportion at 46.8 percent of those who fetched water on premises compared to 97.3 percent in cities and towns and 92.7 percent in urban villages. Predominantly, most of the rural areas dwellers fetched water within the threshold time of one hour, about 8.4 percent fall outside the one hour threshold.

Table 6.5 : Percentage distribution of housing units by place of residence and principal source of water, perso
collecting water and time taken to fetch water 2017

	Cities and Towns Urbo			Villages	Rural \	/illages	To	tal
Principle source of water	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Principal Source of Water								
Piped Indoors	76,235	48.4	85,111	32.0	26,143	11.5	187,489	28.9
Tap in the yard (piped outdoors)	71,988	45.7	154,426	58.1	73,719	32.5	300,134	46.2
Communal tap	129	0.1	7,106	2.7	47,516	21.0	54,751	8.4
Bouser/Tanker	941	0.6	1,935	0.7	10,103	4.5	12,979	2.0
Well	-	-	-	-	6,382	2.8	6,382	1.0
Borehole	-	-	308	0.1	27,468	12.1	27,776	4.3
River/Stream	-	-	88	-	3,839	1.7	3,927	0.6
Dam/Pan/lake	-	-	-	-	3,170	1.4	3,170	0.5
Rain water tank	-	-	130	-	376	0.2	506	0.1
Bottled water from stores	3,834	2.4	5,168	1.9	1,469	0.6	10,471	1.6
Other (Specify)	4,209	2.7	11,270	4.2	26,425	11.7	41,904	6.4
Not stated	87	0.1	158	-	72	-	317	-
Total	157,423	100	265,701	100	226,681	100	649,806	100
Person collecting water								
Adult Female	2,326	51.2	10,380	54.3	48,092	40.2	60,798	42.5
Adult Male	2,010	44.2	7,670	40.1	66,632	55.7	76,312	53.3
Female Child( under 15)	139	3.1	147	0.8	2,237	1.9	2,522	1.8
Male Child(under 15)	68	1.5	715	3.7	2,482	2.1	3,265	2.3
Not Stated	-	-	208	1.1	89	0.1	297	0.2
Total	4,543	100	19,120	100	119,531	100	143,194	100
Time taken to fetch water	(round trip)							
On Premises	153,126	97.3	246,300	92.7	106,008	46.8	505,434	77.8
Less than 15 minutes	3,085	2.0	8,989	3.4	37,408	16.5	49,482	7.6
15 minutes to less than 30 minutes	299	0.2	2,988	1.1	25,243	11.1	28,529	4.4
30 minutes to less than 1 hour	163	0.1	3,396	1.3	22,246	9.8	25,805	4.0
One Hour or more	-	-	1,357	0.5	19,062	8.4	20,419	3.1
Do not Know	663	0.4	2,353	0.9	16,643	7.3	19,659	3.0
Not Stated	87	0.1	318	0.1	72	-	477	0.1
Total	157,423	100	265,701	100	226,682	100.0	649,805	100

### 6.6 SOURCES OF ENERGY

Botswana is among the countries that are signatory to the UN Sustainable Development Goals7 (SDG7) which aims to deliver affordable, reliable, sustainable and modern energy for all. The two indicators used to measure SDG7 are the proportion of population with access to electricity and the proportion of population with primary reliance on clean fuels and technology. The use of unclean energy sources for lighting, cooking and heating has undesirable after effects on other development areas consequently limiting the attainment of all other SDGs.

### 6.6.1 SOURCE OF FUEL FOR LIGHTING

Table 6.6 below presents information on the source of fuel used for lighting, cooking and heating space. Most households use electricity for lighting (67.4 percent) followed by paraffin (11.8 percent) and candle (10.4 percent). The use of electricity for lighting has sharply increased from 38.3 percent in 2006 to 67.4 percent in 2017. Almost all the households in cities and towns and urban villages use electricity for lighting at 85.6 percent and 84.0 percent respectively. In rural areas, only 35.4 percent of households use electricity followed by paraffin at 22.9 percent and candle at 18.1 percent.

### 6.6.2 SOURCE OF FUEL FOR COOKING

The results show that the most common source of energy used for cooking is gas (Liquid Petroleum Gas) at 40.6 percent followed by wood and electricity at 33.9 percent and 24.8 percent respectively. The BDS 2006 data indicated that 44.8 percent of households used wood for cooking while 7.2 percent of households used electricity. Other sources of energy for cooking such as paraffin, bio gas, cow dung, and crop waste had a share of less than 10 percent. The most common source of energy used for cooking in both cities and towns as well as in urban villages is gas (LPG) and electricity at 62.9 percent and 49.0 percent respectively. Nonetheless most rural households use wood at 72.6 percent, followed by gas at 15.2 percent and electricity at 11.2 percent.

### 6.6.3 SOURCE OF FUEL FOR HEATING SPACE

Table 6.6 below shows that 50.6 percent of households do not have any source of energy for heating space. The use of wood for heating space has decreased from 49.1 percent in 2006 to 27.2 percent in 2017. Also, equal proportions of households in cities and towns (56.7 percent) and urban villages (56.6 percent) do not use any source of energy for heating space while a much higher proportion of rural households (51.0 percent) use wood.

Table 6.6 : Percentage distribution	of housing units by sources	of energy and place of residence 2017

		Place Of Residence						
	Cities o	and Towns	Urban	Villages	Rural	Villages	To	otal
Characteristics	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Source of fuel for lighting								
Electricity	134,794	85.6	223,266	84.0	80,141	35.4	438,201	67.4
Gas (LPG)	203	0.1	480	0.2	283	0.1	966	0.1
Wood	213	0.1	1,134	0.4	10,041	4.4	11,389	1.8
Paraffin	8,717	5.5	15,836	6.0	51,953	22.9	76,506	11.8
Candle	9,518	6.0	17,444	6.6	40,919	18.1	67,881	10.4
Paraffin/ candle	1,877	1.2	4,052	1.5	13,307	5.9	19,235	3.0
Solar Power	1,116	0.7	1,638	0.6	13,946	6.2	16,700	2.6
Bio Gas	-	-	-	-	68	-	68	-
Other (specify)	898	0.6	1,693	0.6	15,889	7.0	18,479	2.8
Not stated	87	0.1	158	0.1	135	0.1	380	0.1
Total	157,423	100	265,701	100	226,681	100	649,806	100
Source of fuel for cooking	I							
Electricity	51,108	32.5	84,670	31.9	25,335	11.2	161,113	24.8
Gas (LPG)	98,960	62.9	130,078	49.0	34,542	15.2	263,580	40.6
Paraffin	716	0.5	159	0.1	1,029	0.5	1,904	0.3
Solar Power	67	-	-	-	201	0.1	268	-
Bio Gas	519	0.3	54	-	162	0.1	735	0.1
Wood	5,819	3.7	50,060	18.8	164,492	72.6	220,371	33.9
Cow-dung	-	-	-	-	408	0.2	408	0.1
Crop waste	-	-	307	0.1	78	-	386	0.1
Charcoal	-	-	76	0.0	49	-	125	-
Other (specify)	147	0.1	138	0.1	313	0.1	598	0.1
Not stated	87	0.1	158	0.1	72	-	317	-
Total	157,423	100	265,701	100	226,681	100	649,806	100
Source fuel for heating								
Electricity	52,260	33.2	61,773	23.2	19,513	8.6	133,545	20.6
Gas (LPG)	2,717	1.7	1,633	0.6	641	0.3	4,991	0.8
Wood	11,700	7.4	49,587	18.7	115,614	51.0	176,901	27.2
Paraffin	135	0.1	182	0.1	840	0.4	1,157	0.2
Solar Power	158	0.1	117	-	128	0.1	403	0.1
Cow dung	-	-	-	-	71	-	71	-
Charcoal	294	0.2	173	0.1	-	-	467	0.1
Coal	-	-	137	0.1	104	-	241	-
None	89,330	56.7	150,485	56.6	89,136	39.3	328,951	50.6
Other (specify)	743	0.5	1,456	0.5	501	0.2	2,700	0.4
Not stated	87	0.1	158	0.1	135	0.1	380	0.1
Total	157,423	100	265,701	100	226,681	100	649,806	100

### **6.7 SANITATION FACILITIES**

Figure 6.7 presents information on the type of toilet facilities used by households in Botswana. The data shows that majority of households in Botswana use "own flush" toilet(43.7 percent) followed by owned pit latrines with 38.7 percent and households with no toilet facility at 10.8 percent. There has been an improvement from the 2006 BDS results which indicated that 24.4 percent of households used "own flush" toilets. The table further indicates that majority of households in cities \towns (78.5 percent) have access to owned flush toilets followed by 46.9 percent in urban villages while in rural areas the most common toilet facilities are pit latrines at 43.6 percent.



### Table 6.7 : Percentage distribution of housing units by type of toilet facilities and place of residence 2017

		Place Of Residence								
	Cities o	and Towns	Urban	Villages	Rural \	/illages	То	ital		
Toilet Facilities	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage		
Own: Flush toilet	123,637	78.5	124,701	46.9	35,896	15.8	284,234	43.7		
Own: Ventilated Improved Pit Latrine (VIP)	585	0.4	2,523	0.9	1,831	0.8	4,939	0.8		
Own: Pit latrine	29,378	18.7	123,023	46.3	98,785	43.6	251,186	38.7		
Own: Enviro-loo	93	0.1	-	-	2,090	0.9	2,183	0.3		
Communal: Flush toilet	1,272	0.8	1,704	0.6	1,807	0.8	4,782	0.7		
Communal: Pit latrine	942	0.6	1,059	0.4	1,119	0.5	3,120	0.5		
Communal: Neighbors toilet	916	0.6	7,904	3.0	20,140	8.9	28,959	4.5		
None	514	0.3	4,628	1.7	64,944	28.6	70,086	10.8		
Not stated	87	0.1	158	0.1	72	-	317	-		
Total	157,423	100	265,701	100	226,681	100	649,806	100		

### 6.8 REFUSE DISPOSAL

Table 6.8 below presents different ways of disposing of refuse in Botswana. The table shows that 50.9 percent of households have their waste collected. The percentage of households who have their waste disposed of by being collected has risen from 37.7 percent since the 2006 BDS survey. The percentage of households who burn refuse and those who use a rubbish pit are almost similar at 20.5 percent and 18.6 percent respectively. Fewer than ten percent (7.9 percent) of households dispose their refuse by the roadside. All the households in Orapa, Jwaneng and Sowa Town have their refuse collected from home. The next districts having a higher percentage of households with waste collected from their homes are Gaborone, Francistown, Lobatse, Selibe Phikwe, South East and Chobe while Kgalagadi South and Ngamiland West have the least percentage of households which have their waste collected from their homes. The use of rubbish pits is highest in Kgalagadi North and Kweneng West at 45.8 percent and 43.7 percent respectively. The table also indicates that burning as a mode of waste disposal is more common in Ngamiland West by 50.9 percent and Central Tutume at 39.3 percent.

					Moo	de of refu	use Disposo	al					
	Collec	:ted	Burr	ı	Road dum	lside ping	Rubbis	h pit	Other (s	specify)	Not st	lated	
District	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Total
Gaborone	84,512	98.7	285	0.3	219	0.3	197	0.2	209	0.2	168	0.2	85,589
Francistown	32,052	92.5	1,484	4.3	343	1.0	628	1.8	134	0.4	-	-	34,641
Lobatse	8,819	91.2	68	0.7	275	2.8	512	5.3	-	-	-	-	9,674
Selebi Pikwe	15,420	95.2	251	1.5	135	0.8	322	2.0	66	0.4	-	-	16,193
Orapa	3,235	100	-	-	-	-	-	-	-	-	-	-	3,235
Jwaneng	6,855	100	-	-	-	-	-	-	-	-	-	-	6,855
Sowa Town	1,236	100	-	-	-	-	-	-	-	-	-	-	1,236
Ngwaketse	7,379	19.3	11,002	28.8	6,556	17.2	11,884	31.1	1,362	3.6	-	-	38,183
Barolong	3,803	22.8	5,204	31.3	2,839	17.1	4,551	27.3	250	1.5	-	-	16,646
Ngwaketse West	1,761	49.1	534	14.9	181	5.0	1,111	31.0	-	-	-	-	3,587
South East	26,379	82.6	2,421	7.6	1,311	4.1	1,498	4.7	311	1.0	-	-	31,920
Kweneng East	49,451	56.3	15,221	17.3	7,732	8.8	12,792	14.6	2,466	2.8	158	0.2	87,822
Kweneng West	2,905	19.0	3,592	23.5	1,786	11.7	6,678	43.7	243	1.6	72	0.5	15,275
Kgatleng	11,340	39.0	10,004	34.4	1,347	4.6	5,626	19.4	748	2.6	-	-	29,065
Serowe Palapye	13,943	25.5	17,800	32.6	4,331	7.9	16,662	30.5	1,925	3.5	-	-	54,661
Central Mahalapye	8,797	25.4	9,404	27.2	2,983	8.6	12,959	37.5	448	1.3	-	-	34,591
Central Bobonong	3,179	15.4	6,544	31.8	2,687	13.1	7,308	35.5	868	4.2	-	-	20,587
Central Boteti	5,017	30.5	5,903	35.9	1,369	8.3	3,410	20.7	675	4.1	63	0.4	16,438
Central Tutume	7,107	15.9	17,544	39.3	6,407	14.4	11,347	25.4	2,213	5.0	-	-	44,618
North East	10,543	57.9	3,300	18.1	2,888	15.9	1,362	7.5	114	0.6	-	-	18,207
Ngamiland East	8,222	33.0	8,704	35.0	1,884	7.6	5,939	23.9	144	0.6	-	-	24,893
Ngamiland West	1,478	9.5	7,928	50.9	1,211	7.8	4,554	29.2	407	2.6	-	-	15,577
Chobe	8,008	80.6	904	9.1	498	5.0	407	4.1	124	1.2	-	-	9,941
Ghanzi	6,114	45.7	2,426	18.1	1,609	12.0	3,166	23.7	62	0.5	-	-	13,378
Kgalagadi South	719	7.8	1,799	19.6	1,666	18.1	4,627	50.4	338	3.7	32	0.4	9,181
Kgalagadi North	2,153	27.6	857	11.0	1,196	15.3	3,581	45.8	26	0.3	-	-	7,813
Total	330,427	50.9	133,181	20.5	51,452	7.9	121,121	18.6	13,131	2.0	493	0.1	649,806

### Table 6.8: Percentage distribution of households by mode of refuse disposal and district 2017

### **CHAPTER 7 FAMILY PLANNING**

It has been noted that fertility regulation has the potential to contribute to better maternal health beyond simply reducing the proportion of births that are unwanted. Increased use of contraception has a direct effect of on the reduction of the number of pregnancies.

This chapter presents the findings from the 2017 Botswana Demographic survey on aspects of contraception that include current use of specific method, source of obtaining these methods, reasons for not using and other background characteristics that can influence family planning such as education level and place of residence.

### 7. 1 CONTRACEPTION USE

Information relating to the use of contraceptive methods was collected from female respondents in the reproductive ages by asking them if they have ever used anything to delay or avoid a pregnancy. Respondents were also asked if they were currently using a method to prevent pregnancy and if so, which main method were they using.

Majority of the respondents in the reproductive ages used the male condom at 64.2 percent, injections at 17.0 percent and 12.6 percent of women use the pill.

Moreover the results show that 1.4 percent of women use Intra Uterine Device while female sterilization and Norplant recorded 1.0 percent each. An insignificant proportion of the population were using traditional methods such as withdrawal and prolonged abstinence, both at 0.5 percent and periodic abstinence at 0.2 percent. Moreover, the overall contraceptive prevalence for married women aged 15-49 was estimated at 67.4 percent, which increased from 52.8 percent prevalence rate estimated from the 2007 Botswana Family Health Survey.



### Figure 7.1 Percentage Distribution of contraception Methods use 2017

### **7.2 SOURCE OF CONTRACEPTIVE METHODS**

Source of contraceptives refers to place where the method previously or currently being used was obtained the last time it was acquired. In the BDS 2017, all women who reported that they were currently using or previously used any contraceptive method at the time of the survey were asked their last place of visit to obtain the method.

The majority of contraceptive users mostly obtained their method of choice from the clinic (57.4 percent) (table 7.2). Equally, 18.9 percent obtained contraceptive from pharmacies, and 7.5 percent from hospitals. However, quiet an insignificant percentage obtained their contraceptives from health post (3.6 percent), workplace (2.0 percent), recreational place (1.4 percent), private doctor/hospital/clinic (1.7 percent) and friends/relatives (1.6 percent). The use of contraceptives obtained from traditional practitioners was almost nonexistent.

The condom is available in most places, this was also the case during the BFHS 2007. Amongst people who

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reported to be using the pill, they mostly obtained their method from private doctor/hospital/clinic at 18.3 percent, followed by health post and clinics at 16.5 percent and 13.1 percent respectively. This is in contrast with the BFHS 2017 where respondents obtained their pill from clinics and health post with 16.0 percent and 13.0 percent respectively. In the same way, use of traditional contraceptives for both the BDS 2017 and BFHS 2007 were obtained from traditional practitioners.

	Source of Contraception Method											
Current Method	Health Post	Clinic	Hospital	Private Doctor/ hospital/ clinic	Pharmacy	Traditional practitioner	Workplace	Recreational Place	Friends/ Relatives	Other (specify)	Don't Know	Total (%)
Pill	16.5	13.1	9.7	18.3	9.1	-	-	1.9	-	0.7	-	10.9
IUD	0.2	1.2	4.1	16.1	-	-	-	-	-	-	-	1.3
Injection	25.9	23.7	11.1	14.0	0.1	-	-	-	-	-	-	15.4
Diaphragm/ Foam/Jelly	-	0.2	-	1.4	-	-	-	-	-	-	-	0.1
Male Condom	55.2	59.0	53.9	29.6	88.9	-	98.4	97.0	65.2	92.0	61.9	67.1
Female Condom	0.5	1.2	2.4	-	1.3	-	1.6	-	-	0.9	-	1.2
Female Sterilization	0.7	0.1	11.5	8.5	-	-	-	1.1	-	-	-	1.1
Male Sterilization	-	0.1	0.2	-	0.2	-	-	-	-	-	3.0	0.1
Traditional	-	0.0	-	-	-	100	-	-	1.2	-	-	0.1
Periodic Abstinence	-	0.0	0.4	0.8	-	-	-	-	7.6	1.0	-	0.2
Prolonged Abstinence	-	0.0	1.0	1.6	0.1	-	-	-	13.8	1.8	13.8	0.5
Withdrawal	-	-	-	1.5	-	-	-	-	12.2	2.5	21.3	0.5
Norplant	1.1	1.3	4.8	5.4	-	-	-	-	-	-	-	1.2
Other (specify)	-	0.1	0.8	2.8	0.2	-	-	-	-	1.1	-	0.2
TOTAL	15993	253,525	33,028	7,586	83,295	136	8,731	6,133	7,066	22,846	3,126	441,465
Percentage	3.6	57.4	7.5	1.7	18.9	0.03	2.0	1.4	1.6	5.2	0.7	100

Table 7.2 Percentage Distribution of current user (female) aged	15-49 years of contraceptives by source of method and
specific method 2017	

### 7.3 REASONS FOR NOT USING CONTRACEPTIVE METHOD

The leading reasons for not using any method of contraception are the desire to have a child at 30.4 percent, followed by health problems at 8.4 percent and religion at 7.8 percent as presented in Figure 7.3 below. The other reasons indicated by women were husband/partner disapproval, infrequent sex, lack of knowledge at 6.6, 6.0 and 4.9 consecutively.



### 7.4 PROBLEMS EXPERINCED AFTER USING CONTRACEPTIVE METHODS

Family planning goals can only be achieved when reliable methods of contraception are used consistently. The concern for family planning policies and programmes is the extent to which users experience problems which may cause discontinuation. This information enable family planning providers to better advise potential users on the pros and cons of each contraceptive method, allowing women to make informed choices about the methods that are most suitable.

Figure 7.4 presents different problems that women reportedly experieced after using contraception method. A high proportion (83.5 percent) of contraceptive users mentioned side effects as their main problem in using contraceptives followed by method failure at 5.5 percent. A low proportion of users also indicated that methods of contraception is inconvenient to use, partners disapprove of contraceptive use and that sometimes contraceptive supplies are not available from sources with proportions of 2.3 percent, 0.5 percent and 0.4 percent respectively.



### 7.5 CURRENT USE OF CONTRACEPTION BY BACKGROUND CHARACTERISTICS

Table 7.5 presents information on current use of contraceptives by background characteristics among all women aged 15-49. Current use of contraception methods varies by different background such as marital status, education level, and religion and place residence.

The use of contraceptive method decreases from 45.7 percent among women who were never married to 35.0 percent among women who are living together while 17.5 percent were married women of child bearing ages. Among divorced, widowed and separated the use of contraceptive methods have been reported to be very low recording 0.8 percent, 0.8 percent and 0.2 percent consecutively.

The use of contraceptive method is positively related to a women's level of education, this means that, the higher the education level a woman attains, the more likelihood of contraceptive use and vice-versa. In the BDS 2017, 89.5 percent of women who reported to be currently using contraceptives had attained secondary level followed by those who only went up to primary level with 10.2 percent. Women whose highest level of education attained was non-formal and non-standard curriculum reported very insignificant use of less than 1.0 percent.

The conclusion that can be drawn from the findings of the BDS 2017 is that women residing in urban villages are the highest users of contraceptives at 45.8 while women in rural areas and cities & towns recorded 28.8 percent and 25.3 percent respectively.

and backgroond char	acteristics	,							
				Age gr	oup				
Background characteristics	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total	Percent
MARITAL STATUS									
Married	-	832	4,870	14,458	17,837	15,301	10,185	63,483	17.5
Never Married	13,673	40,081	35,078	29,623	22,745	14,605	9,961	165,765	45.7
Living Together	2,010	18,065	30,616	30,874	25,787	13,058	6,562	126,971	35.0
Separated	-	-	-	85	119	320	109	632	0.2
Divorced	-	-	64	589	666	805	676	2,801	0.8
Widowed	-	-	-	-	588	837	1,390	2,815	0.8
Total	15,684	58,978	70,628	75,628	67,743	44,925	28,883	362,468	100
EDUCATION LEVEL									
Pre school	93	-	-	-	-	-	-	93	0.0
Non standard curriculum	-	-	-	56	78	-	-	134	0.0
Non Formal	-	179	62	318	213	-	313	1,084	0.3
Primary	1,296	2,453	3,838	4,907	4,936	9,365	9,083	35,879	10.2
Secondary	14,064	55,350	66,052	68,881	60,714	33,515	17,363	315,940	89.5
Total	15,454	57,981	69,952	74,162	65,941	42,880	26,759	353,129	100
RELIGION									
Christianity	13,956	53,328	65,368	70,410	63,325	41,808	27,189	335,385	92.5
Islam	-	-	275	422	-	-	75	772	0.2
Hinduism	-	-	87	67	64	65	-	283	0.1
Badimo	179	613	666	452	832	722	470	3,934	1.1
No Religion	1,548	5,036	4,231	4,205	3,442	2,183	1,149	21,796	6.0
Other, specify	-	-	-	72	81	-	-	153	0.0
Not stated	-	-	-	-	-	146	-	146	0.0
Total	15,684	58,978	70,628	75,628	67,743	44,925	28,883	362,468	100
PLACE OF RESIDENCE									
Cities and Towns	2,873	14,948	18,350	20,326	17,307	11,552	6,465	91,822	25.3
Urban Villages	6,949	28,226	34,376	34,949	29,234	19,291	13,057	166,081	45.8
Rural	5,861	15,804	17,901	20,354	21,201	14,082	9,361	104,565	28.8
Total	15,684	58,978	70,628	75,628	67,743	44,925	28,883	362,468	100

# Table 7.5 Percentage Distribution of women age 15-49 years by current use of contraceptive method and background characteristics

### **CHAPTER 8 BIRTH AND NATIONAL REGISTRATION**

### 8.1. BIRTH REGISTRATION STATUS OF CHILDREN UNDER 5 YEARS

Information on birth registration was collected for children under the age of five. Table 8.1 below shows the percentage of children under 5 years of age and whether their births were registered or not. The survey interviewed a total 219,680 children, 87.5 percent had their birth registered. Children aged three and four years have the highest percentage registered at 90.7 percent and 91.0 percent respectively. There was a small proportion (0.08%) of children, whose registration status was not known by their caretakers.

Moreover, birth registration varies by place of residence; the highest proportion was registered in Cities/Towns at 95.7 percent followed by urban areas (89.9%).

Background Characteristics	Yes	No	Do not Know	Total
Sex				
Male	86.7	13.2	0.1	127,193
Female	88.4	11.5	0.1	123,748
Age in Months				
0-6	73.4	26.6	0.0	31,055
7-11	87.0	13.0	0.0	21,891
12-23	89.1	10.6	0.3	49,543
24-35	88.6	11.4	0.0	51,163
36-47	90.6	9.3	0.1	48,373
48-59	91.1	8.9	0.0	47,584
Place of Residence				
Cities/Town	95.7	4.3	0.0	46,695
Urban Village	89.9	10.0	0.2	102,499
Rural	81.5	18.5	0.0	101,747
Total	219,680	31,069	192	250,941
Percent	87.5	12.4	0.1	100

## Table 8.1 : Percentage Distribution of children under 5 years by birth registration status, Sex, Age and Residence 2017

### **8.2 NATIONAL IDENTITY REGISTRATION**

All Batswana citizen aged 16 and above are required to register for national identity card. At the time of the survey, those aged 16 were not all expected to have registered for national identity (Omang) as it is the starting age hence the slightly lower percentage in the 16-19 age group. Figure 8.2 below shows that there is an almost equal proportion of national identity registration among all the age groups.



### **CHAPTER 9 NUTRITIONAL STATUS**

### 9.1 BREASTFEEDING

The World Health Organization and UNICEF recommendations on breastfeeding are as follows; initiation of breast feeding within the first hour after birth; exclusive breastfeeding for the first six months and continued breastfeeding for two years or more, together with safe, nutritionally adequate, age appropriate, responsive complementary feeding starting in the sixth month.

Table 9.1 shows a slight variation in various background characteristics such as sex, where 81.4 percent of males aged below 5 were breastfed compared to 80.2 percent of females. Similarly place of residence differ slightly as 84.9 percent of children in cities/towns were breastfed whereas those in urban areas and rural areas followed by 82.8 percent and 76.9 percent respectively.

Background	Breastfed		Non Brea	stfeeding	Don't		
Characteristics	Number	Percent	Number	Percent	Number	Percent	Total
Sex							
Male	103519	81.4	23518	18.5	156	0.1	127193
Female	99210	80.2	23744	19.2	794	0.6	123748
Age(months)							
0-6	25356	81.6	5505	17.7	194	0.6	31055
7-11	18219	83.2	3673	16,8	0	0	21892
12-23	40465	81.7	9020	18.2	58	0.1	49543
24-35	41016	80.2	10021	19.6	127	0.2	51164
36-47	39123	80.9	9112	18.8	138	0.3	48373
48-59	37637	79.1	9747	20.5	199	0.4	47583
Place of Residence	e						
Cities/Town	39658	84.9	6898	14.8	138	0.3	46694
Urban Village	84830	82.8	17464	17	204	0.2	102498
Rural	78240	76.9	22899	22.5	608	0.6	101747
Total	202728	80.8	47261	18.8	950	0.4	250941

# Table 9.1 : Percentage Distribution of under 5 children by breastfeeding status andbackground characteristics 2017

### 9.2 BREAST FEEDING INITIATION

Early initiation of breastfeeding is important for the child therefore it is recommended that where possible, the child be breastfed immediately after birth. The first milk to come out known as colostrum is highly nutritious and contains anti bodies that provide natural immunity to the infant.

Breastfeeding is common in Botswana. Figure 9.2 below shows how soon after birth the child was given breast. Majority (60 percent) of children under 5 years of age were breastfed within hour after birth. Amongst those who were breastfed within one hour and a day, 29.1 percent were aged two years. In the same period, those aged 1 year and 4 years were 27.4 percent and 27.0 percent respectively. An insignificant proportion of children were given breast after one day at least 5.3 percent.

Figure 9.2: Percentage Distribution of children by Time taken to initiate breastfeeding 2017 100 Percent 50 0 0 1 2 3 4 <1hour</p> 65.9 62.8 61.8 60.7 64 1hour-24 hours 25.6 27.4 29.1 27 23.3 After 1 day 5.3 4 4.6 5.3 4.6 Don't kno w 3.2 5.8 4.4 7.8 7.4

### 9.3 COMPLEMENTARY FEEDING FOR UNDER 5 CHILDREN

World Health Organization recommends that complementary foods be started at the age of six months as breast milk alone is not enough to maintain a child. At this age children need nutritious foods to complement breast feeding.

The survey question sought to establish the type of foods consumed in the previous night before the interview. The results show that the practice of feeding children liquids other than breast milk and giving them solid or semisolid foods starts early in life.

Table 9.3 below show that 40.7 percent of breastfeeding children aged 0 - 6 months children have received other liquid (not plain water) other than breast milk. Thirty nine percent of breastfed children aged 0-6 months were given plain water whereas 28.1 percent were given infant formula (0-6months) in addition to breast milk

Overall, 22.3 percent of breastfed children aged 0-6 months have received some kind of solid or semisolid food and this proportion increases to 96.5 percent by age 4-5 months.

	CHILD NUTRITION													
Age in Month	Vit Mineral Supplements or medicine	Plain Water	Sweetened Water	Oral Rehydration Salts (ORS)	Infant For- mula (0-6 months)	Infant Formula (6-12 months)	Other Tinned Milk	Fresh Milk	Pasturised Milk	Powdered Milk	Other Liquids	Solid or Semi Solid Food	Total	Total (%)
0-6	21.5	39.1	2.5	1.4	28.1	5.2	2.4	3.8	5.7	0.8	40.7	22.3	31,433	6.2
7-11	15.3	82.5	2.4	1.3	6.6	17.5	0.7	6.9	16.9	1.7	29.5	78.7	46,440	9.1
12-23	11.4	92.4	2.2	2.8	0.4	3.6	2.7	10.2	21.5	0.7	42.6	90.4	113,000	22.1
24-35	10.0	94.6	4.2	0.9	-	0.4	1.5	11.4	14.2	0.7	44.0	94.1	112,050	21.9
36-47	7.8	95.2	4.3	1.0	-	-	0.4	6.2	10.9	0.5	54.4	93.1	105,578	20.7
48-59	6.5	96.4	4.1	0.2	-	-	0.4	10.2	8.1	0.5	55.8	96.8	102,629	20.1
Total	20,688	169,538	6,644	2,437	6,439	5,681	2,526	16,792	25,660	1,383	89,130	164,214	511,131	100

## Table 9.3 : Percentage Distribution of under 5 years children by Type of food consumed the previous day before interview

### 9.4 CONSUMPTION OF FRUITS AND VEGETABLES

Fruits and vegetables consumption is an important component of a healthy diet as they are a source of minerals and vitamins which are essential for our health. Inadequate intake can lead to poor health and increased risk of non-communicable diseases (NCDs). Fruits and vegetables consumption may also help to prevent weight gain and reduce the risk of obesity.

According to World Health Organization, at least 400 grams of fruits and vegetables (that is an approximated five 80-gram portions) are needed to meet an individual's daily nutritional requirements and protect them from diseases.

The BDS 2017, measured the extent of fruits and vegetables consumption within the population by asking the respondent how often they consumed fruits and vegetables.

The results in Table 9.4 below show that, 43.5 percent of the population tend to consume vegetables on a daily basis while 22.6 percent consume once in a while followed by those who consume vegetables about thrice a week at 21.8 percent. While on the contrary the population consume fruits once in a while at 52.4 percent, followed by every day at 17.8 percent and once a week at 13.9 percent.

### Table: 9.4 Proportion of population consuming fruits and vegetables 2017

	Vegeto	ables	Fruits		
Periodicity	Number	Percent	Number	Percent	
Everyday	938102	43.5	382685	17.8	
Three times a week	468818	21.8	220401	10.2	
Once a week	180509	8.4	299612	13.9	
Once in a while	487646	22.6	1128329	52.4	
Too young	40295	1.9	39797	1.8	
Never	34643	1.6	79308	3.7	
Not stated	4851	0.2	4731	0.2	

### 9.5 BODY MASS INDEX

Body mass index (BMI) is an index of weight-for-height that is commonly used to classify overweight and obesity in adults. That is, it is a person's weight in kilograms divided by the square of his height in meters (kg/ m2). Although BMI is not a measure of body fatness, persons classified as obese, tend to have excess body fat. BMI in the overweight range in most cases is considered less healthy, but in some cases it may be acceptable. For an instance, people who are muscular but have less fat. It is therefore evident that BMI ranges are not exact ranges of healthy and unhealthy weight. However, studies have shown that health risk increases as BMI increase.

Body mass index is classified differently for men and women, the specifications shown below were adopted from World Health Organization criterion.

#### Table: 9.5 Body mass index classification for men and women 2017

BMI CLASSIFICATION	WOMEN	MEN
Underweight	<19.1	<20.7
Normal weight	19.1-25.8	20.7-26.4
Marginally Overweight	25.8-27.3	26.4-27.8
Overweight	27.3-32.3	27.8-31.1
Very Overweight (Obese)	>32.3	>31.1
Morbidly obese	>40	>40

\*\*Caution: when interpreting BMI results interpretations were based on WHO and CDC criteria. This criterion was determined in Europe and therefore may not be applicable for Africans

### 9.6 BODY MASS INDEX STATUS BY SEX

In the BDS 2017, all members of household were weighted and their heights measured hence used for computing their BMI. The results drawn from the findings of the survey in Table 9.6 below indicate that 61.4 percent of males are underweight as compared to their female counterparts at 35.4 percent, on the same note 14.4 percent of females are overweight compared to 4.7 percent of males.

Furthermore, females tend to be obese and morbidly obese at 8.4 percent and 2.4 percent while their male counterparts are 3.2 percent and 0.5 percent respectably.

•						
		Male	Female			
BMI Status	Number	Percent	Number	Percent		
Underweight	559,146	61.4	361,484	35.4		
Normal	247,965	27.2	344,343	33.7		
marginal overweight	26,886	3.0	56,630	5.5		
Overweight	42,989	4.7	146,830	14.4		
Obese	29,153	3.2	85,960	8.4		
Morbidly obese	4,346	0.5	25,341	2.5		
Total	910,485	100	1,020,587	100		

### Table 9.6: Percentage distribution of BMI status by sex 2017

### CHAPTER 10 NON COMMUNICABLE DISEASES, HIV AND AIDS

Non-communicable diseases (NCDs), are collectively responsible for almost 70% of all deaths worldwide. Therefore, WHO in 2017 marked the NCDs as the leading causes of death among the human species, thus qualifying them to be a global health challenge.

However, non-communicable diseases do not constitute the highest burden of morbidity and mortality in Botswana. This therefore presents an opportunity for the government of Botswana, through the Ministry of Health and Wellness to invest in preventive measures through its policies and programs.

### **10.1 PREVALENCE OF NON - COMMUNICABLE DISEASES**

The Botswana Demographic Survey 2017 investigated the prevalence of non-communicable diseases in the country by asking respondents if they have been diagnosed with any of these diseases. Table 10.1 below highlights the extent at which the population is affected by different NCD's by sex and place of residence. The results show that high blood pressure is the leading NCD affecting 34.9 percent followed by HIV and AIDS and asthma at 33.5 percent and 12.5 percent respectively.

	Cities an	d Towns	Urban V	/illages	Ru	ral	Tot	al	TOT	AL.
	м	F	м	F	м	F	м	F	BOTH	PERCENT
High blood pressure	33.3	31.9	27.0	41.8	26.4	39.5	54,886	128,215	183101	34.9
Low blood pressure	2.6	10.8	1.4	7.8	1.5	3.8	3,317	22,798	26115	5.0
Diabetes	10.1	4.7	5.5	7.4	3.3	2.9	10,992	17,149	28140	5.4
Cancer	0.4	1.5	0.9	1.4	0.3	0.9	1,060	4,127	5187	1.0
Cardio-vas- cular	4.1	3.6	3.0	4.1	3.0	3.2	6,302	12,013	18314	3.5
Respiratory disease	1.8	1.5	3.5	1.4	2.9	1.5	5,646	4,747	10393	2.0
Osteoporosis	0.5	1.8	1.1	1.8	0.8	1.5	1,692	5,546	7239	1.4
Dental disease	7.2	5.3	5.1	4.8	4.3	3.5	10,251	14,532	24783	4.7
Asthma	14.8	11.6	17.4	12.6	11.5	9.8	28,418	37,334	65752	12.5
Depression	2.0	2.3	1.7	1.6	1.1	1.3	2,998	5,380	8378	1.6
Chronic mental disease	0.4	1.2	3.8	1.5	4.2	1.3	6,288	4,378	10666	2.0
Intestinal Ulcer	5.8	9.0	5.0	6.6	3.3	3.4	8,806	19,388	28194	5.4
Rheumatism/ joint Inflamma- tion	2.9	4.4	3.5	4.1	3.6	4.7	6,680	14,386	21066	4.0
Chronic kid- ney disease	1.7	0.6	3.4	0.9	2.3	1.0	5,091	2,806	7898	1.5
Tuberculosis	3.8	3.6	7.1	2.8	11.7	6.0	15,983	13,646	29629	5.7
Anemia	1.1	8.5	0.6	5.9	0.4	2.1	1,171	16,477	17649	3.4
HIV/AIDS	24.5	28.5	27.9	30.1	37.2	44.4	60,057	115,248	175305	33.5
Epilepsy	1.9	1.2	2.5	0.8	2.5	1.3	4,610	3,511	8121	1.6
Other specify	7.2	6.4	5.7	3.7	4.6	3.5	10,874	13,660	24534	4.7
Total	41,481	64,969	78,305	142,589	75,409	121,196	195,195	328,754	523949	100

Table: 10.1 Percentage of population 12 years ad above suffering from non-communicable diseases by type and place of residence 2017.

### **10.2 PREVALENCE AND TREATMENT OF NON-COMMUNICABLE DISEASES, HIV AND AIDS**

The Government of Botswana like other middle income countries faces the burden of providing medical assistance to people affected with non-communicable diseases, this raises the health costs. It is therefore critical to invest in preventive measures to lessen this burden on the economy.

Figure: 10.2 below shows that out of a total of 524,111 people affected by non-communicable diseases 85 percent are receiving treatment while 14 percent are not receiving treatment.



### **CHAPTER 11 DISABILITY**

The definition of disability is defined as long term impairment, be it physical, mental, intellectual, or sensory, whether inherited or acquired which, when combined with environmental and societal barriers limits the person's inability to function on an equal bases with others who have no impairment (National Disability Policy, 2011).

The purpose of this report is to convey the results of the BDS of 2017 in order to make informed decisions which address disability policies and programs. The survey sought to establish the extent of different disabilities in the population. It mainly focused on the following types of disability; sight/visual impairment, hearing impairment, speech impairment, impairment of legs, impairment of arms, remembering and self-care.

### **11.1 DISABILITY PREVALENCE RATES**

The results on disability status was extracted from the Botswana demographic survey conducted in 2017. Prevalence rates of all types of disabilities was calculated at the national level and in all census districts.

Out of 2,154,863 of the population surveyed a total of 90,945 individuals reported disabilities, accounting for a prevalence rate of 4.2 percent. Females had a higher prevalence rate of disability at 4.7 percent compared to males at 3.7 at national level.

Table 11.1 below shows disability prevalence rate at district level, Kgalagadi North recorded the highest rate of reported disability, at 8.7 percent. Chobe and Jwaneng also reported higher proportions at 6.9 percent and 6.7 percent respectively while Selibe Phikwe and Gaborone reported the lowest proportions of disability at 2.3 percent and 2.2 percent in that order.

District		Male			Female			Total	
	Disabled	Total	Rate (%)	Disabled	Total	Rate (%)	Disabled	Total	Rate (%)
Gaborone	1,982	117,277	1.7	3,409	117,498	2.9	5,391	234,775	2.3
Francistown	1,407	50,995	2.8	2,116	56,233	3.8	3,524	107,228	3.3
Lobatse	298	13,917	2.1	573	14,576	3.9	871	28,493	3.1
Selebi Pikwe	314	23,236	1.4	777	26,224	3.0	1,091	49,460	2.2
Orapa	87	4,948	1.8	251	5,114	4.9	337	10,062	3.3
Jwaneng	330	6,885	4.8	774	9,585	8.1	1,103	16,469	6.7
Sowa Town	49	1,994	2.5	65	1,891	3.4	114	3,886	2.9
Ngwaketse	3,081	64,099	4.8	3,800	72,000	5.3	6,882	136,098	5.1
Barolong	1,530	28,052	5.5	1,998	29,044	6.9	3,528	57,096	6.2
Ngwaketse West	106	6,661	1.6	354	7,939	4.5	461	14,600	3.2
South East	1,329	47,251	2.8	1,612	52,042	3.1	2,942	99,361	3.0
Kweneng East	4,821	136,102	3.5	7,240	144,593	5.0	12,061	280,695	4.3
Kweneng West	658	26,861	2.4	861	27,153	3.2	1,520	54,014	2.8
Kgatleng	1,718	49,123	3.5	1,092	50,008	2.2	2,811	99,131	2.8
Serowe Palapye	3,163	88,719	3.6	6,194	99,107	6.2	9,357	187,826	5.0
Central Mahalapye	2,250	58,794	3.8	2,841	66,064	4.3	5,090	124,857	4.1
Central Bobonong	1,543	37,539	4.1	3,112	43,971	7.1	4,655	81,510	5.7
Central Boteti	1,517	30,794	4.9	1,180	31,057	3.8	2,697	61,851	4.4
Central Tutume	2,965	74,114	4.0	4,932	84,464	5.8	7,898	158,898	5.0
North East	1,844	30,687	6.0	1,413	33,646	4.2	3,257	64,333	5.1
Ngamiland East	2,030	43,801	4.6	1,381	49,331	2.8	3,411	93,278	3.7
Ngamiland West	1,385	27,616	5.0	2,534	34,446	7.4	3,920	62,062	6.3
Chobe	894	14,069	6.4	994	13,319	7.5	1,888	27,389	6.9
Ghanzi	1,383	21,114	6.6	1,394	22,707	6.1	2,778	43,821	6.3
Kgalagadi South	570	17,179	3.3	834	17,984	4.6	1,404	35,164	4.0
Kgalagadi North	752	12,494	6.0	1,202	10,015	12.0	1,955	22,509	8.7
National Total	38,009	1,034,321	3.7	52,936	1,120,008	4.7	90,945	2,154,863	4.2

#### Table 11.1: Disability prevalence rate by district and sex 2017

Figure 11.1 below also shows that a highest proportion of females reported disability in Kgalagadi North at 12.0 percent followed by Jwaneng at 8.1 percent. On the same note a higher proportion of males who reported disabilities were recorded in Ghanzi and Chobe at 6.6 percent and 6.4 percent.

The lowest proportions of disabled females were found in Kgatleng (2.2 percent), Ngamiland East (2.8 percent) and Gaborone at 2.9 percent, while males who reported lowest proportions were found in Selibe Phikwe (1.4 percent), Ngamiland West (1.6 percent) and Gaborone (1.7 percent)



### **11.2 TYPES OF DISABILITIES**

The table below shows that among the disabled population sight/visual impairment accounted for the highest proportion of disabilities at 49.4 percent. Impairment of legs and hearing impairment constituted 28.7 and 18.5 percent respectively. The rest of the disabilities were at 10.5 percent and below. It further indicates that the disability of self-care is mostly common among males at 9.7 percent compared to their female counterparts at 5.8 percent.

		Se	×			
	Mc	ıle	Fen	nale	Т	otal
Disabilities	Number	Percentage	Number	Percentage	Number	Percentage
Sight/Visual impairment	17299	45.5	27640	52.2	44939	49.4
Hearing impairment	6261	16.5	10592	20.0	16854	18.5
Speech impairment	5104	13.4	2660	5.0	7764	8.5
Impairment of Leg(s)	9413	24.8	16703	31.6	26115	28.7
Impairment of arms(s)	4170	11.0	5350	10.1	9520	10.5
Remembering	4108	10.8	4985	9.4	9092	10.0
Self-Care	3701	9.7	3094	5.8	6796	7.5
Total	38009	100.0	52936	100.0	90945	100.0

Table 11.2 Distribution of Population with disability by type of disability and sex 2017

Table 11.3 shows the distribution of type of disability by school attendance. About half of the population with disabilities reported to have left school, while about one third (32.9 percent) never attended followed by those were still at school (10.9 percent).

Among the sight/visually impaired population, those who left school recorded the highest proportion (59.3

percent) while those who never attended and those who are still at school yielded 30.5 percent and 10.2 percent in that order.

The table shows that 55.3 percent of legs impaired population left school, 42.4 percent and 2.3 percent were still at school.

The highest proportion in the hearing impaired population was recorded at left school (49.5 percent), never attended (38.3 percent) and still at school (12.2 percent).

Table 11.3 Distribution of	type of disc	bility by sch	ool attenda	nce 2017

				SCHOOL ATT	ENDANCE			
	Still at	school	Yes	, left	Never o	attended	Te	otal
Disability	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Sight/Visual impairment	4583	10.2	26668	59.3	13688	30.5	44939	100.0
Hearing impairment	2062	12.2	8337	49.5	6454	38.3	16854	100.0
Speech impairment	1308	17.0	2381	30.9	4012	52.1	7701	100.0
Impairment of Leg(s)	606	2.3	14398	55.3	11047	42.4	26051	100.0
Impairment of arms(s)	890	9.3	5480	57.6	3150	33.1	9520	100.0
Remembering	1502	16.5	4045	44.5	3545	39.0	9092	100.0
Self-Care	747	11.1	2425	36.0	3568	52.9	6740	100.0
Total	9917	10.9	50979	56.2	29866	32.9	90763	100.0

### **APPENDICES**

### **APPENDIX A**

Table 2.7.2: Percentag	e Distribution of	of Population by	School Attendance.	Aae	District and	<b>Residence 2017</b>
Table Lin Li Tereennag				Age.	, bisinici ana	

				School Att	endance					
	Still at s	chool	Yes,	left	Never at	tended	Not sto	ated		Total
Background Characteristics	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Age group										
0-4	27,074	18.3	2,245	1.5	118,992	80.2	-	-	148,311	7.2
5-9	219,973	83.7	3,192	1.2	39,533	15.0	-	-	262,698	12.8
10-14	229,057	97.4	4,926	2.1	1,143	0.5	-	-	235,126	11.5
15-19	113,218	65.4	58,318	33.7	1,514	0.9	-	-	173,050	8.4
20-24	2,918	1.6	179,112	97.0	2,492	1.3	218	0.1	184,739	9.0
25-29	-	-	170,181	98.1	3,382	1.9	-	-	173,563	8.5
30-34	-	-	175,107	97.1	5,250	2.9	-	-	180,358	8.8
35-39	-	-	151,536	96.5	5,355	3.4	72	0.0	156,962	7.7
40-44	-	-	118,727	92.7	8,762	6.8	554	0.4	128,043	6.2
45-49	-	-	80,059	89.6	9,253	10.4	-	-	89,312	4.4
50-54	-	-	69,166	80.9	16,083	18.8	281	0.3	85,530	4.2
55-59	-	-	44,015	69.1	19,680	30.9	-	-	63,696	3.1
60-64	-	-	34,717	65.8	17,993	34.1	73	0.1	52,783	2.6
65-69	-	-	22,144	59.1	15,296	40.9	-	-	37,441	1.8
70-74	-	-	13,807	52.6	12,440	47.4	-	-	26,247	1.3
75-79	-	-	9,838	48.4	10,481	51.6	-	-	20,319	1.0
80-84	-	-	5,479	43.9	6,994	56.1	-	-	12,473	0.6
85-89	-	-	3,413	32.3	7,160	67.7	-	-	10,572	0.5
90-94	-	-	1,868	34.3	3,576	65.7	-	-	5,444	0.3
95+	-	-	358	10.0	3,238	90.0	-	-	3,596	0.2
Total	592,240	28.9	1,148,209	56.0	308,618	15.1	1,198	0.1	2,050,265	100
District										
Gaborone City	52,442	23.3	162,050	72.0	10,419	4.6	236	0.1	225,146	11.0
Francistown City	30,112	29.3	62,698	61.0	9,929	9.7	-	-	102,739	5.0

### Table 2.7.2 continued: Percentage Distribution of Population by School Attendance, Age, District and Residence 2017

				School Att	endance					
	Still at s	chool	Yes,	left	Never a	ttended	Not sto	ated		Total
Background Characteristics	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Age group										
Lobatse	8,815	32.2	17,091	62.4	1,480	5.4	-	-	27,387	1.3
Selebi Pikwe	13,898	29.7	28,321	60.6	4,511	9.7	-	-	46,729	2.3
Orapa	3,681	38.2	5,715	59.3	249	2.6	-	-	9,645	0.5
Jwaneng	3,738	24.5	10,484	68.8	1,010	6.6	-	-	15,232	0.7
Sowa Town	1,456	39.3	2,080	56.1	173	4.7	-	-	3,710	0.2
Ngwaketse	41,100	31.7	64,689	49.9	23,784	18.4	-	-	129,573	6.3
Barolong	15,868	29.3	26,594	49.1	11,753	21.7	-	-	54,216	2.6
Ngwaketse West	3,758	26.6	6,636	47.1	3,709	26.3	-	-	14,102	0.7
South East	24,721	25.8	62,468	65.2	8,513	8.9	72	0.1	95,774	4.7
Kweneng East	67,311	25.0	161,702	60.1	39,491	14.7	496	0.2	268,999	13.1
Kweneng West	17,029	33.4	20,710	40.6	13,192	25.9	72	0.1	51,003	2.5
Kgatleng	25,011	26.3	58,136	61.0	12,126	12.7	-	-	95,273	4.6
Serowe Palapye	53,147	30.0	91,828	51.8	32,179	18.2	-	-	177,154	8.6
Central Mahalapye	39,164	33.0	57,077	48.1	22,465	18.9	64	0.1	118,770	5.8
Central Bobonong	22,632	29.8	36,222	47.7	17,127	22.5	-	-	75,980	3.7
Central Boteti	17,436	30.2	27,507	47.6	12,768	22.1	63	0.1	57,773	2.8
Central Tutume	53,075	35.1	71,351	47.2	26,775	17.7	-	-	151,201	7.4
North East	18,749	31.1	32,666	54.2	8,908	14.8	-	-	60,322	2.9
Ngamiland East	24,798	28.3	50,094	57.3	12,515	14.3	73	0.1	87,480	4.3
Ngamiland West	17,564	30.1	24,982	42.8	15,878	27.2	-	-	58,424	2.8
Chobe	6,341	24.0	16,814	63.7	3,127	11.8	124	0.5	26,405	1.3
Ghanzi	13,128	31.1	21,449	50.9	7,578	18.0	-	-	42,155	2.1
Kgalagadi South	10,843	32.7	16,932	51.1	5,385	16.2	-	-	33,159	1.6
Kgalagadi North	6,423	29.3	11,912	54.4	3,578	16.3	-	-	21,913	1.1
Total	592,240	28.9	1,148,209	56.0	308,618	15.1	1,198	0.1	2,050,265	100
Residence										
Cities and Towns	114,143	26.5	288,439	67.0	27,771	6.4	236	0.1	430,588	100
Urban Villages	257,205	29.1	515,470	58.4	108,970	12.3	828	0.1	882,473	100
Rural	220,892	30.0	344,300	46.7	171,878	23.3	135	-	737,204	100
Total	592,240	28.9	1,148,209	56.0	308,618	15.1	1199	0.1	2,050,265	100

Table 2.8: Population Di	stributio	n by Lang	uage, R	esidence	e, Distric	t and Sch	100 Atte	ndance	i 2017									
							Lar	nguage sp	oken mos	t often at h	ome							
Background Characteristics	dsilgn∃	2etswana	Kalanga	Shekgalagari	Ηετετο	Sebirwa	ոկչսչովա	Şesatwa	Shona	ələdəbN	gnoqpwsfə2	Afrikaans	3ubiya	іүәүід	language Sign	Other	Not Stated	Total
Residence																		
Cities and Towns	35,925	331,636	34,365	2,981	872	3,225	60	275	7,285	3,494	2,890	1,045	I	232	169	5,957	148	430,588
Urban Villages	23,396	757,382	28,829	21,870	4,118	8,584	4,396	1,946	10,237	6,472	2,725	1,149	2,284	1,069	620	6,704	691	882,473
Rural	4,678	482,021	64,402	50,577	10,281	16,637	24,402	26,982	3,944	4,662	28,036	5,685	3,842	4,080	643	6,118	214	737,204
Total District	63,999	1,571,039	127,596	75,428	15,271	28,446	28,888	29,203	21,466	14,629	33,651	7,880	6,126	5,381	1,431	18,779	1,053	2,050,265
Gaborone City	28,473	168,684	12,215	2,094	636	142	ı	83	4,786	1,725	1,540	347	I	215	,	4,058	148	225,146
Francistown City	3,774	73,012	20,149	210	236	520	60	,	1,690	1,413	310	472	ı	ı	154	708	,	102,739
Lobatse	427	26,554	I	132	I	ı	ı	ı	ı	ı	273	ı	I	ı	ı	I	ı	27,387
Selebi Pikwe	1,531	39,196	872	I	I	2,546	I	126	308	356	684	I	I	ı	ı	1,112	ı	46,729
Orapa	520	8,622	298	43	ı	ı	I	ı	I	I	82	I	I	,	,	79	ı	9,645
Jwaneng	1,070	12,863	136	485	I	ı	I	ı	452	ı	ı	226	I	ı	ı	I	ı	15,232
Sowa Town	131	2,705	695	16	I	17	ı	66	50	I	ı	I	I	17	15	I	I	3,710
Ngwaketse	1,314	126,620	112	ı	ı	ı	108	ı	1,191	62	ı	ı	I	ï	ï	165	ı	129,573
Barolong	156	53,380	I	I	I	49	ı	ı	I	I	ı	ı	I	,	89	542	ı	54,216
Ngwaketse West	143	3,422	I	10,499	I	ı	ı	ı	I	37	ı	I	I	ı	ı	I	I	14,102
South East	6,539	84,097	1,337	678	166	431	ı	293	927	708	72	ı	I	ı	68	387	72	95,774
Kweneng East	6,626	237,563	6,625	2,246	220	804	244	ı	6,283	4,003	158	583	I	·	193	2,957	496	268,999
Kweneng West	199	27,973	287	22,110	,	'	ı	144	81	ı	78	,	ı			59	72	51,003
Kgatleng	2,588	88,832	334	204		93		ı.	1,083	1,012	138	I.	I.			988		95,273

				, , , , , , , , , , , , , ,					oken most	often at ho	em							
Background Characteristics	dzilgn3	26ţzwana	Kalanga	Shekgalagari	Негего	2ebirwa	Mbukushu	262alma	ζµουα	ələdəbN	Setswapong	Afrikaans	2npiya	ίγ϶γίηζ	language Sign	Other	Not Stated	Total
Residence																		
Serowe Palapye	3,000	160,446	509	365	ı	158	ı	4,265	662	663	6,144	ı	49	ı	64	829	ı	177,154
Central Mahalapye	1,097	93,099	64		349	427	ı	,	53	197	22,942	,	ı		133	411	ı	118,770
Central Bobonong	271	51,232	407			22,895			543	124	ı	ı	ı		125	382	ı	75,980
Central Boteti	356	41,010	3,743		1,329	108	,	10,118	164	ı	342	ı	ı	60	60	340	142	57,773
Central Tutume	1,236	89,075	53,889	76	'	'	ı	1,712	1,411	1,401	ı	64	128		148	2,061	ı	151,201
North East	451	32,754	22,715	'	ı	'	ı		1,073	2,353	85	ı	333		ı	559	ı	60,322
Ngamiland East	1,660	71,253	1,263	546	6,771	73	2,868	683	252	363	547	I	ı	808	234	159	ı	87,480
Ngamiland West	233	25,702	195	1,648	412	ľ	24,856	873	1	87	'	ı	163	4,046	148	61	ı	58,424
Chobe	1,224	16,413	1,415	86	273	184	515	68	191	ı	61	I	5,452	234	ı	165	124	26,405
Ghanzi	269	9,294	88	14,284	4,755	'	207	10,476	124	124	ı		ı		ı	2,533	ı	42,155
Kgalagadi South	436	23,709	ı	2,821	123	'	ı	32	'	ı	ı	5,940	ı		ı	67	ı	33, 159
Kgalagadi North	276	3,530	248	16,884	·	'	,	263	142	ı	195	248	ı	'	ı	128	ı	21,913
Total School Attendance	63,999	1,571,039	127,596	75,428	15,271	28,446	28,888	29,203	21,466	14,629	33,651	7,880	6,126	5,381	1,431	18,779	1,053	2,050,265
Still at school	25,572	455,748	33,203	21,700	5,673	8,952	8,701	7,176	4,768	1,481	10,211	2,457	1,738	644	169	4,045	I	592,240
Yes, left	35,232	892,885	75,734	37,211	7,147	14,057	11,399	9,595	13,213	11,067	17,486	4,714	3,222	2,871	333	12,043	ı	1,148,209
Never attended	3,194	222,182	18,659	16,516	2,452	5,437	8,788	12,432	3,485	2,080	5,953	709	1,166	1,866	929	2,691	80	308,618
Not stated	·	224								,		,	ı		ı	·	974	1,198
Total	63,999	1,571,039	127,596	75,428	15,271	28,446	28,888	29,203	21,466	14,629	33,651	7,880	6,126	5,381	1,431	18,779	1,053	2,050,265
Percentage	3.1	76.6	6.2	3.7	0.7	1.4	1.4	1.4	1.0	0.7	1.6	0.4	0.3	0.3	0.1	0.9	0.1	100

Table 2.8 continued: Population Distribution by Lanauade. Residence. District and School Attendance 2017

						М	arital Sta	itus							
Background Characteristics	Married	Percentage	Never Married	Percentage	Living Together	Percentage	Separated	Percentage	Divorced	Percentage	Widowed	Percentage	Not stated	Percentage	Total
Age															
12-14	-	-	135,487	99.8	229	0.2	-	-	-	-	-	-	50	0.0	135,766
15-19	342	0.2	168,627	97.4	3,499	2.0	-	-	-	-	-	-	583	0.3	173,050
20-24	2,678	1.4	146,468	79.3	35,375	19.1	-	-	-	-	-	-	218	0.1	184,739
25-29	9,288	5.4	104,016	59.9	60,121	34.6	-	-	64	0.0	-	-	74	0.0	173,563
30-34	27,110	15.0	81,589	45.2	70,066	38.8	215	0.1	1,109	0.6	148	0.1	120	0.1	180,358
35-39	38,541	24.6	56,462	36.0	58,483	37.3	308	0.2	1,948	1.2	910	0.6	310	0.2	156,962
40-44	42,601	33.3	41,490	32.4	39,433	30.8	525	0.4	1,722	1.3	1,592	1.2	680	0.5	128,043
45-49	34,633	38.8	28,174	31.5	21,522	24.1	247	0.3	1,309	1.5	3,348	3.7	79	0.1	89,312
50-54	34,414	40.2	24,841	29.0	18,966	22.2	514	0.6	2,129	2.5	4,449	5.2	218	0.3	85,530
55-59	26,519	41.6	17,367	27.3	9,705	15.2	571	0.9	3,179	5.0	6,295	9.9	60	0.1	63,696
60-64	23,954	45.4	12,550	23.8	7,562	14.3	380	0.7	2,218	4.2	6,118	11.6	-	-	52,783
65-69	17,351	46.3	6,963	18.6	3,939	10.5	175	0.5	1,522	4.1	7,492	20.0	-	-	37,441
70-74	10,448	39.8	4,830	18.4	2,817	10.7	-	-	794	3.0	7,358	28.0	-	-	26,247
75-79	7,437	36.6	3,597	17.7	1,576	7.8	320	1.6	565	2.8	6,824	33.6	-	-	20,319
80-84	3,959	31.7	2,311	18.5	791	6.3	-	-	440	3.5	4,972	39.9	-	-	12,473
85-89	3,041	28.8	2,252	21.3	733	6.9	-	-	178	1.7	4,368	41.3	-	-	10,572
90-94	1,092	20.1	677	12.4	113	2.1	-	-	123	2.3	3,439	63.2	-	-	5,444
95+	316	8.8	725	20.2	283	7.9	-	-	78	2.2	2,195	61.0	-	-	3,596
Total Sex	283,723	18.4	838,426	54.4	335,213	21.8	3,255	0.2	17,377	1.1	59,508	3.9	2,392	0.2	1,539,895
Male	140,215	49.4	414,073	49.4	150,990	45.0	1,348	41.4	5,481	31.5	8,766	14.7	1,422	59.4	722,295
Female	143,508	50.6	424,353	50.6	184,223	55.0	1,907	58.6	11,897	68.5	50,742	85.3	970	40.6	817,600
Total Citizenship	283,723	18.4	838,426	54.4	335,213	21.8	3,255	0.2	17,377	1.1	59,508	3.9	2,392	0.2	1,539,895
Batswana	247,504	16.8	822,942	55.9	323,167	21.9	2,910	0.2	16,408	1.1	58,269	4.0	1,325	0.1	1,472,525
Non Batswana	36,219	53.8	15,484	23.0	12,045	17.9	345	0.5	970	1.4	1,239	1.8	1,067	1.6	67,370
Total Residence	283,723	18.4	838,426	54.4	335,213	21.8	3,255	0.2	17,377	1.1	59,508	3.9	2,392	0.2	1,539,895
Cities and Towns	75,446	22.0	178,879	52.2	77,343	22.6	795	0.2	3,875	1.1	5,951	1.7	515	0.2	342,804
Urban Villages	126,083	18.7	379,877	56.3	132,201	19.6	1,173	0.2	6,948	1.0	27,024	4.0	1,642	0.2	674,947
Rural	82,195	15.7	279,670	53.6	125,669	24.1	1,287	0.2	6,555	1.3	26,534	5.1	235	0.0	522,144
Total	283,723	18.4	838,426	54.4	335,213	21.8	3,255	0.2	17,377	1.1	59,508	3.9	2,392	0.2	1,539,895

			)	•											
							Children Eve	r Born							
Age Group	-	2	e	4	5	9	7	œ	6	10	=	12	13	14+	Total
15-19	6,290	2,444	444		'	1	'	'		'	'	ı	'	1	9,178
20-24	31,818	18,722	6,258	2,620	555	1,110					·	ı	1	ï	61,083
25-29	30,804	50,288	30,219	14,372	6,825	3,036	931	'	711			ı		1	137,186
30-34	24,498	58,962	54,534	34,996	21,340	12,360	7,322	1,344	,			ı		1	215,356
35-39	13,221	49,408	60,723	45,684	31,505	21,252	10,248	5,008	2,529	640	2,156	ı	·	ï	242,374
40-44	8,700	28,364	42,006	36,968	29,945	20,214	11,186	10,248	5,247	2,230	693	744	·	,	196,545
45-49	7,143	16,526	26,970	32,916	24,265	19,830	10,976	7,448	5,913	1,240	1,474	ı		1	154,701
50-54	4,936	13,906	29,382	39,216	33,535	31,866	23,583	11,088	10,647	7,960	2,233	936	ı	ï	209,288
55-59	1,508	7,562	17,637	25,336	29,985	27,438	26,061	16,976	10,782	6,630	1,331	1,440	ı	ı	172,686
60-64	1,039	5,030	9,816	14,928	25,420	21,792	26,348	22,960	12,177	8,510	1,463	ı	,	1	149,483
65-69	1,157	2,526	5,244	6,576	14,370	20,844	18,494	14,224	16,380	10,880	7,150	936	1,937	924	121,642
70-74	891	2,294	4,224	6,252	5,045	10,236	12,705	16,264	12,600	8,980	7,590	3,348	1,573	1	92,002
75-79	801	1,602	2,736	3,448	5,360	8,748	10,178	9,656	11,169	11,070	7,194	2,904	1,794	1,880	78,540
80-84	476	318	1,659	3,428	2,945	5,646	7,721	8,192	8,073	3,990	3,850	720	819	1,218	49,055
85-89	135	1,088	1,818	2,412	2,280	2,106	6,958	8,432	2,106	9,450	1,496	4,416	ı	3,388	46,085
90-94	82	562	1,074	1,332	5,255	1,218	4,368	2,592	5,400	700	1,760	ı	ı	ı	24,343
85+	138	762	201	676	1,190	1,326	1,029	2,056	1,512	4,410	ı	ı	ı	825	14,125
Total	133,637	260,364	294,945	271,160	239,820	209,022	178,108	136,488	105,246	76,690	38,390	15,444	6,123	8,235	1,973,672

Table 3.2: Children Ever Born by Age Group of the Mother

### Table 4.3 Male Abridged Life Table-BDS 2017 (National)

Age,	Width,									
x	n	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.040	0.154	0.039	100000	3868	96727	0.956	6666505	66.67
1	4	0.004	1.742	0.015	96132.4	1436	381287	0.987	6569778	68.34
5	5	0.002	2.5	0.008	94696.3	742	471627	0.993	6188491	65.35
10	5	0.001	2.5	0.005	93954.6	493	468540	0.993	5716864	60.85
15	5	0.002	2.5	0.009	93461.3	880	465107	0.988	5248324	56.16
20	5	0.003	2.5	0.014	92581.6	1270	459732	0.986	4783217	51.66
25	5	0.003	2.5	0.014	91311.3	1279	453358	0.985	4323485	47.35
30	5	0.003	2.5	0.015	90032.1	1367	446743	0.984	3870127	42.99
35	5	0.003	2.5	0.017	88665.2	1501	439573	0.981	3423383	38.61
40	5	0.004	2.5	0.021	87164	1822	431264	0.976	2983810	34.23
45	5	0.005	2.5	0.027	85341.7	2309	420936	0.966	2552546	29.91
50	5	0.008	2.5	0.041	83032.6	3421	406609	0.952	2131610	25.67
55	5	0.011	2.5	0.055	79611.1	4392	387076	0.930	1725001	21.67
60	5	0.018	2.5	0.086	75219.2	6454	359962	0.892	1337925	17.79
65	5	0.028	2.5	0.133	68765.6	9119	321030	0.835	977963	14.22
70	5	0.045	2.5	0.203	59646.4	12129	267909	0.748	656933	11.01
75	5	0.074	2.5	0.312	47517.2	14833	200505	0.485	389024	8.19
80+		0.173	5.768	1	32684.7	32685	188519		188519	5.77

### Table 4.4 Female Abridged Life Table-BDS2017 (National)

Age,									
x	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
1	0.001	1.702	0.005	98088.2	458.952	391298	0.996	7365202	75.09
5	0.000	2.5	0.002	97629.3	212.334	487615	0.998	6973904	71.43
10	0.000	2.5	0.002	97416.9	187.518	486616	0.997	6486288	66.58
15	0.001	2.5	0.003	97229.4	307.905	485377	0.996	5999672	61.71
20	0.001	2.5	0.005	96921.5	443.292	483499	0.995	5514295	56.89
25	0.001	2.5	0.006	96478.2	530.652	481064	0.994	5030796	52.14
30	0.001	2.5	0.006	95947.6	583.505	478279	0.993	4549731	47.42
35	0.001	2.5	0.007	95364	701.645	475066	0.991	4071452	42.69
40	0.002	2.5	0.011	94662.4	1049.69	470688	0.987	3596386	37.99
45	0.003	2.5	0.015	93612.7	1404.61	464552	0.981	3125699	33.39
50	0.005	2.5	0.024	92208.1	2185.16	455578	0.972	2661146	28.86
55	0.007	2.5	0.033	90023	2930.22	442789	0.957	2205569	24.5
60	0.011	2.5	0.053	87092.7	4633.89	423879	0.929	1762780	20.24
65	0.019	2.5	0.090	82458.8	7419.73	393745	0.881	1338901	16.24
70	0.033	2.5	0.152	75039.1	11395.2	346708	0.803	945156	12.6
75	0.057	2.5	0.250	63643.9	15928.4	278399	0.535	598448	9.4
80	0.149	6.707	1	47715.5	47715.5	320050		320050	6.71

### Table 4.5 Male Abridged Life Table-BDS 2017 (Cities)

#### Age, х nMx nax nqx lх ndx nLx 5Px Тx ex 0.197 0 0.056 0.054 100000 5363.36 95691.6 0.937 6248045 62.48 1 0.007 1.697 0.027 2508.79 372770 0.977 6152354 65.01 94636.6 5 0.003 2.5 0.013 92127.9 1176.76 457697 0.990 5779584 62.73 10 0.002 2.5 0.008 711.564 452977 0.990 5321887 90951.1 58.51 15 0.002 2.5 0.012 90239.5 1099.39 448449 0.985 4868910 53.96 20 0.004 2.5 0.018 89140.1 1571.07 441773 0.982 4420461 49.59 25 0.004 2.5 0.018 87569.1 1592.28 433865 0.981 3978688 45 43 30 0.004 2.5 0.020 85976.8 1683.97 425674 0.979 3544823 41.23 0.022 35 0.004 2.5 84292.8 1850.23 416839 0.976 3119149 37 40 0.005 2.5 0.027 82442.6 2216.55 406672 0.970 2702311 32.78 45 0.007 2.5 0.034 80226 2728.57 394309 0.959 2295639 28.61 0.049 50 0.010 2.5 77497.5 3814.4 377951 0.943 1901330 24.53 0.013 2.5 0.065 73683.1 4804.95 356403 0.919 1523379 20.67 55 60 0.021 2.5 0.098 68878.1 6771.69 327461 0.878 1166976 16.94 0.032 2.5 0.149 9232.64 287451 0.816 839515 13.52 65 62106.4 70 0.051 2.5 0.225 52873.8 11896.6 234627 0.726 552064 10.44 75 0.338 7.75 0.081 2.5 40977.2 13841.8 170281 0.464 317437 80 0.184 5.423 1 27135.4 27135.4 147155 147155 5.42

#### Table 4.6 Female Abridged Life Table-BDS2017 (Cities)

Age									
x	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	0.034	0.148	0.033	100000	3269.93	97214.3	0.962	6973025	69.73
1	0.004	1.680	0.014	96730.1	1360.41	383764	0.988	6875810	71.08
5	0.001	2.5	0.006	95369.7	590.83	475371	0.995	6492047	68.07
10	0.001	2.5	0.004	94778.8	423.017	472837	0.995	6016675	63.48
15	0.001	2.5	0.006	94355.8	595.499	470290	0.993	5543839	58.75
20	0.002	2.5	0.009	93760.3	803.614	466793	0.991	5073548	54.11
25	0.002	2.5	0.010	92956.7	924.004	462473	0.990	4606756	49.56
30	0.002	2.5	0.011	92032.7	1014.33	457628	0.988	4144282	45.03
35	0.003	2.5	0.013	91018.4	1164.37	452181	0.985	3686655	40.5
40	0.004	2.5	0.017	89854	1562.9	445363	0.981	3234474	36
45	0.004	2.5	0.022	88291.1	1900.97	436703	0.973	2789111	31.59
50	0.006	2.5	0.032	86390.1	2739.66	425101	0.963	2352408	27.23
55	0.009	2.5	0.043	83650.5	3566.96	409335	0.945	1927307	23.04
60	0.014	2.5	0.067	80083.5	5393.2	386935	0.912	1517972	18.95
65	0.023	2.5	0.110	74690.3	8217.42	352908	0.858	1131037	15.14
70	0.039	2.5	0.179	66472.9	11898.8	302617	0.774	778129	11.71
75	0.066	2.5	0.283	54574.1	15462.9	234213	0.507	475512	8.71
80	0.162	6.170	1	39111.2	39111.2	241299		241299	6.17

### Table 4.7 Male Abridged Life Table-BDS2017 (Urban)

### Age,

x	nMx	nax	nqx	lx	ndx	nLx	5Px	Тх	ex
0	0.112	0.33	0.104	100000	10377	93047.4	0.873	5077923	50.78
1	0.018	1.558	0.070	89623	6228.42	343282	0.941	4984875	55.62
5	0.006	2.5	0.030	83394.6	2539.04	410626	0.976	4641593	55.66
10	0.003	2.5	0.017	80855.6	1352.37	400897	0.981	4230968	52.33
15	0.004	2.5	0.021	79503.2	1681.43	393312	0.974	3830071	48.18
20	0.006	2.5	0.030	77821.8	2346.8	383242	0.969	3436758	44.16
25	0.006	2.5	0.032	75475	2379.37	371426	0.967	3053516	40.46
30	0.007	2.5	0.034	73095.6	2462.91	359321	0.964	2682090	36.69
35	0.008	2.5	0.038	70632.7	2684.76	346452	0.958	2322769	32.89
40	0.009	2.5	0.046	67947.9	3108.99	331967	0.949	1976318	29.09
45	0.011	2.5	0.056	64839	3611.37	315166	0.936	1644350	25.36
50	0.015	2.5	0.073	61227.6	4495.71	294899	0.916	1329184	21.71
55	0.020	2.5	0.095	56731.9	5406.98	270142	0.886	1034285	18.23
60	0.029	2.5	0.135	51324.9	6935.4	239286	0.837	764143	14.89
65	0.043	2.5	0.195	44389.5	8655.42	200309	0.764	524858	11.82
70	0.067	2.5	0.287	35734.1	10251.2	153042	0.662	324549	9.08
75	0.103	2.5	0.410	25482.9	10442.6	101308	0.409	171506	6.73
80	0.214	4.667	1	15040.3	15040.3	70198.1		70198.1	4.67

### Table 4.8 Female Abridged Life Table-BDS2017 (Urban)

Age,									
x	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	0.045	0.179	0.043	100000	4313.85	96460.1	0.948	6639859	66.4
1	0.006	1.663	0.023	95686.1	2202.09	377598	0.981	6543399	68.38
5	0.002	2.5	0.010	93484.1	939.706	465071	0.992	6165801	65.96
10	0.001	2.5	0.007	92544.4	610.173	461196	0.992	5700730	61.6
15	0.002	2.5	0.009	91934.2	784.693	457709	0.990	5239533	56.99
20	0.002	2.5	0.011	91149.5	1013.22	453214	0.988	4781824	52.46
25	0.003	2.5	0.013	90136.3	1160.25	447781	0.986	4328610	48.02
30	0.003	2.5	0.014	88976	1287.48	441661	0.984	3880829	43.62
35	0.003	2.5	0.017	87688.5	1469.11	434770	0.981	3439168	39.22
40	0.004	2.5	0.022	86219.4	1861.87	426442	0.976	3004398	34.85
45	0.005	2.5	0.026	84357.6	2188.13	416317	0.969	2577955	30.56
50	0.007	2.5	0.037	82169.4	3021.72	403293	0.957	2161638	26.31
55	0.010	2.5	0.049	79147.7	3907.71	385969	0.937	1758345	22.22
60	0.016	2.5	0.076	75240	5751.39	361822	0.902	1372375	18.24
65	0.026	2.5	0.122	69488.6	8502.42	326187	0.844	1010554	14.54
70	0.043	2.5	0.195	60986.2	11907.4	275162	0.757	684367	11.22
75	0.071	2.5	0.302	49078.8	14835.6	208305	0.491	409204	8.34
80	0.170	5.867	1	34243.2	34243.2	200899		200899	5.87

### Table: 4.9 Male Abridged Life Table- BDS 2017 (Rural)

### Age,

x	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	0.039	0.151	0.038	100000	3788.44	96785.2	0.957	6690905	66.91
1	0.004	1.745	0.014	96211.6	1389.22	381713	0.987	6594120	68.54
5	0.002	2.5	0.008	94822.3	721.394	472308	0.994	6212407	65.52
10	0.001	2.5	0.005	94100.9	482.006	469300	0.993	5740099	61
15	0.002	2.5	0.009	93618.9	864.16	465934	0.989	5270799	56.3
20	0.003	2.5	0.013	92754.8	1247.94	460654	0.986	4804865	51.8
25	0.003	2.5	0.014	91506.8	1256.85	454392	0.986	4344211	47.47
30	0.003	2.5	0.015	90250	1344.53	447889	0.984	3889819	43.1
35	0.003	2.5	0.017	88905.5	1478.46	440831	0.981	3441930	38.71
40	0.004	2.5	0.021	87427	1797.39	432642	0.976	3001099	34.33
45	0.005	2.5	0.027	85629.6	2283.34	422440	0.966	2568457	29.99
50	0.008	2.5	0.041	83346.3	3394.32	408246	0.953	2146018	25.75
55	0.011	2.5	0.055	79952	4362.71	388853	0.931	1737772	21.74
60	0.018	2.5	0.085	75589.2	6425.51	361882	0.893	1348919	17.85
65	0.028	2.5	0.132	69163.7	9099.08	323071	0.836	987037	14.27
70	0.045	2.5	0.202	60064.7	12127.3	270005	0.750	663966	11.05
75	0.073	2.5	0.310	47937.3	14878.4	202491	0.486	393961	8.22
80	0.173	5.792	1	33058.9	33058.9	191470		191470	5.79

### Table 4.10 Female Abridged Life Table-BDS2017 (Rural)

Age,

x	nMx	nax	nqx	lx	ndx	nLx	5Px	Тх	ex
0	0.017	0.100	0.017	100000	1668.54	98498.4	0.982	7562759	75.63
1	0.001	1.706	0.004	98331.5	353.514	392515	0.997	7464261	75.91
5	0.000	2.5	0.002	97977.9	166.175	489474	0.998	7071746	72.18
10	0.000	2.5	0.002	97811.8	153.882	488674	0.998	6582271	67.3
15	0.001	2.5	0.003	97657.9	262.028	487634	0.997	6093597	62.4
20	0.001	2.5	0.004	97395.9	382.545	486023	0.996	5605963	57.56
25	0.001	2.5	0.005	97013.3	461.455	483913	0.995	5119940	52.78
30	0.001	2.5	0.005	96551.9	506.91	481492	0.994	4636027	48.02
35	0.001	2.5	0.006	96045	615.227	478687	0.992	4154535	43.26
40	0.002	2.5	0.010	95429.7	941.7	474794	0.988	3675848	38.52
45	0.003	2.5	0.014	94488	1284.88	469228	0.982	3201054	33.88
50	0.004	2.5	0.022	93203.1	2035.17	460928	0.974	2731826	29.31
55	0.006	2.5	0.030	91168	2744.26	448979	0.960	2270898	24.91
60	0.010	2.5	0.050	88423.7	4389.04	431146	0.933	1821919	20.6
65	0.018	2.5	0.085	84034.7	7119.72	402374	0.887	1390773	16.55
70	0.031	2.5	0.144	76915	11106.5	356809	0.811	988399	12.85
75	0.055	2.5	0.241	65808.4	15843.7	289433	0.542	631590	9.6
80	0.146	6.848	1	49964.8	49964.8	342157		342157	6.85

						F	Place o	f Origin							
District	Gaborone	Francistown	Lobatse	Selibe Phikwe	Orapa	Jwaneng	Sowa Town	Ngwaketsi	Barolong	Ngwaketse West	South East	Kweneng East	Kweneng West	Kgatleng	
Gaborone City	-	1,328	336	1,064	-	-	-	1,714	442	219	934	3,246	588	2,371	
Francistown City	1,004	-	58	858	145	90	-	309	-	71	61	291	-	195	
Lobatse	878	326	-	-	-	65	-	572	387	-	187	-	-	68	
Selebi Pikwe	664	178	-	-	128	-	-	124	-	-	-	-	-	183	
Orapa	87	43	-	41	-	-	-	-	-	-	43	38	-	-	
Jwaneng	265	531	-	60	68	-	-	201	-	72	113	145	-	-	
Sowa Town	83	31	-	32	-	-	-	-	-	-	-	-	-	-	
Ngwaketse	1,958	304	728	464	-	505	-	-	1,092	-	264	280	-	56	
Barolong	1,127	-	489	49	-	273	50	627	-	-	203	210	62	-	
Ngwaketse West	218	37	-	74	-	107	-	-	-	-	-	37	-	-	
South East	4,038	558	112	-	221	42	-	651	160	47	-	1,183	146	544	
Kweneng East	6,712	1,451	545	285	-	136	164	1,471	257	448	1,180	-	1,182	790	
Kweneng West	362	58	-	199	-	72	-	108	-	108	162	1,125	-	58	
Kgatleng	1,356	112	202	312	-	-	-	79	73	86	1,408	916	242	-	
Serowe Palapye	2,941	974	74	2,806	69	437	-	365	-	-	473	254	-	229	
Central Mahalapye	1,205	383	144	407	-	-	95	199	122	-	268	199	-	419	
Central Bobonong	626	703	-	2,428	434	-	-	-	-	-	-	116	-	227	
Central Boteti	506	628	-	68	305	808	-	60	-	-	140	130	-	-	
Central Tutume	1,754	3,002	-	258	59	-	-	71	-	-	150	-	-	-	
North East	1,542	1,503	71	1,303	-	-	-	74	-	-	246	98	-	-	
Ngamiland East	562	1,166	-	93	81	173	-	86	80	-	240	259	63	80	
Ngamiland West	178	265	-	-	-	108	-	-	-	-	54	54	-	-	
Chobe	675	86	-	122	-	-	-	-	-	-	-	295	-	307	
Ghanzi	500	88	-	74	-	-	-	336	-	62	-	-	-	165	
Kgalagadi South	209	-	-	-	-	-	22	54	32	22	32	86	-	154	
Kgalagadi North	223	55	164	-	-	78	-	55	-	83	-	214	81	48	
Total	29,673	13,810	2,923	10,997	1,510	2,894	331	7,156	2,645	1,218	6,158	9,176	2,364	5,894	

### Table 5.7: In migration and Outmigration by District 2017
						Plac	e of Orig	jin					Hundright         Hundright <thhundright< th="">         Hundright         <th< th=""></th<></thhundright<>										
Central Serowe Palapye	Central Mahalapye	Central Bobonong	Central Boteti	Central Tutume	North East	Ngamiland East	Ngamiland West	Chobe	Okavango Delta	Ghanzi	Central Kgalagadi Game Reserve	Kgalagadi South	Kgalagadi North	Unknown	Total								
1,544	994	298	207	505	203	614	222	220	64	69	-	206	75	-	17,463								
439	363	872	198	1,448	792	537	75	-	-	151	-	-	-	-	7,957								
204	65	-	-	-	-	-	-	-	-	65	-	-	-	-	2,817								
1,048	116	511	60	254	-	-	60	69	-	-	-	-	-	-	3,395								
246	43	41	293	41	-	-	41	-	-	-	-	-	-	-	957								
76	294	-	68	-	-	-	-	-	-	145	-	140	68	-	2,246								
17	-	-	-	112	32	17	-	15	-	-	-	-	-	-	339								
573	76	-	101	-	195	81	62	118	-	81	-	389	89	-	7,416								
-	62	-	-	-	-	71	97	-	-	65	-	-	-	-	3,385								
-	-	-	-	-	-	-	-	-	-	-	-	218	141	-	832								
460	396	118	78	137	-	178	78	-	-	166	-	-	146	-	9,459								
847	1,772	391	75	362	172	307	65	65	-	104	-	396	533	-	19,710								
-	104	-	-	59	-	-	-	-	-	76	62	81	116	-	2,750								
76	1,285	411	38	642	136	-	-	-	-	-	-	-	-	-	7,374								
-	2,017	887	1,379	295	385	455	-	79	-	66	60	105	-	-	14,350								
1,410	-	62	140	-	62	-	-	151	60	-	-	92	53	-	5,471								
275	88	-	-	164	-	-	58	58	-	-	-	-	-	-	5,177								
1,214	364	211	-	509	271	645	-	126	60	130	-	-	-	-	6,175								
805	82	305	415	-	303	626	222	225	-	-	-	71	-	76	8,424								
259	312	72	229	531	-	239	104	57	-	123	-	-	-	-	6,763								
226	320	64	471	136	172	-	1,655	173	-	64	-	-	-	-	6,164								
54	54	-	-	-	212	920	-	108	53	53	-	-	-	-	2,113								
257	-	86	63	222	241	171	63	-	-	444	-	-	-	-	3,032								
115	62	-	73	-	-	198	125	-	-	-	220	114	62	-	2,194								
-	154	-	32	-	-	32	-	-	-	160	-	-	141	-	1,130								
215	108	159	-	-	-	-	55	-	-	212	164	383	-	-	2,297								
10,360	9,131	4,488	3,920	5,417	3,176	5,091	2,982	1,464	237	2,174	506	2,195	1,424	76	-								

#### Table 6.9: Percentage distribution of housing units by toilet facilities and place of residence

	Cities an	d Towns	Urban \	/illages	Rural V	/illages	То	tal
Toilet Facilities	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Own: Flush toilet	123,637	78.5	124,701	46.9	35,896	15.8	284,234	43.7
Own: Ventilated Improved Pit Latrine (VIP)	585	0.4	2,523	0.9	1,831	0.8	4,939	0.8
Own: Pit latrine	29,378	18.7	123,023	46.3	98,785	43.6	251,186	38.7
Own: Enviro-loo	93	0.1	-	-	2,090	0.9	2,183	0.3
Communal: Flush toilet	1,272	0.8	1,704	0.6	1,807	0.8	4,782	0.7
Communal: Pit latrine	942	0.6	1,059	0.4	1,119	0.5	3,120	0.5
Communal: Neighbors toilet	916	0.6	7,904	3.0	20,140	8.9	28,959	4.5
None	514	0.3	4,628	1.7	64,944	28.6	70,086	10.8
Not stated	87	0.1	158	0.1	72	-	317	0.0
Total	157,423	100.0	265,701	100.0	226,681	100.0	649,806	100.0

#### Table 6.10 : Percentage of Ownership of Durable goods

Item	Percent	Total
Van/Bakkie	15.3	96675
Car	30.8	194269
Tractor	2.6	16626
Donkey Cart	11.4	71553
Bicycle	11.8	74554
Wheelbarrow	42.3	266419
Radio	63.2	398164
TV	63.2	398147
Computer	25.2	158713
Refrigerator	60.2	379784
Watch	40	251962
Cell Phone	96	605243
BTC phone(land line)	9.6	60249
Mokoro/canoe	0.8	4895
Boat with motor	0.3	1800
Sewing machine	5.1	32341
Motor Bike	0.6	3529
Plough	10.8	67935

#### Table 6.11 : Percentage distribution of households by water treatment methods

Water Treatment Methods	Percent	Total
Boil	83.5	19469
Add bleach / chlorine	2.2	518
Strain it through a cloth	1	226
Use water filter (ceramic, sand, composite )	5.2	1218
Solar disinfection	0.8	190
Let it stand and settle	1	243
Other (Specify)	6.3	1462
Total	100	23326

Method	lia	QNI	Injection	Diaphragm/Foam/ Jelly	Male Condom	Female Condom	Female Sterilization	Male Sterilization	Traditional	Periodic Abstinence	Prolonged Abstinence	Withdrawal	Norplant	Other (specify)	Total
Age group															
12-14	15.5	-	18.8	-	65.7	-	-	-	-	-	-	-	-	-	576
15-19	6.3	0.8	12.7	-	75	0.6	-	0.4	-	0.3	1.9	0.5	1.4	-	15,684
20-24	9.4	0.4	18.9	-	67.4	1.8	0.3	-	-	0.1	0.1	0.2	1.2	0.1	58,978
25-29	11.8	1.2	21.7	0.1	61.5	0.8	-	0.1	-	0.2	0.3	0.6	1.4	0.4	70,628
30-34	13.8	1	14.8	0.5	64.5	0.6	1.2	0.1	0.1	0.1	0.2	0.8	2	0.3	75,562
35-39	12.5	1.7	15.3	-	65.2	1.6	1.6	0.1	-	0.4	0.2	0.4	0.9	0.2	67,743
40-44	8.5	2.9	9.8	-	73.4	1.3	2.2	0.1	-	-	0.9	0.2	0.4	0.2	44,925
45-49	6.7	0.6	5.2	0.3	76.8	1.8	3	0.2	0.6	0.8	2.6	0.4	0.7	0.3	28,883
Total (%)	10.9	1.3	15.4	0.1	67.1	1.2	1.1	0.1	0.1	0.2	0.5	0.5	1.2	0.2	362,978
Place of Resi	dence														
Cities/Town	10.3	1.7	9.9	-	71.6	1.1	1.4	0.1	0.1	0.1	0.3	0.5	2.4	0.4	91,755
Urban Village	10.4	1.3	11.9	0.3	71.1	1.3	1.1	0.2	-	0.4	0.7	0.5	0.6	0.2	166,319
Rural	12.3	0.9	25.8	0.1	56.6	1.1	0.8	-	0.2	0.1	0.5	0.4	1	0.2	104,903
Total (%)	10.9	1.3	15.4	0.1	67.1	1.2	1.1	0.1	0.1	0.2	0.5	0.5	1.2	0.2	362,978

### Table 7.1Percentage Distribution of women aged 12-49 years by current use of contraception method,Type of method and Place of residence

#### Table 7.3 Population Distribution of women aged 12-49years by reason for not using contraception method

	Age group									
Reason	12-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total	
Want a Child	-	325	2,423	1,446	2,037	2,241	928	795	10,195	
Lack of Knowledge	62	606	430	70	132	124	180	92	1,697	
Opposed to Family Planning	-	224	134	144	242	124	55	311	1,234	
Husband/Partner Disapprove	-	109	313	305	213	330	241	712	2,224	
Other Disapprove	-	175	239	-	294	293	82	125	1,208	
Health Problems	-	-	-	472	642	366	832	505	2,817	
Difficult to Get	-	-	38	177	-	-	-	-	214	
Costs too Much	-	-	-	-	-	78	-	-	78	
Inconvenient to Use	-	55	55	283	55	63	62	34	608	
Not Effective	-	53	312	-	58	63	176	-	661	
Infrequent Sex	-	227	379	-	210	277	590	320	2,001	
Fatalistic	-	-	-	68	-	65	189	-	322	
Religion	-	62	127	836	304	223	498	571	2,620	
Postpartum/ Breastfeeding	-	-	137	202	-	69	-	65	473	
Menopausal/Sub fecund	-	-	-	-	-	-	218	1,051	1,269	
Not yet sexually active	64	157	-	-	65	164	-	186	636	
Other (specify)	-	298	704	988	975	668	1,266	486	5,384	
TOTAL	126	2,292	5,291	4,991	5,227	5,146	5,317	5,254	33,643	

Table 7.4: Population	distribution of women	aged 15-49 b	y main problem e	experienced after using	a contraception method
		<b>J</b>	/		

AGE GROUP	Method Failed	Partner Disapproved	Side effects	Not Available	Inconvenient to Use	Other (specify)	TOTAL
15-19	210	66	757	-	208	66	1,306
20-24	344	72	7,404	-	135	547	8,502
25-29	389	-	9,181	61	183	856	10,671
30-34	793	-	7,432	57	190	890	9,362
35-39	393	-	5,669	78	165	488	6,793
40-44	285	-	4,038	-	69	257	4,649
45-49	82	104	3,156	-	62	374	3,779
PERCENT	5.5	0.5	83.5	0.4	2.2	7.7	100
Total	2,496	242	37,637	196	1,013	3,478	45,062

#### Table 8.1: Population Distribution according to National registration status

Age group	Yes	No	Do Not Know	Total
16-19	115620	15798	24	131442
20-24	175518	4294	159	179971
25-29	164270	1877	-	166147
30-34	166329	1902	-	168231
35-39	145367	863	-	146230
40-44	116215	801	81	117097
45-49	82147	1145	-	83292
50-54	80708	630	-	81338
55-59	61655	346	-	62001
60-64	49768	400	-	50168
65-69	36146	272	-	36418
70-74	25975	129	-	26104
75-79	20197	-	-	20197
80-84	12166	181	-	12347
85-89	10572	-	-	10572
90-94	5444	-	-	5444
95+	3524	73	-	3597
Total	1271621	28711	264	1300596

#### Table 9.2: Percentage distribution of children under 5 breastfeeding initiation

Initiation of Breastfeeding	0	1	2	3	4	Total	Percent
Less than 1 hour	65.9	62.8	61.8	60.7	64	127875	63.1
Between 1 and 24 hours	25.6	27.4	29.1	27	23.3	53779	26.5
After 1 day	5.3	4	4.6	4.6	5.3	9661	4.8
Don't know	3.2	5.8	4.4	7.8	7.4	11415	5.6
Total	43944	39859	41049	39774	38104	202730	100

	Total	Percentage	1.5	3.3	5.4	4.6	4.8	4.7	6.4	5.4	6.0	6.2	7.3	5.0	6.0	6.2	6.2	20.7	
Disability		Number	1,374	3,034	4,945	4,224	4,343	4,297	5,863	4,928	5,450	5,662	6,634	4,561	5,476	5,682	5,647	18,824	
	Care	Percentage	8.4	3.9	11.8	4.3	5.1	7.0	9.4	5.7		1.0	2.9	3.1	4.9	2.1	1.9	28.4	
	Self-(	Number	573	265	803	294	347	473	637	389	'	71	200	213	330	146	126	1,928	
	mbering	Percentage	1	3.9	11.7	4.8	2.1	7.4	6.3	2.7	3.9	5.6	0.9	2.5	6.0	7.7	7.2	19.2	
	Reme	Number	1	355	1,062	438	192	675	577	243	353	507	822	223	544	701	655	1,744	
	nt of arms(s)	Percentage	3.6	2.9	4.4	3.2	4.5	5.7	3.7	9.2	8.0	6.6	6.3	6.0	4.5	8.8	5.5	17.1	
	Impairmer	Number	339	277	417	307	431	543	354	879	757	627	603	572	424	834	528	1,628	
	nt of Leg(s)	Percentage	2.8	1.5	1.7	2.1	2.8	2.0	3.8	4.7	5.0	3.2	7.9	7.5	7.3	7.2	9.7	30.8	
Disability	Impairme	Number	720	392	440	555	739	514	1,004	1,233	1,317	824	2,055	1,949	1,900	1,889	2,542	8,044	
	pairment	Percentage	7.5	15.8	10.7	10.7	8.7	8.4	11.4	6.2	4.0	5.7	2.4	1.7	3.0	1.0		2.8	
	Speech im	Number	583	1,226	831	827	675	651	887	479	312	443	187	132	234	78	'	221	
	npairment	Percentage	0.8	4.2	4.0	6.1	5.2	4.0	6.8	3.0	6.1	5.0	4.8	6.3	3.3	7.1	4.9	28.3	
	Hearing in	Number	136	710	679	1,023	878	681	1,152	498	1,031	848	811	1,062	552	1,199	824	4,770	
	impairment	Percentage	0.2	2.7	4.9	3.9	4.6	4.4	6.2	5.2	5.8	7.4	7.8	4.5	6.1	6.1	6.2	24.2	
	Sight/Visual	Number	94	1,226	2,206	1,748	2,045	1,990	2,769	2,317	2,601	3,330	3,494	2,000	2,721	2,731	2,777	10,888	
	AGe	Groups	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	

Table 11.4 Distribution of population with disabilities by age

#### Table11.5: Distribution of type of disability by district

District	Sight/Visual impairment	Hearing impairment	Speech impairment	Impairment of Leg(s)	Impairment of arms(s)	Remembering	Self-Care	Total
Gaborone	3,084	539	233	1,076	502	464	392	5,391
Francistown	1,426	537	491	1,358	639	217	357	3,524
Lobatse	378	119	61	249	51	130	-	871
Selebi Pikwe	540	62	-	371	62	-	55	1,091
Orapa	258	-	38	-	-	41	-	337
Jwaneng	706	253	-	128	68	76	-	1,103
Sowa Town	82	15	15	17	-	-	-	114
Ngwaketse	3,410	871	522	2,352	530	624	708	6,882
Barolong	1,431	1,014	332	769	384	400	193	3,528
Ngwaketse West	245	106	-	72	72	35	-	461
South East	1,368	629	283	827	330	270	-	2,942
Kweneng East	6,545	1,775	1,101	3,241	1,223	739	533	12,061
Kweneng West	906	102	135	348	-	72	187	1,520
Kgatleng	1,494	379	374	889	218	171	279	2,811
Serowe Palapye	4,015	1,847	676	2,612	1,159	1,648	1,001	9,357
Central Mahalapye	2,874	852	595	1,295	344	437	800	5,090
Central Bobonong	2,036	863	448	1,476	157	605	480	4,655
Central Boteti	1,413	521	266	836	109	374	187	2,697
Central Tutume	3,779	2,071	704	2,793	1,219	786	195	7,898
North East	1,032	529	138	827	466	485	214	3,257
Ngamiland East	1,873	556	182	1,072	608	494	393	3,411
Ngamiland West	1,775	840	411	1,397	398	758	340	3,920
Chobe	782	494	202	471	-	174	-	1,888
Ghanzi	1,588	935	223	560	279	93	73	2,778
Kgalagadi South	754	398	143	373	184	-	80	1,404
Kgalagadi North	1,145	543	188	707	518	-	328	1,955
Total	44,939	16,854	7,764	26,115	9,520	9,092	6,796	90,945

### **APPENDIX B**

#### METHODOLOGY REVIEW FOR THE 2017 BOTSWANA DEMOGRAPHIC SURVEY

#### 1.0 Introduction

Botswana Demographic Survey 2017 (BDS) is a national sample survey designed to provide information on demographic indicators in the country. This is the fourth of its kind to be conducted following the 1987, 1998 and 2006 BDS surveys. The BDS 2017 data collection was conducted for a period of about two and half months between 24th August and 30th October 2017. For the first time, the BDS adopted the use of computer assisted personal interviews (CAPI). The survey collected information on population characteristics, house-hold characteristics, economic activity, fertility, mortality, migration, family planning, nutritional status, birth registration and non-communicable diseases. The Botswana Demographic Survey 2017 data was envisaged to fulfill data needs for the sustainable development goals while awaiting the 2021 round of Population and Housing census.

#### 2.0 Objectives

The specific objectives of the survey were to;

- Assess trends in demographic indicators, in particular fertility, mortality and migration.
- Estimate population size, growth and distribution by gender and age groups.
- Provide data on family planning and fertility behavior of the population, therefore enabling policy makers and programmers to evaluate and enhance family planning initiatives.
- Examine basic indicators of child welfare (nutritional status).
- Measure the level of infant and adult mortality.

#### 3.0 Layout of the methodology

The summary of the BDS methodologies employed in the 2006 and 2017 reports are outlined below.

2006	2017
Target Population:	Target Population:
<ul> <li>All members of the household and visitors who spent the night with the households.</li> </ul>	<ul> <li>All members of the household and visitors who spent the night with the households.</li> </ul>
<ul> <li>For parental survival segment, the population below 18 years of age</li> </ul>	<ul> <li>Fertility and child survival segment targeted females 12 years and above</li> </ul>
• Fertility and child survival segment targeted females 12 years and above	
<ul> <li>Scope and Coverage:</li> <li>Private Dwellings only</li> <li>Institutional dwellings, Ngamiland Delta, CKGR and Industrial Areas were not in the scope of the survey</li> </ul>	<ul> <li>Scope and Coverage:</li> <li>Private dwellings only</li> <li>Institutional dwellings, Ngamiland Delta, CKGR and Industrial Areas were not in the scope of the survey</li> </ul>
<ul> <li>Sampling Frame:</li> <li>2001 Population &amp; Housing Census EA's</li> </ul>	<ul> <li>Sampling Frame:</li> <li>2011 Population and Housing Census EA's</li> </ul>
<ul> <li>Sampling Design:</li> <li>A stratified two-stage probability sampling design was used.</li> <li>First Stage was the selection of EA's as Primary Sampling Units (PSUs) with PPS where MOS is the # of HHLDS in the EA as defined in the 2001 Population &amp; Housing Census</li> <li>At Second Stage, HHLDS Secondary Sampling Units (SSUs) were systematically selected from a listing of HHLDS in the selected EA's (PSUs).</li> </ul>	<ul> <li>Sample Design: <ul> <li>A stratified two-stage probability sampling design was used.</li> <li>First Stage was the selection of EA's as Primary Sampling Units (PSUs) with PPS where MOS is the # of HHLDS in the EA as defined in the 2011 Population &amp; Housing Census</li> <li>At Second Stage, HHLDS as Secondary Sampling Units (SSUs) were systematically selected from a listing of HHLDS in the selected EA's (PSUs).</li> </ul> </li> </ul>
Sample Size: First stage sampling	<b>Sample size:</b> <u>First stage sampling</u> The formulae below was used to determine
<ul> <li>588 EA's were selected with PPS method where Measure of size (MOS) is the # of HHLDS in the EA as defined in the 2001 Population &amp; Housing Census</li> </ul>	the minimum sample size, $n = D \frac{Z_{\alpha}^{2} P(1-P)g}{e^{2} * h * r}$
Sampling procedure for selecting EA's in each stratum:	

١.	Calculating the sampling interval for each stratum	Whe
$I = \sum_{i=1}^{n}$ the str # of E/	$\sum_{n} M_i$ , where $\sum_{i} M_i$ is the size of atum (total # of HHLS) and $n$ is the A's to be selected in the stratum	•
∥. Ⅲ. IV.	Calculating the cumulated size for each EA. Calculating the sampling numbers R, R + I, R + 2I,, R + (n - 1)I where $R$ is the random start number between 1 and 1. Comparing sampling number with the cumulated size to determine the selected EA's.	
<u>Secon</u> •	<u>d stage sampling</u> 11760 HHLDS were drawn systematically from the selected EA's	•
Systen done	natic selection of HHLDS were as follows:	
١.	Calculating the sampling interval	•
$I = \frac{M}{m}$ HHLS line of HHL	, where $M$ the total #of occupied sted in the stratum and $m$ is the # S to be selected in the stratum.	•
ΙΙ.	Calculating the sampling numbers R, R + I, R + 2I,, R + (m-1)I where $R$ is the random number between 1 and 1.	•

#### Where:

- n is estimated sample size for the KEY (rarest) indicator,
- $Z_{\alpha}$  is value of Z which provides a/2 in each tail of normal curve if a 2-tailed test is used or a in one tail if a 1-tailed test is used. If a, the type-I error, is .05 then the 2-tailed Z is 1.96. a specifies the probability of declaring a difference to be statistically significant when no real difference exists in the population.
- *P* is the predicted or anticipated prevalence (coverage rate) for the key indicator, which is based upon the smallest target group (in terms of its proportion of the total population),
- *e* is the margin of error or allowable error to be tolerated (in general 5 percentage points),
- D is the design effect (a ratio of the expected sampling variance from the sampling design to be used compared to that of a simple random sample of the same size. It is a measure of how much more unreliable the present survey is compared to a simple random sample). DEFF = 1.5 was assumed since it was not calculated from the previous survey.
- r= the proportion of total population that the smallest group comprises, and

• $h =$ the average household size.
• g is the factor necessary to raise the
sample size $n_2$ a specific
percentage for non-response (for
example $g=1/0.9=1.11$ to raise the
sample size by 10 percent).
• $ CC = \frac{Deff-1}{b-1} = \frac{1.5-1}{20-1} = 0.026 = 2.63\%$
Where $b$ is the cluster size, fixed at 20. This is
the number of households interviewed per
EA.
Following the calculation outlined, the Key Indicator was found to be Under 5 Mortality Rate (UMR), which yielded the largest sample size of <b>478</b> EAs. These were selected with Probability Proportional to Size (PPS) method where Measure of size (MOS) is the number of households as enumerated from the 2011 Population & Housing Census. This also yielded <b>9 560</b> households.
Sampling procedure for selecting EA's in each stratum:
i. Calculating the sampling interval for each stratum
$I = \frac{\sum M_i}{n}$ , where $\sum M_i$ is the size of the stratum (total # of HHLDS) and <i>n</i> is the # of EA's to be selected in the stratum
ii. Calculating the cumulated size for each EA. iii. Calculating the sampling numbers R, R + I, R + 2I,, R + (n-1)I where $R$ is the random start number between 1 and 1.
III. Comparing sampling number with the cumulated size to determine the selected EA's.
Second stage sampling

	<ul> <li>9560 HHLDS were to be drawn systematically from the selected EA's</li> </ul>
	Systematic selection of HHLDS were done as follows:
	I. Calculating the sampling interval
	$I = \frac{M}{m}$ , where <i>M</i> the total #of occupied
	HHLDS listed in the stratum and $m$ is the $\#$ of HHLDS to be selected in the stratum.
	II. Calculating the sampling numbers R, R + I, R + 2I,, R + (m-1)I where $R$ is the random number between 1 and I.
Sampling Weights	Sampling Weights
There are three components of weighting used:	There are three components of weighting used:
I. <u>First Stage weighting (From EA to</u> <u>Stratum Level</u> ) – account for varying probability of EA selection. For the <i>i</i> <sup>th</sup> EA in the <i>h</i> <sup>th</sup> stratum, the first stage weight is determined by: $W_{1hi} = \frac{\sum_{i} M_{hi}}{n_h M_{hi}}$	First Stage weighting (From EA to Stratum Level) – account for varying probability of EA selection. For the <i>i</i> <sup>th</sup> EA in the <i>h</i> <sup>th</sup> stratum, the first stage weight is determined by: $W_{1hi} = \frac{\sum_{i} M_{hi}}{n_h M_{hi}}$ Where
Where	$W_{1hi}$ = The first stage weight for $i^{th}$ EA in $h^{th}$
$W_{1hi}$ = The first stage weight for $i^{th}$ EA in $h^{th}$ stratum	stratum $n_h$ =The # of EA's selected in $h^{th}$ stratum
$n_h$ = The # of EA's selected in $h^{th}$ stratum	$M_{hi}$ = The size of the $i^{th}$ EA in $h^{th}$ stratum
$\overset{"}{M}_{hi}$ = The size of the $i^{\prime h}$ EA in $h^{\prime h}$ stratum	$\sum_{i} M_{hi}$ =The total size of $h^{ih}$ stratum
$\sum_{i} M_{hi} = \text{The total size of } h^{ih} \text{stratum}$ I. <u>Second stage weighting (From</u> <u>HHLDS to EA level</u> ): obtained by dividing the total occupied HHLDS by the # of selected HHLDS in the EA	Second stage weighting (From HHLDS to EA level): obtained by dividing the total occupied HHLDS by the # of selected HHLDS in the EA $W_{2hi} = \frac{M_{hi}^{o}}{m}$
	11 hi

$W_{2hi} = \frac{M_{hi}^{o}}{m_{hi}}$	Where
Where	$W_{2hi}$ = second stage weight for $i^{th}$ EA in $h^{th}$ stratum
$W_{2hi}$ =second stage weight for $i^{th}$ EA in $h^{th}$ stratum	$M_{hi}^{o}$ =Total # of listed HHLDS in $i^{th}$ EA in $h^{th}$ stratum
$M^{o}_{hi}$ =Total # of listed HHLDS in $i^{\prime h}$ EA in $h^{\prime h}$ stratum	$m_{hi}$ =The # of occupied HHLDS selected for the <i>i</i> <sup>th</sup> EA in <i>h</i> <sup>th</sup> stratum
$m_{hi}$ =The # of occupied HHLDS selected for the $i^{th}$ EA in $h^{th}$ stratum	Non Response Adjustment: The non-response adjustment for the $i^{th}$ EA in $h^{th}$ stratum
II. <u>Non Response Adjustment</u> : The non-response adjustment for the $i^{th}$ EA in $h^{th}$ stratum	$R_{hi} = 1 + \frac{m_{2hi} + m_{4hi}}{m_{1hi} + m_{5hi}}$
$R_{hi} = 1 + \frac{m_{2hi} + m_{4hi}}{m_{1hi} + m_{5hi}}$	Where
Where $m_{ihi} = \#$ of occupied HHLDs falling under	$m_{jhi} = \#$ of occupied HHLDs falling under $j^{lh}$ result code in $i^{th}$ EA in $h^{th}$ stratum.
$j^{th}$ result code in $i^{th}$ EA in $h^{th}$ stratum.	Note:
Note: $j = \begin{cases} 1, Completed \\ 2, Non - contact \\ 4, Re fused \\ 5, Partly - competed \end{cases}$	$j = \begin{cases} 1, Completed \\ 2, Non - contact \\ 4, Re fused \\ 5, Partly - competed \\ \hline Thus, \end{cases}$
Thus, I. The <b>final weight</b> for the $i^{th}$ EA in $h^{th}$ stratum is:	The <b>final weight</b> for the <i>i</i> <sup>th</sup> EA in <i>h</i> <sup>th</sup> stratum is: $W_{hi} = W_{hi} * W_{2hi} * R_{hi}$
$W_{hi} = W_{hi} * W_{2hi} * R_{hi}$	

#### 4.0 DISCUSSIONS FOR BDS 2017 SURVEY EVALUATION

The following points were observed from the 2017 BDS report and need to be used in guiding us to develop the statistical methodology for the envisaged BDS 2027.

i. The sample size for BDS have declined from 588 EAs in 2006 to 478 EAs in 2017.

ii. It is worthy to note that the initial designed methodology was not implemented in the field as it is indicated in the report, the sample size was reduced by 23 percent owing to resource constraints. Hence 478 EAs instead of 622 were enumerated. However a pre-caution has to be noted that the objective method used to determine the sample size is designed in such a way that it gives the minimum sample size that is expected to yield reliable estimates. Thus administering a sample below the minimum size comprises with precision and hence quality of the estimates. Therefore it is not advisable to go below the minimum requirements of the sample size and proceeding in such a manner defeats the objective of the survey.

iii. There are inhibited areas such as, Ngami land Delta and CKGR which are inaccessible or are normally not included in the samples yet population estimates are essential for those communities. A sound direct or indirect method of indicators like Infant Mortality Rate and under five mortality rate estimations in those areas are pertinent.

#### **5.0 STANDARD ERRORS FOR SELECTED KEY VARIABLES**

The estimates from a sample survey are affected by two types of errors which are sampling and non-sampling errors.

**Sampling errors**, they can be evaluated statistically. The best method of preventing the sampling errors is to use correct scientific methods. Sampling errors are a measure of the variability between the true population parameter and the estimate of that particular parameter from the sample survey data. Although the degree of variability is not known exactly, it can be estimated from the survey results. A sampling error is usually measured in terms of standard error for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population parameter can reasonably be assumed to fall.

The standard error can also be used to compute the design effect (DEFF) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A design effect (DEFF) is an adjustment made to find a survey sample size, due to a sampling method (e.g. stratified sampling) resulting in larger sample sizes (or wider confidence intervals) than you would expect with simple random sampling (SRS). The DEFF tells you the magnitude of these increases.

The design effect is the ratio of the actual variance to the variance expected with SRS. It can more simply be stated as the actual sample size divided by the effective sample size (the effective sample size is what you would expect if you were using SRS). For example, in the BDS 2017 we were using Stratified Random Sampling with a DEFF of size 1.5. Therefore a DEFF of 1.5 means the variance is 1.5 times as large as you would expect with SRS. It also means that if you used stratified sampling, you'd have to use 1.5 times the sample size. In most cases the increase is mainly due to the use of more complex designs.

As complex designs involve clustering and stratification, the clustering effect has been controlled by fixing the number of households in each Enumeration Area to the size of 20. Due to homogeneity factor, it is assumed that the cluster size of 20 will serve the optimum purpose and increasing it will not have any significant effect in the accuracy of the estimates of the population parameters.

BDS 2017 as explicitly explained in the design follow a complex design, this provides the basis why it is critical to evaluate the standard errors at the end of the survey. It had not been possible to sample respondents using the simple random sample due to the complexity of the population structure. Latest SPSS version are said to have been improved to incorporate the complexity of the survey design in computing standard errors, as opposed to the old versions which were assuming the data were collected using SRS. Therefore in evaluating the BDS standard errors were computed using SPSS version 25.

Non-sampling errors are the results of mistakes made in the implementing of data collection and data processing. Furthermore non sampling errors occur due to;

(i) The Interviewer bias

The best way of dealing with this type of errors is to give enumerators the best training and motivation, employ qualified enumerators, rationalize the workload, monitor adherence to the work plan and conduct effective quality control activities.

#### (ii) The questionnaire

Questions in the questionnaire vary depending on the objectives of the survey. They range from socioeconomic, health indicator, as well as the demographic variables. Due diligence has to be undertaken in all these approaches in order to solicit the required responses as some questions are sensitive and deserve the same treatment. Ambiguous and leading questions should be avoided at all costs for the maximum benefit of the survey.

(iii) The respondent.

The respondents could have a significant contribution on the non-sampling errors due to fatigue emanating from the long interviews, level of motivation due to the types of questions asked, and the use of proxy where it is not appropriate and relevant and then ultimately provide inaccurate responses.

The creeping in of non-sampling errors is inevitable, however various strategies have to be employed to curb and minimize these errors. It has proven that it is impossible to evaluate statistically but their effects affect the quality of data and then ultimately the precision of the population parameter estimates.

#### 6.0 Recommendations

The desired levels of precision can be specified using the width of the confidence limits as well as the relative precision, which are  $(L,U) = (\bar{y} \pm z_{1-\frac{x}{2}n-1} * \sqrt{v(\bar{y})})$  and  $c.v(\bar{y}) = \frac{se(\bar{y})}{\bar{y}}$  respectively. The standard errors for the key variables for the Botswana Demographic Survey 2017 as presented in the tables below appear to be very low which implies that the data from this survey can produce reliable estimates. The variability across the variables of interest are comparable and the mean of the estimates are within the confidence limits. This validates the survey results and render them useable for policy and decision making.

#### Standard errors for selected variables.

			Confidence Interval [95% C.I]	Coefficient of Variation (%)
Variables	Mean	Standard error (SE)		$C.V = \frac{s.e(\overline{y})}{\overline{y}}$
P35m: How many MALE children have been born alive?	2.161	0.581	(0.58 ; 3.44)	0.269
P35f: How many FEMALE children have been born alive?	2.137	0.580	(0.85 ; 3.43)	0.271
P38m: How many of the children have died? MALE	1.425	0.366	(0.58 ; 2.27)	0.257
P38f: How many of the children have died? FEMALE	1.345	0.328	(0.50 ; 2.19)	0.23
P39m: How many children have been born alive by (past 12 months)	1.011	0.021	(0.74 ; 1.28)	0.021
P40m: How many of these children have died?(past 12 months)	0.021	0.033	(-0.1195 ; 0.1623)	1.531
D6: How old was in completed years at the time of death?	59.17	4.048	(51.11 ; 67.23)	0.068

#### PREPARED BY STATISTICAL METHODS UNIT. AUGUST 2018.



## BOTSWANA DEMOGRAPHIC SURVEY 2017 QUESTIONNAIRE

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# BOTSWANA DEMOGR APHIC SURVEY 2017 QUESTIONNAIRE



#### **GENERAL INFORMATION**

	District	VIIIage	Locality	
Name				
Code				
Stratum Number	EA No.	EA Serial No.	Dwelling No.	Household No.

GPS Coordinates	Latitude	Longitude
Enumeration Area		
Dwelling		

Respondent Name & Line no	
Name of Enumerator & Code	
Name of Supervisor& Code	

	1st Visit	2nd Visit	3rd Visit	Comment Box	
Interview Date					
Starting Time					
Einishing Time					
Results					
1030113					
				Total Visits	

Result Code	Total Persons in Household	
1.Completed	No.of questionnaire used	

2. Present but not available for interviews	

3. Postponed		Name	Date
4. Refused	Observation		
	Checked by		
5.Partially completed			
	Coded		
6. Dwelling Vacant			
	Entered		
7. Dwelling Destroyed			
	Online Edited		

IF FOUND PLEASE SEND TO: STATISTICS BOTSWANA, PRIVATE BAG 0024, GABORONE OR NEAREST DISTRICT COMMISSIONER OFFICE



P	BOTSWANA DEMOGRAPHIC SURVEY 2017
Serial No.	ALL PERSONS ALL PERSONS
	NAME
	<ul> <li>Please give me names of <u>all persons</u> <u>who spent the last night with</u> this household. Make sure to include : <ol> <li>Persons who were away last night on duty, prayer meetings, wake keeping, etc</li> <li>Babies, newly born, elderly, visitors and persons with disability who slept with this household</li> </ol> </li> <li>Please also give names of all persons who did not spend last night but usually live with this household and no other household</li> <li>Make sure to include: <ol> <li>Usual members hospitalised, in prisons, in boarding schools, hotels and outside the country.</li> <li>Babies, newly-born, and persons with disabilities.</li> </ol> </li> </ul>
	(START WITH THE HEAD OF HOUSEHOLD)
P01	P02
01	
02	
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	
14	
15	



P	BOTSWANA DEMOGRAPHIC SURVEY 2017									
Serial				1	ALL PERS	ONS	1			
NO.	RESIDEN	ICE		SEX	AGE	RELATIONSHIP TO HEAD	PLACE OF BIRTH	CITIZENSHIP		
	Does usually live here? 1.Yes 2.No	INSTRUCTION CHECK P03 (IF P03= 1 CONTINUE (IF P03= 2 END INTERVIEW	Didspend the last night here? 1. Yes 2. No	Ismale or female? 1. Male 2. Female	How old is in completed years? (Age as at last birthday. If under 1 enter 00 and if 98 or above enter 98)	What is's relationship to the head of the house-hold? 00 Head 01 Spouse/Partner 02 Son/Daughter 03 Child In-law 04 Step child/ Foster/adopted 05 Grandchild 06 Parent 07 Parent In-law 08 Grand Parent 09 Brother/Sister 10 Nephew/Niece 11 Uncle/Aunt 12 Other relative 13 Not related	Where wasborn? (USUAL PLACE OF RESIDENCE OF MOTHER BEFORE DELIVERY) (STATE DISTRICT VILLAGE AND LOCALITY IF BORN IN BOTSWA- NA) Otherwise state Country	What is the country of's citizenship? 001 Botswana 002 Angola 003 Lesotho 004 Madagascar 005 Malawi 006 Mozambique 007 Namibia 008 South Africa 009 Swaziland 010 Zambia 011 Zimbabwe 012Tanzania 013 DRC 014 Mauritius 015 Seychelles Other - see list		
P01	P03	P03a	P04	P05	P06(2)	P07(2)	P08(7)	P09(3)		
01										
02										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										





Р	BOTSWANA DEMOGRAPHIC SURVEY 2017									
Serial					ALL PERSC	ONS				
No.	BIRTH	16 YEARS+	PLACE OF LIVING	;		ALL PERSONS				
	REGISTRA- TION	OMANG	NOW	A YEAR AGO	5 YEARS AGO	MOTHER		FATHER		
	Does have a birth certificate? 1. Yes 2. No	Has registered for National Identity (Omang ) Card 1. Yes 2. No	Where does usually live? 0001 in this housing unit 0002 Elsewhere in this locality 66XX Elsewhere in Botswana (State Town/ District) 7XXX Other Country (See list)	Where did live this time last year? 0000 Not born 0001 In this housing unit 0002 Elsewhere in this locality 66XX Elsewhere in Botswana (State Town/ District) 7XXX Other Country (See list)	Where did live 5 Years ago 0000 Not born 0001 In this housing unit 0002 Elsewhere in this locality 66XX Elsewhere in Botswana (State Town/ District) 7XXX Other Country (See list)	Is's biological mother alive? 1. Yes 2. No → <b>P17</b> 9. Don't know → <b>P17</b>	Does's biological mother usually live in this household? 1. Yes 2. No	Is's biological father alive? 1. Yes 2. No → P19 9. Don't Know → P19	Does's biological father usually live in this household? 1. Yes 2. No	
P01	P10	P11	P12(4)	P13(4)	P14(4)	P15	P15 P16		P18	
01										
02										
03										
04										
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15										





P	BOTSWANA DEMOGRAPHIC SURVEY 2017												
Serial	ALL PERS	ONS 2 YE	ARS AND OVER			PERS	ONS					PERSON	s
No.	LANGUA	GE	EDU	CATION		AGE	D 5-35	ALL PERSONS	12 YEARS AND	OVER		AGED	ARS
			(FORMAL OR	NON FOR	MAL)			TRAINING				12-00 12	
	What language doesSpeak most often at home? 01 English 02 Setswana 03 Kalanga 04 Shekgalagari 05 Herero 06 Sebirwa 07 Mbukushu 08 Sesarwa 09 Shona 10 Ndebele 11 Setswapong 12 Afrikaans 13 Subiya 14 Shiyeyi 15 Sign language Other		Hasever attended School ? 1. Still at school 2. Yes, left 3. Never Attended IF 3 → P23	What is the high- est level that has completed? Pre-school 00 01 02 03 09 30 Non standard curriculum Non Formal 60 61 62 63 64 65 69 Primary 10 11 12 13 14 15 16 17 19 Secondary 21 22 23 24 25 26 29 (IF AGE IS 36 & OVER →P23) (IF P20 IS 1 OR 3 →P23)		When did last attend school ? (State the year)		<ul> <li>Hasever had training of any type for at least 3 months?</li> <li>1. Still training</li> <li>2. Yes Completed</li> <li>3. Yes left not Completed training?</li> <li>4. No Training</li> <li>(If 3 OR 4 → P26)</li> </ul>	TRAININGHasever had training of any type for at least 3 months?Highest level obtained / to be obtained?3 months?31 Apprent. Certificate 32 Brigades Certificate 33 Vocational Certificate 34 Educ. College Certificate 36 Other Certificate 36 Other Certificate1. Still34 Educ. College Certificate 36 Other Certificate 41 Vocational Diploma 43 University Diploma 43 University Diploma 45 Other Diploma 52 Post graduate 53 Other Degree2. Yes41 INS Diploma 45 Other Diploma 52 Post graduate 53 Other Degree4. No Irraining(If 3 OR 4 $\rightarrow$ P26)P23P24a(2)		What is/was 's subject of training? (If AGE IS 36 &OVER → P26) (IF P23 IS 1 OR 4 → P26)	When di last atter training (State th year)	d nd e
P01	P19	2(2)	P20	P2	1(2)	P2	22(4)	P23	P24	a(2)	P24b	P25(	(4)
		r			1					1			
01													
00													
02													
03													
04													
05													
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13													
14													
15													





Р	BOTSWANA DEMOGRAPHIC SURVEY 2017									
Serial No	ALL PERSONS AGED 12	YEARS & OVER								
110.	RELIGION	MARITAL STATUS	ECONOMIC ACTIVITY							
	What is's main religion? 1. Christianity 2. Islam 3. Bahai 4. Hinduism 5. Badimo 6. No Religion Other	What is 's current marital status? 1. Married 2. Never Married 3. Living Together 4. Separated 5. Divorced 6. Widowed	What hasbeen doing mainly in the past 12 Months? Seasonal work 01 Paid 02 Unpaid Non seasonal work 03 Paid 04 unpaid Other 05 Job Seeker 06 Home maker 07 Student 08 Retired 09 Sick Other (specify)	Did do any type of work for pay, profit or home use for at least 1 hour in the past 7 days? 1. Yes → <b>P31</b> 2. No [If no, hasworked at lands/cattle Post?]						
P01	P26	P27	P28(2)	P29						
01										
01										
02										
03										
04										
05										
06										
0/										
08										
09										
10										
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11										
12										
10										
13										
14										
15										





Р	BOTSWANA DEMOGRAPHIC SURVEY 2017								
Serial No	ALL PERSONS AGED 12 YEARS A	ND OVER							
	ECONOMIC ACTIVITY		OCCUPATION	INDUSTRY					
	Since was not working, what did he/she do for the past 7 days? 1. Actively seeking work 2. Home maker 3. Student	What wasworking as during the past 7 days? 01 Employee paid in cash 02 Employee-paid in kind only 03 Self-employed (no employee) 04 Self-employed (with employees)	What type of work did do in the past 7 days? (PROBE AS NECESSARY, USE TWO OR MORE WORDS TO DESCRIBE OCCUPATION)	What was the main product / service or activity ofplace of work? (PROBE AS NECESSARY, USE TWO OR MORE WORDS TO DESCRIBE INDUSTRY) IF MALE → P42 )					
	4. Retired 5. Sick Other (Specify) [IF FEMALE → P34, IF MALE → P42]	05 Unpaid family helper in business 06 Working at own lands/cattleposts							
P01	P30	P31(2)	P32	P33					
01									
02									
03									
04									
05									
06									
07									
08									
00									
07									
10									
11									
12									
13									
14									
15									





Р	BOTSWANA DEMOGRAPHIC	SURVEY 2017							
Serial No.			F	EMALES AGED	0 12 YEARS AN	DOVER			
			FERT	ILITY AND CH	ILD SURVIVALS	- FEMALES			
	Hasever given birth to a live child? Hasever given birth to a live child? Have been born alive by? (including those who have died) (IF NO → P42)		children are living with mother?		How mai children elsewher	ny of these are living e ?	How many of have died?	How many of the children have died?	
		M	F	M	F	M	F	M	F
P01	P34	P35	(4)	P	36 (4)		P37 (4)	P3	B (4)
01									
00									
02									
03									
							I		
04									
05									
03									
06									
07									
08									
09									
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11									
12									
10									
13									
14									
15									





Р	BOTSWANA DEMOGRAPHIC SURVEY 2017									
Serial No.		FEMALES AGED 12-49 YEARS (P39-P41)								
		Past 12 Months								
	How many children have been born alive by?	How many of these children have died? (IF 00 → P42)	How long did they live before they died? (start with the most recent)							
	M F	M F	M F							
P01	P39 (4)	P40 (4)	P41(12)							
01										
01			days months							
02			days months							
03			days mentts days mentts days mentts days mentts days mentts days mentts							
04										
			Cups meminis Cups meminis Cups meminis Cups meminis Cups meminis Cups meminis Cups							
05			days months days marths days months days months days months days months days months.							
06			doys menths days menths days menths days menths days menths days menths days menths							
07			days months							
08			days months							
09										
07			days months							
10			days months days months days months days months days months days months days							
11			doys menths							
12			dava monthe dava monthe dava monthe dava monthe dava monthe dava monthe							
13			doys months days months days months days months days months days months days months							
4			days months							
15			days months days months days months days months days months days months							





Р	BOTSWANA DEMOGRAPHIC SURVEY 2017														
Serial No.	ALL PERS	SONS													
	DISABILI	ſY								HEAL	TH STATUS				
	Does main dis (L)	abilities a	ave one c nd level o	of the follo f difficulty	wing diffi for disab	iculities? I pility (i.e D	Record up isability (D	) to thre ) and L	e evel	Hasever been dignosed with any of the following diseases (record up to three per person)					
	11 Difficulty of seeing in 1 eye 12 Difficulty of seeing in 2 eyes 21 Difficulty of hearing in 1 ear 22 Difficulty of hearing in 2 ears 31 Difficulty of speech 41 Difficulty to use 1 leg 42 Difficulty to use 2 legs 51 Difficulty to use 2 arms 51 Difficulty of Remembering 71 Difficulty with self care 81 No Disability Level No, no difficulty1 Yes, some difficulty2 A lot Difficulty3 Cannot do at all5								01 High BI 02 Low BF 03 Diabet 04 Cance 05 Cardia 05 Cardia 06 Respira 07 Osteop 08 Dental 09 Asthma 10 Depres 11 Chroni 12 Stoma 13 Rheum 14 Chroni 15 TB 16 Anaen 17. HIV/AI 18. Epilep 19. None 20. Other.	r - Vascular atory Disect porosis disease a sison c mental c ch/interstir natism/join c Kidney D nia DS sy (Specify) <b>3c</b>	disease se disease hal ulcer t inflamatio disease	on			
			1			1			1	-					
P01	<u>с</u>	)	L	D	P42	L	D		L			P4;	3a(6)		
		1										1			
01															
02															
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14															
15															





Р	BOTSWANA DEMOGRAPHIC SURVEY 2017		
Serial	ALL PERSONS		
No.		HEALTH STATUS	
	lsreceiving treatment?	How often doesconsume fruits?	How often does consume vegetables?
	1. Yes 2. No	1. Everyday 2.Three times a week 3. Once a week 4. Once in a while 5. Too Young 6. Never	1. Everyday 2. Three times a week 3. Once a week 4. Once in a while 5. Too Young 6. Never
P01	P43b	P43c	P43d
01			
02			
03			
04			
05			
00			
06			
07			
08			
09			
10			
12			
13			
14			
15			





P	BOTSWANA DEMOGRAPHIC SURVEY 2017								
Serial	ALL PERSONS								
No.		HEALTH STAT	rus	-					
	Measure weight and record in kilograms (kg) Result of Measurement 1. Measured 2. Not Present 3. Refused 4. Sick If 2 → P45a If 3 → P45a If 4 → P45a	Weight Weight in kg	Measure height and record in centimeters(cm) Result of Measurement 1. Measured 2. Not Present 3. Refused 4.Sick If $2 \rightarrow D2$ If $3 \rightarrow D2$ If $4 \rightarrow D2$	Height Height in cm					
P01	P44a	P44b	Ρ45α	P45b					
01									
02									
03									
04									
05									
06									
07									
0.9									
00									
09									
10									
11									
12									
13									
14									
1.5									
15									



	BOTSWANA DEA	MOGRAPHIC SURVEY 2017								
٥	MORTALITY									
Serial No	DEATHS OC	CURRED DURING LAST 12 MONTHS								
	Has any usual member of this household elect in the last 12 months? (stayed atleast 14 days) 1. Yes 2. No IF 2 → D11	Write name of the deceased (START WITH THE MOST RECENT)	Date of death MONTH YEAR	Was male or 1. Male 2. Female	How old was in com- pleted years at the the fime of death? <b>(Age as</b> at last birthday. If under 1 enter og and and af as birthday.	What was place of usual residence (STATE DISTRICT VILLAGE AND LOCALITY) IF RESIDENT IN BOTSWANA) Otherwise state country	What was the cause of death? 1. Illness 2. Transport related accident 3. Other accidents 4. Murder 5. Suicide 6. Maternal (Pregnancy/ childbirth) 7. Natural Disaster Other (Specify) <b>F 2 TO 7 &amp; OTHER</b> → D10	For how long he been sick? MONTHS MONTHS	was the death registered with Civil Registration? <b>1. Yes</b> <b>2. No</b> <b>9. Don't Know</b>	Was there any burial in this household in the past 12 months (Enter number of persons buried during the period. If none Enter 00) (IF NO → H01) (IF NO → H01) (If total burials is not equal to number of deaths Check D3 and correct accordingly Number of buried persons
D	D2	D3	D4(6)	D5	D6(2)	D7(7)	D8	D9(2)	D10	D11(2)
			-			-				
0										
02										
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03										
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04										
05										
č										
8										
07										
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60	1									
2										

		SALT IODIZATION MODULE	Does this Test sample	household (REGUEST FOR SALT use iodized salt for cooking ? 1. Yes 2. Less than 15 PPM 2. No 9. Don't Know 4. No salt in home 5. Salt not tested	Н07 Н08		
		z	FLOOR	1. Cement 2. Mud/Mud and Dung 3 Wood 5 file Other (Specify)	H06		
		I AL OF CONSTRUCTIO	ROOF	1 Slate 2 Thatch/Straw 3 Roof Tiles 4 Corrugated Iron/Zinc/Tin 5 Asbestos 6 Concrete Other (Specity) 	H05		
		MATER O	MALL	01 Modern bricks/blocks 02 Mud bricks/blocks 03 Mud and poles/ cowdung/thatch/ reeds 04 Poles and reeds /straw 05 Corrugated fron/Zinc/Tin 06 Asbestos 07 Wood 08 Stone Other (Specify)	H04(2)		
	TERISTICS	NUMBER OF ROOMS	How many rooms	are there in this dousing unit? (include: garages, kitchen etc. if also used for sleeping)	Н03(2)	-	
IIC SURVEY 2017		TENURE OF HOUSING UNIT	How was this	housing unit acquired? 01 Self Built 02 Inherited (Owner-occupied) 03 Purchased (Owner-occupied) 04 Rent: BHC 05 Rent: BHC 05 Rent: Council 07 Rent: Council 07 Rent: Council 08 Rent: Council 08 Rent: Council 10 Free (Inc. Job related) 99 Don't know	H02(2)		
<b>BOTSWANA DEMOGRAPH</b>	H HOUSING CHARAC	TYPE OF HOUSING UNIT	01 Traditional structure	(Lolwapa) 02 Mixed structures 03 Detrached house 04 Semi- detached 05 Town house/ Terraced 06 Flats, 07 Part of commercial building 08 Movable 09 Shack 10 Rooms	H01(2)		







		AND	How many nectares	Do memebers of this nousehold own? Hectares	H30(2)	
<b>WANA DEMOGRAPHIC SURVEY 2017</b>		OF LIVESTOCK	Does this household	own any agricultiral 1. Yes 2. No 9. Do not know <b>if 2 or 9 Go</b> <b>to E1</b>	H29	
		OWNERSHIP AGRICULTUR	Does this household	own any livestock, other farm animals, or poultry? 2. No 2. No	H28	
		JRABLES WNERSHIP	bes any member of is household own a	orkingin this uusing unit <b>NTER ALL MEN-</b> <b>DNED</b> Van/Bakkie Car fractor Donkey Cart Sicycle Mheelbarrow Refrigerator Watch Computer Refrigerator Watch Cell Phone BTC phone (land e) Motor Bike Motor Bike Plough	Н27(2)	
BOTS		10	How often is Do the refuse/ thi	rubbish collected? hc collected <b>1</b> 2 Irregularity 2 collected <b>3</b> 31 31 31 31 31 31 31 31 31 31 31 31 31	H26	
	RACTERISTICS	REFUSE DISPOSAL	How does this household	dispose off its refuse/rubbish? 2. Burn 3. Roadside dumping 5. Other (Specify) ( <b>IF 2 TO 5</b> → H27)	H25	
	HOUSING CHAI		Heating (Space)	1. Electricity 2. Gas (LPG) 3. Wood 4 Parafilin 4. Parafilin 5. Solar Power 6. Cowdung 7. Charcoal 9. None 0ther 	H24	
			Lighting	1. Electricity 2. Gas (LPG) 3. Wood 4. Paraffin 5. Candle 6. Paraffin/ candle 7. Solar Power 8. Bio Gas 0. Other (Specify)	H23	
GRAPHIC SURVEY 2017				In this household is food cooked on open fire or stove? 2. Stove	H22	
		SY USED FOR		Do you have a separate room which is used as a kichen? 2. No 2. No	H21	
		SOURCE OF ENERC		Where is the cooking done? 1. In the house 2. In a separate building 3. Out doors Other 	H20	
<b>BOTSWANA DEMO</b>		WHAT IS THE MAIN	Cooking	01. Electricity 02. Gas (LPG) 03 Paraffin 04. Solar Power 05. Bio Gas 06. Wood 07. Cow-dung 08. Coal 09. Crop waste 10. Charcoal 09. Crop waste 10. Charcoal 09. Crop waste 10. Charcoal 01. Charcoal 01. Charcoal 01. Charcoal 01. Charcoal 01. Charcoal 01. Charcoal 01. Charcoal 01. Charcoal 02. Langueta 03. Cop 04. Cop 04. Cop 04. Cop 05. Bio Gas 05. Bio Gas 06. Langueta 07. Cov-dung 07. Cov-dung 08. Coal 07. Cov-dung 08. Coal 08. Coal 09. Crop waste 10. Charcoal 01. Charcoal 01. Charcoal 03. Cop 04. Cop 05. Bio Gas 06. Bio Gas 07. Cov-dung 07. Cov-dung 08. Coal 07. Cov-dung 08. Coal 08. Coal 09. Cop 04. Cop 04. Cop 04. Cob 05. Bio Gas 06. Bio Gas 06. Bio Gas 07. Cov-dung 07. Cov-dung 08. Coal 07. Cov-dung 08. Coal 08. Coal 09. Cop 04. Cop 04. Cop 04. Cop 04. Cob 04. Cob 04. Cop 04. Cob 04. Cob 04	H19(2)	





P	BOTSWANA DEMOGRAPHIC SURVEY 2017									
Serial No.	CHECK ELIGIBILITY	CONTRACEPTION: FEMALES 12-49 Now I would like to ask you some Personal and very intimate questions that are very important for our survey. I would like to remind you that								
	Females 12-49	the information you pro	ovide to us is confidentic	al.						
	Circle line number of females eligible for individual interview. Female aged 12 to 49 yrs old Check P04 = 1 Check P06 = 12 to 49	Serial no. Record serial no in P01 of	Have you ever had sexual relations	Have you had sexual relations in the past 12 months?						
		females aged 12-49	2. NO →next person	1. res 2. No <b>→ F6</b>						
P01	El	P01	F2	F3						
	01									
	02									
	03									
	04									
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	06									
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	14									
	15									



(BDS 2017

P	BOTSWANA DEMOGRAPHIC SURVEY 2017								
CONTRACEPTION: F	EMALES 12-49								
Are you pregnant now? 1. Yes 2. No → F6	When you got pregnant, did you want to get pregnant at that time? 1. Yes → F7 2. No → F7	Are you currently doing something or using any method to avoid getting pregnant? 1. Yes → F8 2. No	Have you ever used anything or tried in any way to delay or avoid getting pregnant? 1. Yes 2. No → F12	What is the main method you have used or currently using?           Pill.         01           IUD.         02           Injection.         03           Diaphragm/Foam/Jelly.         04           Male Condom.         05           Female Condom.         06           Female Sterilization.         07           Male Sterilization.         09           Periodic Abstinence.         10           Prolonged Abstinence.         11           Withdrawal.         12           Norplant.         13           Other					
F4	F5	F6	F7	F8(2)					





#### BOTSWANA DEMOGRAPHIC SURVEY 2017

CONTRACEPTION: FEMALES 12-49									
Where did you last visit to obtain the contraceptive method?         Health Post.       01         Clinic.       02         Hospital.       03         Private Doctor/hospital/       04         Clinic.       04         Pharmacy.       05         Traditional practitioner.       06         Workplace.       07         Recreational Place.       08         Friends/Relatives.       09         Don't Know.       99         Other	Have you experienced any problems from using the method? 1. Yes 2. No If No → next person If F4 = is 1 go to F13	What is the main problem you experienced?         Method Failed01         Partner Disapproved02         Side effects03         No Access	What is the main reason that you are not using a method to avoid pregnancy?         Want a Child.       01         Lack of Knowledge.       02         Opposed to Family Planning.       03         Husband/Partner Disapprove.       04         Other Disaprove.       05         Health Problems.       06         Difficult to Get.       07         Costs too Much.       08         Inconvenient to Use.       09         Not Effective.       10         Infrequent Sex.       11         Fatalistic.       12         Religion.       13         Postpartum/Breastfeeding.       14         Menopausal/Subfecund.       15         Not yet sexually active.       16         Other	After the birth you are expecting now, would you like to have another child, or would you prefer not to have any more children? 1. Have another child 2. No more 3. Undecided/Don't know					
F9(2)	F10	F11(2)	F12(2)	F13					





	Р	BOTSWANA DEMOGRAPHIC SURVEY 2017											
		0-4 Years											
Check Elegibility					(	CHILD	NUTI	ritio	N				
Children <5 For each child age < 5 Check P06 = < 5	Serial No. Record child line number from P01	Serial no of Respondent in P01	Is the respondent the mother or caretaker of the child? 1. Mother 2. Father 3. Caretaker	Ho Re Do (Re ne 4 c	How old is ? Record date of birth Day/ Month/ Year (Request for birth card if necessary) 4 digits for year							Has ever been breastfed? 1. Yes 2. No → C8 9. Don't Know → C8	Is still being breast fed? 1. Yes → C7 2. No
				D	D D M M Y Y Y			Y					
E2	P01		C1		C2(8)						C3	C4	
					0-(0)								
01													
02													
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15													


BOTSWANA DEMOGRAPHIC SURVEY 2017												
0-4 Years												
CHILD NUTRITION												
Serial No. Record line number from P01	Why was breastfeeding stopped?   Inconvenient	How many months was (Name) breastfed? Record duration in months	How soon after birth was given the breast? 1. Less than 1 hour 2. Between 1 and 24 hours 3. After 1 day 9. Don't Know If C5 is 10 end interview									
		M	_									
P01	C5(2)	C6(2)	C7									





Ρ	BOTSWANA DEMOGRAPHIC SURVEY 2017												
	0-4 Years												
	CHILD N	NUTRITION											
Serial No. Record line number from P01	Since this time yesterday, state 3 main food or liquids taken by the child Vit Mineral Suppliments or medicine1						Take measureme upper arm circu cm	ent of the mferenc	e mid e	Take measurement of Measure head circumference			
	Plain Water. .2   Sweetened Water. .3   Oral Rehydration Salts (ORS) .4   Infant Formula (0-6 months) .5   Infant Formula (6-12 months) .6   Other Tinned Milk. .7   Fresh Milk. .8   Pasturised Milk. .9   Powdered Milk. .10   Other Liquids. .11   Solid or Semi Solid Food. .12					2 3 4 5 7 8	Record in cm cm			Record in cm cm			
						2 2	1. Measured 2. Not present 3. Refused 4. Sick			1. Measured 2. Not present 3. Refused 4. Sick			
	kecora	up to inte	e 1000 of	liquia ite	ems per	child		cm	cm		cm	cm	
P01			C8(6	)			C9a	C9b	o(2)	C10a	C10	b(2)	
				I	1				I				
						1							
												<u> </u>	
					1	1							





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