2014 Annual Road Crash and Claims Report

MVA FUND

Living the promise.

DECADE OF ACTION FOR ROAD SAFETY 2011-2020

Contents

MVA FUND STRATEGIC DIRECTION

Mission
To enhance the quality of life by promoting road safety, compensating, rehabilitating and supporting those affected by road crashes.

Vision
Best Chance to Normal Life.

Values
Our values are a reflection of Botho which underpins our national service culture as enshrined in our Vision.

Customer focus
We provide support to our customers in order to heal the wounds inflicted by road crashes.

Integrity
We do business in a transparent way and treat everyone with respect.

Teamwork
Our environment provides opportunities for us to develop team spirit and work together to create more value for our customers.

Innovation
We continually improve what we do and how we do it.

Acknowledgements

Since the inaugural issue of the MVA Fund Crash and Claims Report in 2009, the following organizations have been instrumental in providing vital data for the production of this Report; Botswana Police Service (Traffic Division), Department of Road Transport and Safety and Statistics Botswana. For the production of the 2014 issue, we are even grateful that the Department of Roads played an important role in the newly introduced section on Impact Assessment on Road Safety Initiatives. The contribution of all towards this production is highly appreciated.

FOREWORD

The Crash and Claims Report presents a very important information and decision making tool to various stakeholders ranging from government departments, private insurance companies and civic organizations. The MVA Fund is therefore pleased to release the 2014 issue of the Report. Efforts are always made to continuously improve the quality of the Report. For this particular issue, a section on Impact Assessment of Road Safety Initiatives from 2009 to 2014 has been included. This is a deliberate attempt to give stakeholders feedback on the performance of national road safety initiatives against the targets of the Decade of Action for Road Safety.

In terms of traffic safety performance for the year 2014, a total of 377 road crash fatalities and 1234 serious injuries occurred in Botswana. These figures represent 9.0 percent decrease in annual recorded fatalities from the 411 fatalities recorded in 2013 and 6.0% decrease in serious injuries during the same period. The decreases in both fatalities and serious injuries were in line with decrease in total recorded crashes by 2.5% from 17062 in 2013 to 16641 in 2014. This represents a marginal improvement in traffic safety performance.

Over the past ten years, a slight reduction in road crash incidents has been consistently recorded. Fatalities per 100 000 populations dropped from 19.5 in 2013 to 17.5 in 2014 while fatalities per 10 000 vehicles was at 6.8 in 2014 down from 8.0 in 2014. The improvement in road safety performance was achieved because road safety promotion initiatives have been focused towards the prevention of human failures within the traffic system. The country experienced increased number of human and vehicular traffic, commensurate with the ever expanding national road network. There is need for development of strategies geared towards balancing this delicate relationship. Ideally, the expansion of road networks should not invariably result in road crashes. It must bring about socio economic benefits to the populace.

However, road user behavior seems to be one of the main saboteurs of the national road safety promotion efforts. The most recent Road User Behavior Survey Report (2014) reveals that the level of road safety awareness is very high 88.4% among road users. However, application of that knowledge does not translate one on one into practice because the level of compliance with traffic laws and regulations is lower than the awareness level at 54.7%. It is therefore imperative that all road safety promotion initiatives must be geared towards positive behavior modification of all road users, among others.

The existing multi-disciplinary approach to road safety management is acknowledged, and must be sustained, if the country is to achieve the objective of safer roads. We also recognize the increasingly emerging need for research and development initiatives around road safety management. All stakeholders are therefore challenged to reflect on the most effective approaches of mobilizing the necessary human and financial capacity on road safety research.

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Chief Executive Officer
MVA Fund

SECTION 1:

BACKGROUND

1.1 Global and Country Road Safety Profile

According to World Health Organization (WHO) Global Status Report, Road traffic crashes are among the leading causes of death and injury worldwide, and therefore a global concern. The 2013 WHO Global Status Report indicates that worldwide the total number of traffic deaths remains high at 1.24 million per year. The report further indicate that few countries (7%) have a comprehensive road safety laws on key risk factors of drinking and driving, speeding, and failing to use motorcycle helmets, seat-belts, and child restraints. The World Health Organization Global Status Report on Road Safety (2013) indicates that road traffic crashes are ranked eighth in major causes of human deaths. The Report indicates that if effective actions are not taken immediately, road traffic crashes would rise to the fifth spot as a leading cause of death and injury globally by 2020. The current trends therefore compel all nations across the globe to develop and implement road safety promotion strategies to mitigate this eminent global risk.

The United Nations encourages all nations to developed and implemented road safety initiatives that would support the Decade of Action for Road Safety (2011 – 2020). The main goal of the Decade of Action for Road Safety is to stabilize and to reduce road crashes by half between 2011 and 2020. The plan acknowledges that this target can only be achieved through guided, coordinated and concerted action towards achieving the set goals and objectives by all stakeholders. The current trends of road traffic crashes, deaths and injuries impose huge economic and social burden especially on developing economies. The global picture indicates that road crash levels in most industrialized countries are declining, but in developing countries the situation is inversely worse. It is estimated that road crashes cost developing countries around 1-3% of their Gross Domestic Product (GDP) (WHO 2009). The total recorded fatalities in 2014 were 377 compared to 411 in 2013. The five year average shows that between 2010 and 2014 the average recorded fatalities per annum were 414, with another 1264 being seriously injured. The analyses of these crashes from Botswana Police Service Reports (Department of Traffic) indicates that most of the recorded crashes are human error related therefore these deaths and injuries can be avoided if appropriate interventions are put in place.

1.2 Current Road Safety Trends

The table below presents road crash performance overtime. The performance is measured by traffic safety performance indicators such as Crashes per 1000 vehicles, Casualties per 1000 vehicles, fatalities per 10 000 vehicles, fatalities per 100 000 populations and Claims lodged with MVA Fund per 1000 vehicles. These different performance indicators are applied to demonstrate overall traffic safety performance at all levels. The disaggregation gives a broader picture of the trends may be extrapolated to inform both policy and programming.

Table 1 : Car Crash Trends (1981 - 2014)

Year	Crashes	Casualty	Fatalities	Claims Lodged	Reg. Vehicle	Est. Pop	Crash/ 1000 Veh	Casul/ 1000 Veh	Fat/ 10 000 Veh	Fat/ 100 000 Pop	Claims/ 1000 Veh
1981	1715	940	93		34698	941027	49.4	27.1	26.8	9.9	
1982	2648	1614	130		38451	975625	68.9	42.0	33.8	13.3	
1983	2205	1251	176		42479	1011388	51.9	29.4	41.4	17.4	
1984	3300	1799	168		47192	1048245	69.9	38.1	35.6	16.0	
1985	3521	2369	198		51678	1086139	68.1	45.8	38.3	18.2	
1986	4983	1448	182		55604	1125008	89.6	26.0	32.7	16.2	
1987	4515	1746	191	84	57705	1164893	78.2	30.3	33.1	16.4	1.5
1988	5741	2923	262	132	64301	1205834	89.3	45.5	40.7	21.7	2.1
1989	6299	4136	295	232	70030	1247771	89.9	59.1	42.1	23.6	3.3
1990	7614	4845	314	316	80953	1290642	94.1	59.8	38.8	24.3	3.9
1991	8381	4871	349	324	83048	1326796	100.9	58.7	42.0	26.3	3.9
1992	9017	4909	368	486	90405	1378993	99.7	54.3	40.7	26.7	5.4
1993	9161	5136	379	563	94440	1424502	97.0	54.4	40.1	26.6	6.0
1994	9420	5171	352	822	108048	1458690	87.2	47.9	32.6	24.1	7.6
1995	9536	5247	410	888	117733	1493699	81.0	44.6	34.8	27.4	7.5
1996	10338	5457	338	962	128292	1529548	80.6	42.5	26.3	22.1	7.5
1997	11882	5956	411	1490	133691	1546725	88.9	44.6	30.7	26.6	11.1
1998	14279	6887	453	1760	139839	1598610	102.1	49.2	32.4	28.3	12.6
1999	16922	8049	494	2144	149639	1603847	113.1	53.8	33.0	30.8	14.3

Year	Crashes	Casualty	Fatalities	Claims Lodged	Reg. Vehicle	Est. Pop	Crash/ 1000 Veh	Casul/ 1000 Veh	Fat/ 10 000 Veh	Fat/ 100 000 Pop	Claims/ 1000 Veh
2000	16313	7790	529	2303	154000	1642339	105.9	50.6	34.4	32.2	15.0
2001	17125	7945	526	2510	166405	1622129	102.9	47.7	31.6	32.4	15.1
2002	18610	8014	520	2524	186865	1649659	99.6	42.9	27.8	31.5	13.5
2003	18329	7969	557	2649	204228	1973184	89.7	39.0	27.3	28.2	13.0
2004	18136	7840	532	2691	225182	1692731	80.5	34.8	23.6	31.4	12.0
2005	17522	7069	450	2611	246681	1708327	71.0	28.7	18.2	26.3	10.6
2006	17035	6952	429	2574	267117	1719996	63.8	26.0	16.1	24.9	9.6
2007	19487	7639	497	3082	293755	1736396	66.3	26.0	16.9	28.6	10.5
2008	20415	8160	455	2945	329270	1755246	62.0	24.8	13.8	25.9	8.9
2009	20000	7970	475	3217	359223	1776494	55.7	22.2	13.2	26.7	9.0
2010	18978	6430	397	2025	394401	1800098	48.1	16.3	10.1	22.1	5.1
2011	18001	6436	483	2356	430594	1826022	41.8	14.9	11.2	23.9	5.5
2012	17527	6035	404	2132	473530	2024904	37.0	12.7	8.5	19.6	4.5
2013	17062	6157	411	2078	515270	2062972	33.1	11.9	8.0	19.5	4.0
2014	16641	6065	377	2109	556737	2394233	29.9	10.9	6.8	17.6	3.8

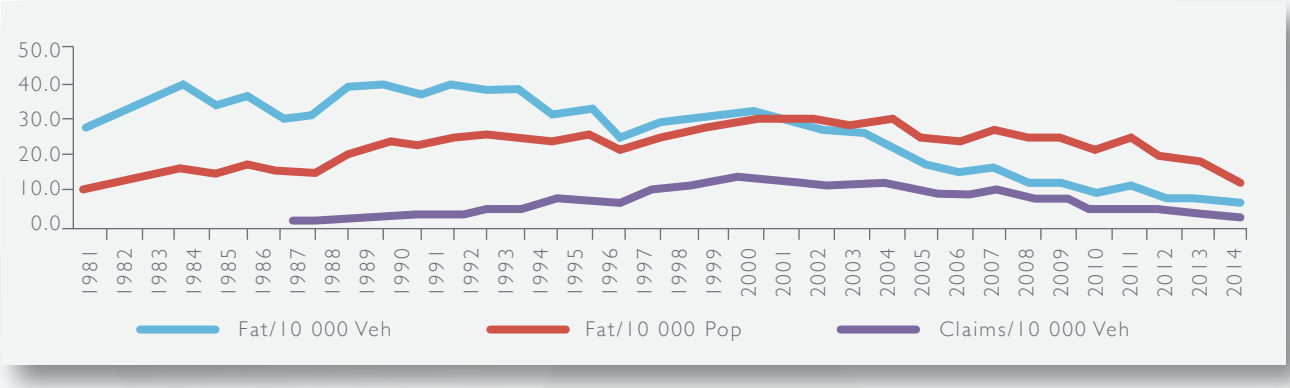
Source : Botswana Police Service, DRTS and Statistics Botswana Population Projections

Table 1 above illustrates traffic safety performance for the past 33 years. Fatalities per 10 000 vehicles is a road safety performance indicator in relation to vehicles population while fatalities per 100 000 populations is purely a health indicator in relation to road safety. The indicator of Claims Lodged with MVA Fund per 1000 vehicles measures the number of claims reported to MVA Fund per 1000 vehicles, this is a measure of MVA Fund Sustainability.

According to the general trends in Figure 1 below, overall road safety performance has been improving in the last decade with some minimal fluctuations. The trends show that both fatalities per 10 000 vehicles and fatalities per 100 000 population moved downwards between 2001 and 2014. Fatalities per 100 000 populations dropped from 38.4 in 2001 to 17.6 in 2014 while fatalities per 10 000 vehicles dropped from 31.6 to 6.8 in 2014. These reductions happen against increasing vehicle population and almost stagnant road infrastructure development.

The results also show that Claims lodged with Motor Vehicle Accident Fund per 1000 vehicles (Claims/1000 vehicles) is decreasing. In 2014 injury claims per 1000 vehicles was 3.8 a drop of 0.2 from 4.0 in 2013. The trend of this indicator shows improvement over the years, in 1987 when the Fund was established injury claims per 1000 vehicles was 1.5, but in 2014 injury claims per 1000 vehicles were 3.8. It must be noted that the indicator went up between 1987 and 2001 and dropped between 2001 and 2014. The movement of injury claims per 1000 vehicles followed a similar pattern as total recorded crashes suggesting that a reduction in recorded crashes result in the reduction in total number of people injured.

Figure 1: Annual Trends 1981 - 2014 (Fatalities/10 000 Vehicle and Fatalities/100 000 Population)



Source : Botswana Police Service, DRTS, Statistics Botswana and MVA Fund Botswana

During the past nine years, 2006-2014, fatalities per 100 000 populations were almost constant with minimal fluctuations in both directions but between 2011 and 2014 the indicator moved downwards. The significant drop in fatalities/100 000 population went down mainly due to significant drop in annual recorded fatalities against growth in the total population.

Figure 2 below demonstrate that fatalities per 100 000 populations dropped significantly between 2013 and 2014 from 19.5 to 17.6. The overall trend between 2006 and 2014 indicate that average fatalities per 100 000 population was 23.2. Though the trend was not changing significantly between the periods, the overall movement was down wards with a significant drop between 2013 and 2014.

Figure 2: National Fatalities/100 000 Population (2006 - 2014)

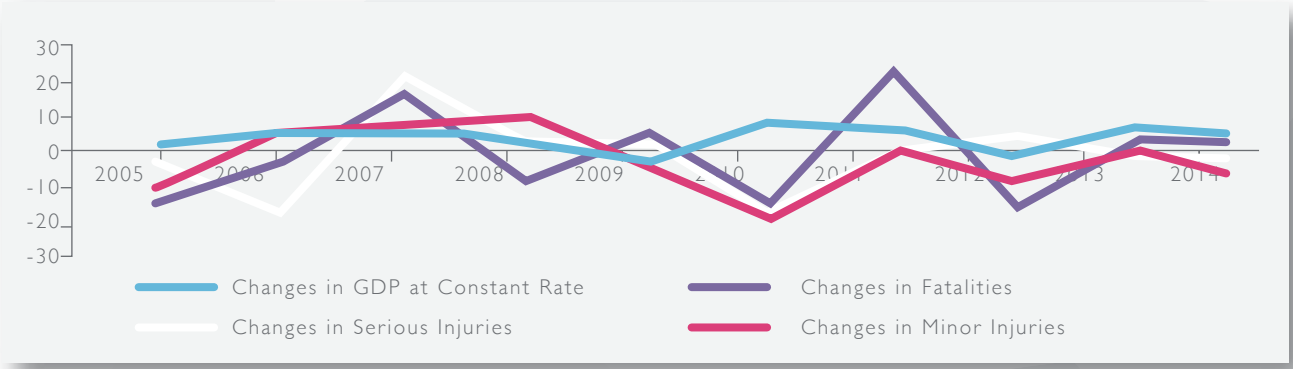
Source: Botswana Police Service

1.3 Percentage changes in GDP and Changes in Casualties.

Figure 3 below shows percentage changes in GDP at constant prices and changes in casualties for the past 9 years. Among the four indicators, changes in GDP at Constant prices showed a more stable movement over the period except between 2008 and 2009 where it dropped due to global economic recession. In 2013 and 2014 changes in GDP at constant prices remained constant at 4.4 compared to 5.8 in 2013.

The overall movements in Fatalities, Serious Injuries and Minor Injuries fluctuated more compared to movements in GDP at constant prices. Changes in all casualties were significantly high between 2006 and 2007 then dropped steadily between 2007 and 2010. In 2011, changes in casualties all went up but changes in fatalities went up more significantly than other casualties. In 2014 almost all casualties remained at the same level as in 2013 except changes in fatalities which dropped compared to 2013, the change was mainly due to a significant drop of fatality head count between 2013 and 2014.

Figure 3 :Annual Percentage Changes In GDP At Constant Prices & Casualities 2006 To 2014



Source: Statistics Botswana (GDP Forth Quarter 2014)

1.4 Motor Vehicle Accident Fund Business Approach

The Motor Vehicle Accident Fund has evolved from just a crash compensation scheme to a more comprehensive scheme ranging from road crash prevention, compensation and rehabilitation of those affected by road crashes. This mandate is contained in the MVA Fund Act No. 15 of 2007. The Act compels the Fund to shape its business model in such a way that it places more emphasis on crash prevention and claimants' rehabilitation, where the latter fails. The provision of road safety as one of the MVA Fund products is considered as a business sustainability factor because the reduction in road crashes and causalities will minimize the total cost of operating the scheme.

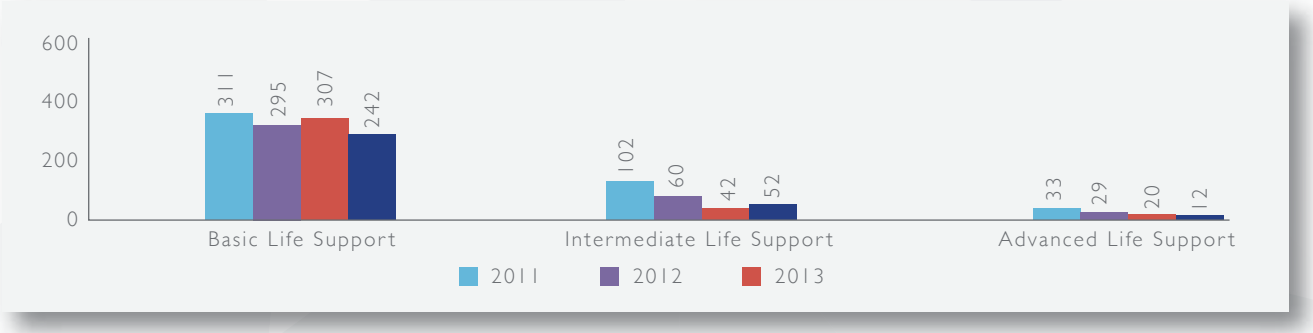
This portion of the report will mainly capture statistics on road crash claims handled by the Fund. It will outline various strategic initiatives that the Fund and other stakeholders undertake to reduce crashes putting more emphasis on the 2014 initiatives.

1.5 Pre-Hospital Trauma Management

Pre-Hospital Trauma Management is a vital component of road safety management. Through prompt provision of effective pre-hospital care, deaths, disability and life-threatening injuries can be reduced or prevented (Pre-hospital Trauma Care System Report – WHO). Due to the importance of pre-hospital trauma management the Fund has signed a Memorandum of Agreement (MoA) with privately owned Emergency Medical Service (EMS) providers in Botswana. The Agreement mandates EMS providers to stabilize and manage all car crash victims during the pre-hospital stage.

The total number of claimants evacuated by EMS providers in 2014 was 306, being a decrease of 68 cases compared to 374 in 2013. The decrease is directly influenced by the reduction in fatal car crashes for the year 2014, meaning that evacuations reduced.

Figure 4: Number of Claimants Evacuated by level of Support

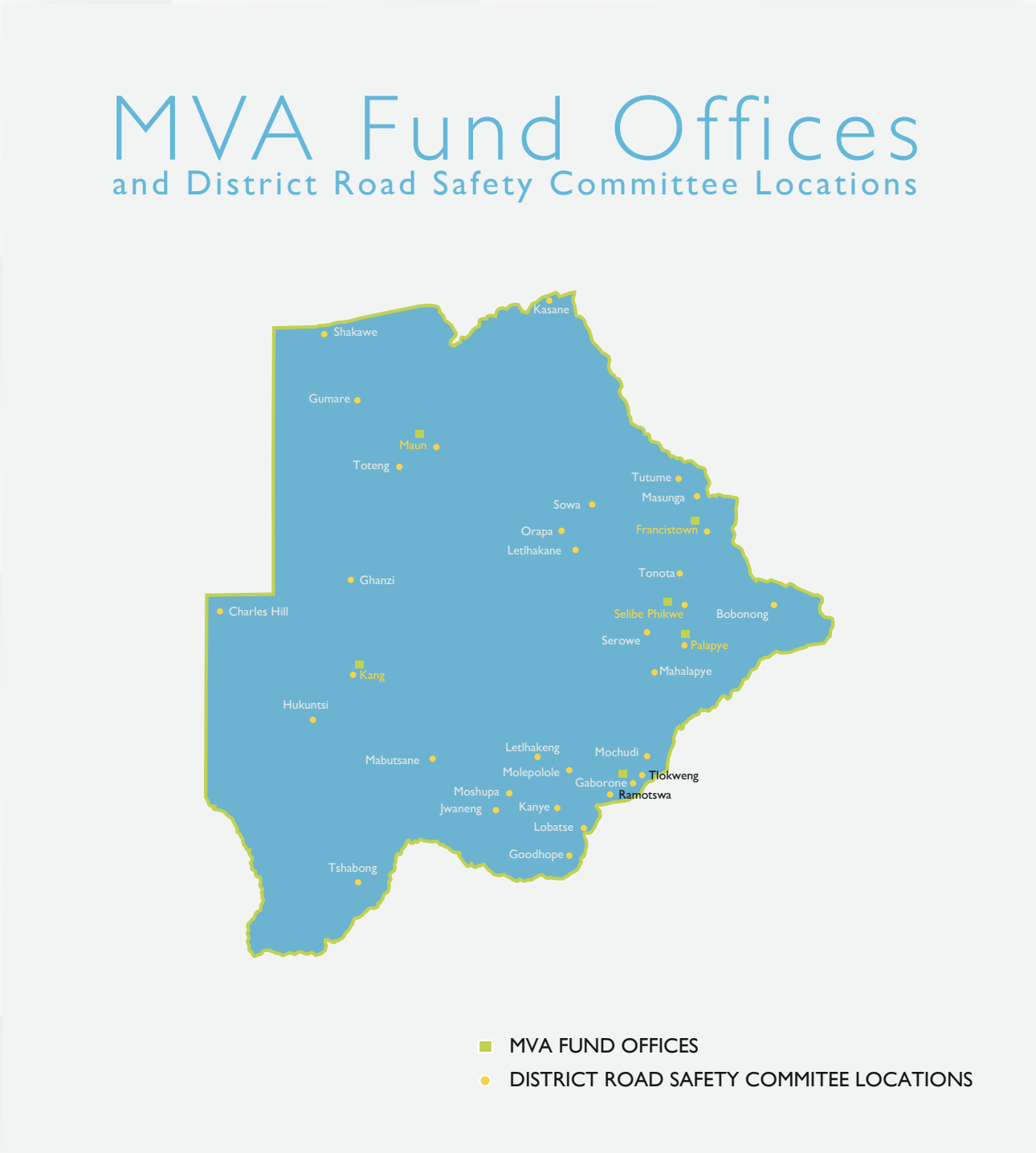


MVA Fund Data Base

1.6 Geographic Foot Print of the Fund

The MVA Fund has a total of seven (7) offices; including one (1) mobile office, across the country. These offices are strategically spread to improve accessibility to customers. Below is pictorial geographic of the offices.

Figure 5 : MVA Fund Offices & Support Structures



SECTION 2:

ROAD TRAFFIC CRASHES BY POLICE DISTRICT

2.1 Road Crashes by Police Districts

Table 2 below shows annual recorded crashes for the past nine years by Police Districts. The table further shows the total and average recorded crashes for the period under review. The average annual recorded road crashes for the past nine years was 18959 an increase compared to last year's average of 18455. The highest total crashes for the period was 20 415 which was recorded in 2008 while the lowest figure was 16 641 which was recorded in 2014. Total recorded accidents have been declining between 2008 and 2014; a significant decline of 1000 crashes was recorded between 2000 and 2001. The drop between 2013 and 2014 was 421 crashes from 17062 to 16 641. The general trend of recorded crashes is moving downwards since 2008 to date; this is an indication of good performance compared to the previous years.

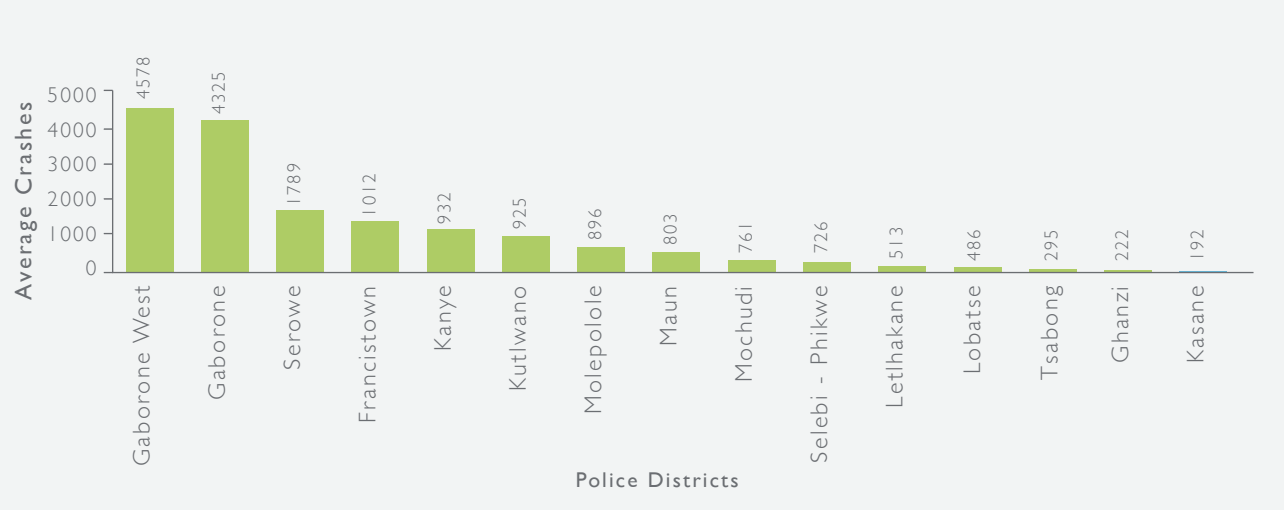
In 2014 Police Districts with high car crash record were Gaborone West, Gaborone, Serowe, Maun, Kutlwano, Mahalapye, Kanye, Molepolole and Francistown. On the lower side, the bottom four Police Districts in annual recorded crashes were Kasane, Tsabong, Ghanzi and Letlhakane.

Table 2 : Total Reported Crashes By Police Districts (2006 - 2014)

Police District	2006	2007	2008	2009	2010	2011	2012	2013	2014	9 year Total	9 year Average
Francistown	1108	1207	1434	1077	995	813	723	736	749	8093	1012
Gaborone	3752	4079	4579	4477	4418	4509	4394	4395	4284	34603	4325
Gaborone West	3973	4657	4836	4957	4607	4581	4560	4453	4516	36624	4578
Ghanzi	199	189	223	262	273	225	211	195	204	1777	222
Kanye	842	985	1137	1157	985	779	788	782	740	7455	932
Kasane	167	227	272	222	180	150	146	172	93	1536	192
Kutlwano	834	1077	1078	942	928	890	831	820	991	7400	925
Letlhakane	468	435	532	519	557	524	517	552	300	4104	513
Lobatse	407	611	594	552	523	390	383	430	343	3890	486
Maun	791	863	774	832	753	748	834	832	951	6427	803
Mochudi	717	874	822	757	847	815	749	508	451	6089	761
Molepolole	884	1005	981	1005	985	834	789	684	700	7167	896
Selebi-Phikwe	550	705	817	866	827	785	794	462	491	5806	726
Serowe	2030	2241	1992	1964	1821	1700	1571	993	935	14312	1789
Tsabong	313	332	344	411	279	258	237	184	190	2358	295
Mahalapye	-	-	-	-	-	-	-	864	703		
Total		17035	19487	20415	20000	18978	18001	17527	16641	147641	18455

Source : Botswana Police Service Reports

Figure 6 : Average's For Total Reported Crashes By Police Districts (2006 - 2014)



Source : Botswana Police Service

2.2 Rank of Car Crash by Police Districts (2006-2014)

The distribution of total crashes recorded annually for the past nine years shows that Gaborone West, Gaborone, Kutlwano and Maun Police Districts registered the highest statistics in that order. The results show that for the first time in nine years Serowe fell from the top three police districts with high recorded crashes this was mainly due to the split of the district into two. The general trend of total recorded crashes per police district has not changed from the previous years.

The analysis of total recorded crashes and total recorded fatalities per police districts show that there is no direct relationship between the two performance indicators. The results show that though the Police Districts of Gaborone West, Gaborone, Kutlwano, Maun and Serowe recorded high numbers of road crashes, they recorded lower fatalities and serious injuries. On the other hand, Tsabong, Ghanzi and Kasane Police Districts recorded low annual crashes for the past nine years but they were top in fatalities per 1000 recorded crashes over the same period. This indicates that though in terms of total reported crashes these districts are low, a higher proportion of crashes in this Police Districts are fatal.

The rankings in table 3 below were derived by dividing the total number of crashes recorded in the district by the total recorded road crashes nationally. The table below indicates that the top three police districts in rank of crashes are Gaborone West, Gaborone and Kutlwano. Kutlwano moved from position six last year to position three, Mahalapye and Serowe police districts dropped from position four and three respectively to eight and five this year.

Table 3 : Rank of crashes by Police Districts (2006 - 2014)

Police District	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gaborone West	1	1	1	1	1	1	1	1	1
Gaborone	2	2	2	2	2	2	2	2	2
Serowe	7	5	7	6	6	5	5	6	3
Mahalapye	8	9	8	10	8	6	4	5	4
Francistown	3	3	3	3	3	3	3	3	5
Molepolole	4	4	4	5	4	7	10	8	6
Kanye	6	7	6	7	7	4	8	7	7
Kutlwano	-	-	-	-	-	-	-	4	8
Maun	5	6	5	4	5	9	7	9	9
Mochudi	10	10	9	8	9	8	6	12	10
Selebi - Phikwe	9	8	10	9	10	10	9	11	11
Letlhakane	12	11	12	12	11	11	12	13	12
Lobatse	11	12	11	11	12	12	11	10	13
Tsabong	14	15	14	15	15	15	14	14	14
Ghanzi	13	13	13	13	13	13	13	15	15
Kasane	15	14	13	14	14	14	15	16	16

Source : Botswana Police Service Reports

2.3 Fatalities per 1000 Crashes (2006 - 2014)

The table below illustrates that the average number of people killed per 1000 recorded crashes in 2014 was 22.7 people a decrease of 1.4 people compared to 24.1 recorded in 2013. The annual average number of people killed per 1000 recorded crashes during the past nine years fluctuated between 26.8 in 2011 and 20.9 in 2010 and the average for the period is 23.8 people killed per 1000 crashes. The results show a significant disparity between police districts in fatalities per 1000 crashes. Kasane Police District recorded the highest number of people killed per 1000 crashes at 161.3 people followed by Serowe at 55.6 people per 1000 Crashes. Ghanzi, Letlhakane and Kanye recorded above 50.7 people killed per 1000 crashes, this is an indication that these police districts have high fatal crashes compared to the other police districts.

The results show that Police Districts in urban villages and towns have low rates of fatalities per 1000 crashes though they have high annual recorded crashes. The results therefore indicate that most of recorded crashes in urban villages and towns are not fatal compared to rural and crashes along major highways. The results indicate that most crashes along major highways are server compared to urban villages and towns and this can be attributed to average speed along highways and in urban villages and towns. The trend therefore suggests that to reduce fatal crashes in the country more efforts must be put in managing speed along major highways and other open roads.

Table 4 : Fatalities Per 1000 Crashes By Police Districts

Police District	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gaborone West	16.1	13.3	9.1	11.1	10.6	15.7	11.0	13.7	15.1
Gaborone	8.0	8.3	6.6	8.7	5.2	7.3	6.6	6.6	2.6
Serowe	35.0	33.5	32.6	48.4	34.6	47.1	38.2	59.4	55.6
Kanye	44.2	24.0	29.3	34.4	25.1	43.1	26.3	51.6	50.7
Francistown	22.5	16.2	21.1	9.5	14.2	19.3	16.5	11.5	21.6
Molepolole	44.1	42.8	40.8	21.9	33.5	43.2	67.2	45.3	44.3
Kutlwano	31.2	31.6	37.1	46.7	21.6	29.2	34.9	24.4	23.2
Selibe - Phikwe	43.2	49.2	36.5	37.0	23.6	47.9	40.1	47.2	28.8
Maun	16.4	36.9	26.9	19.6	27.8	30.6	23.9	43.3	46.8
Mochudi	40.5	39.4	41.3	43.3	65.1	56.1	30.0	19.2	14.7
Lobatse	47.0	46.0	54.5	44.3	21.5	38.2	34.8	39.9	16.7
Letlhakane	34.4	62.2	30.3	50.7	49.7	59.0	49.6	58.1	52.5
Tsabong	12.8	54.2	29.1	24.3	43.0	58.1	38.0	65.2	36.8
Ghanzi	60.3	47.6	62.8	72.5	36.6	53.3	61.6	56.4	53.9
Kasane	41.9	70.5	55.1	49.5	100.0	73.3	123.3	34.9	161.3
Mahalapye								32.4	45.5
Average	**25.2**	**25.5**	**22.3**	**23.8**	**20.9**	**26.8**	**23.1**	**24.1**	**24.1**

Source : Botswana Police Service Reports

2.4 Fatal Crashes by Police Districts (2006 - 2014)

The following table (Table 5) indicates the total annual recorded fatal crashes for 2014 were 288; the table also indicates that fatal crashes ranged between 322 and 372 during the period 2006 to 2014. Annual recorded fatal crashes dropped from 321 in 2013 to 288 in 2014 and this resulted in drop in annual recorded fatalities from 411 to 377 between the two years. The trend shows that there is a positive correlation between fatal crashes to fatalities. The proportion of fatal crashes to fatalities shows that on average, one fatal crash claims more than one life; this indicates that there is a direct relationship between fatal crashes and fatalities. Police Districts with high fatal crashes were Gaborone West, Serowe, Molepolole, Kanye and Mahalapye. Most fatalities recorded in these districts were along the highways therefore suggesting that in most of them excessive speed might have been a factor. The main causes of crashes were loss of vehicle control of the vehicle and animals on the road.

Table 5 : Fatal Crashes by Police Districts (2006 - 2014)

Police District	2006	2007	2008	2009	2010	2011	2012	2013	2014
Kutlwano	22	30	30	31	18	22	21	15	18
Serowe	48	50	51	74	49	57	44	39	31
Gaborone	27	30	26	34	21	32	28	22	11
Lobatse	16	15	18	16	12	16	18	18	4
Maun	8	21	19	17	19	17	16	17	18
Ghanzi	10	9	12	11	8	8	11	11	10
Kasane	6	9	12	5	14	8	11	6	8
Letlhakane	14	25	14	22	23	16	14	19	12
Tsabong	4	11	7	7	9	11	9	10	5
Selebi - Phikwe	21	30	26	22	18	25	22	15	10
Molepolole	31	32	31	19	27	31	42	27	29
Mochudi	23	23	20	25	31	31	18	15	13
Gaborone West	49	50	38	49	45	59	47	50	56
Kanye	33	24	32	31	22	25	16	26	27
Francistwon	10	10	19	9	11	11	11	8	15
Mahalapye								23	21
Total	**322**	**369**	**355**	**327**	**327**	**369**	**328**	**321**	**288**

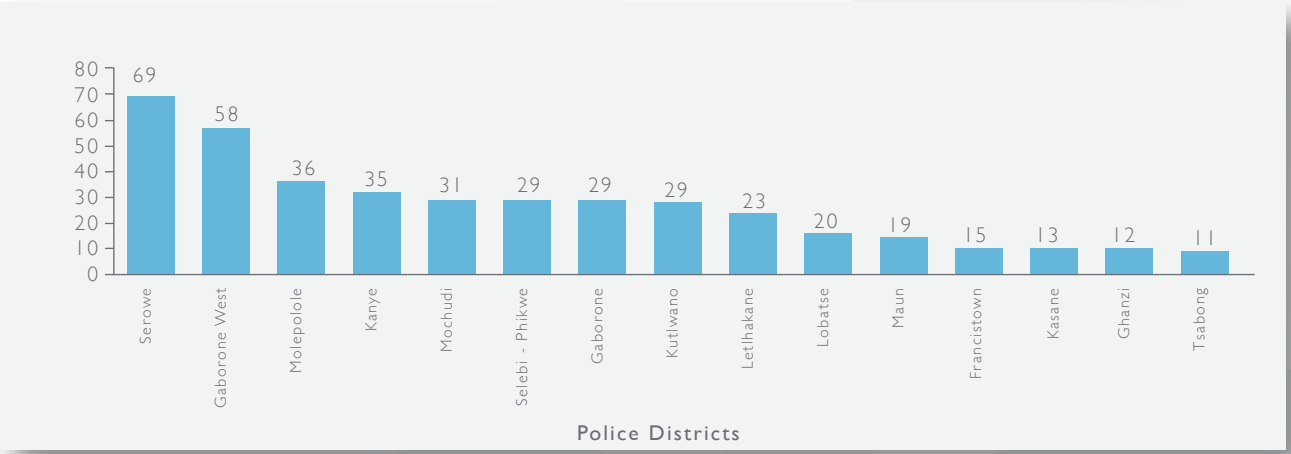
Source : Botswana Police Service Reports

Table 6 : Fatalities by Police Districts (2006 - 2014)

Police District	2006	2007	2008	2009	2010	2011	2012	2013	2014	9 year Total	9 year Average
Serowe	71	75	65	95	63	80	60	59	52	620	69
Gaborone West	64	62	44	55	49	72	50	61	68	525	58
Molepolole	39	43	40	22	33	36	43	31	31	328	36
Mochudi	32	34	32	36	49	42	25	16	14	280	31
Kanye	49	29	42	37	25	35	19	38	38	312	35
Selebi - Phikwe	31	43	30	28	20	39	30	24	13	258	29
Kutlwano	26	34	40	44	20	26	29	20	23	262	29
Gaborone	30	34	30	39	23	33	29	29	11	258	23
Letlhakane	14	38	18	28	26	23	19	25	18	209	19
Lobatse	22	20	29	23	12	20	18	22	5	171	20
Maun	9	26	22	17	23	24	19	20	23	183	15
Francistown	19	16	24	11	14	15	13	9	16	137	13
Kasane	7	16	15	11	18	11	18	6	15	117	12
Ghanzi	12	9	14	19	10	12	13	11	11	111	11
Tsabong	4	18	10	10	12	15	9	12	7	97	
Mahalapye								28	32		
Total	**429**	**497**	**455**	**475**	**397**	**483**	**404**	**411**	**377**	**3868**	**430**

Source : Botswana Police Service Reports

Figure 7: 9 Years Averages For Fatalities By Police Districts (2006 - 2014)



2.5 Fatal Crashes and Fatalities (2006 - 2014)

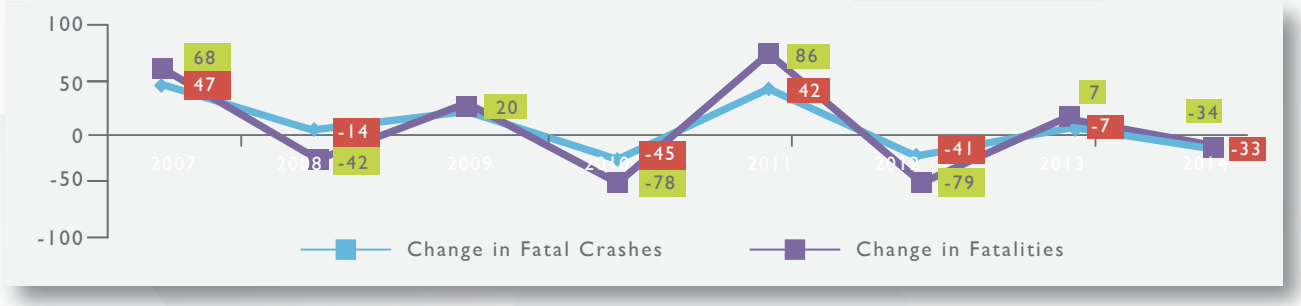
Table 7 below illustrates fatal crashes, fatalities and proportions of fatalities to fatal crashes for the past nine years. In 2014 the proportion of fatalities to fatal crashes was 1.308, an increase from 1.280 in 2013. The proportion of fatalities to fatal crashes show that though total recorded crashes and fatalities decreased between 2013 and 2014 a single fatal crash in 2014 claimed more life's when compared to 2014. The overall distribution shows that on average a fatal crash claimed more than one life and the range was between 1.214 in 2010 and 1.347 in 2007.

The results also show that changes in fatal crashes mainly result in changes in fatalities in the same direction. If total recorded crashes go up total recorded fatalities goes up. The trend in figure 8 below shows that between 2006 and 2007 fatal crashes increased by 47 resulting in an increase of 68 fatalities. Between 2007 and 2008 fatal crashes went down by 14 and this resulted in a reduction of 42 fatalities between the two years. For the year 2009, fatal crashes went up by 17 and resulted in an increase of 20 in fatalities, while in 2010 fatalities went down by 78 due to reduction in fatal crashes by 45. Between 2010 and 2011 the number of fatalities went up by 86 while fatal crashes went up by 42. Between 2011 and 2012 fatalities went down by 79 due to a reduction of 41 in fatal crashes. Between 2012 and 2013 fatalities increased by 7 from a decrease of 7 fatal crashes. Finally fatal crashes went down by 33 between 2013 and 2014 resulting in a reduction of in 34 total recorded fatalities.

Table 7 : Fatal Crashes and Fatalities (2006 - 2014)

Year	Fatal Crashes	Fatalities	Fatalities/ Fatal Crash
2006	322	429	1.332
2007	369	497	1.347
2008	355	455	1.282
2009	372	475	1.277
2010	327	397	1.214
2011	369	483	1.309
2012	328	404	1.232
2013	321	411	1.280
2014	288	377	1.309

Figure 8 : Changes in Fatal Crashes & Fatalities Between 2006 & 2014



2.6: Serious Injuries by Police Districts

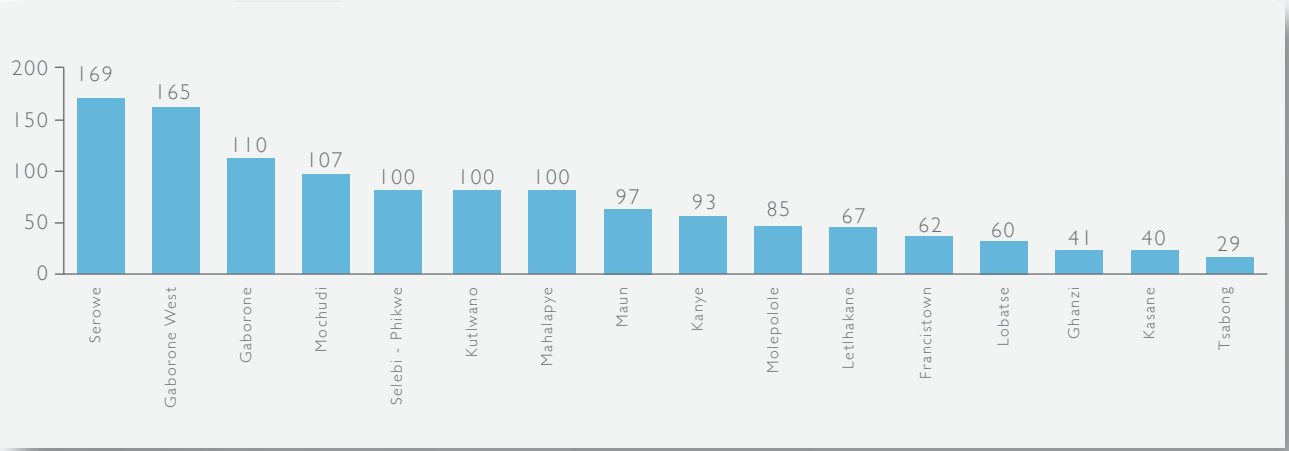
The annual recorded serious injuries table below shows trends for the past nine years. Gaborone West Police District recorded the highest number of injuries for the year 2014 followed by Serowe, Maun and Mahalapye. In review of the serious injuries 9 year total, Serowe Police District recorded the highest number of serious injuries at 1518, followed by Gaborone West at 1489 and Gaborone at 986.

Table 8 : Serious Injuries by Police Districts (2006 - 2014)

Police District	2006	2007	2008	2009	2010	2011	2012	2013	2014	8 year Total	8 year Average
Gaborone West	161	173	144	181	165	150	168	184	163	1489	165
Serowe	152	188	193	229	176	181	160	108	131	1518	169
Maun	74	139	89	91	109	70	99	90	108	869	97
Mahalapye								94	106	200	100
Gaborone	133	113	107	111	120	104	103	96	99	986	110
Kanye	92	99	85	111	92	108	90	77	84	838	93
Francistown	47	68	95	75	41	41	48	57	82	554	62
Molepolole	73	70	74	114	71	73	99	113	79	766	85
Kutlwano	106	119	160	102	74	82	84	97	76	900	100
Mochudi	78	116	142	154	122	108	101	92	54	967	107
Selibe-Phikwe	95	152	127	119	85	91	122	65	53	356	40
Lobatse	63	87	78	56	55	58	45	57	43	899	100
Ghanzi	31	35	40	47	38	57	44	32	43	542	60
Kasane	47	41	55	32	28	35	29	36	42	366	41
Tsabong	19	21	42	31	17	27	36	30	39	262	29
Letlhakane	66	73	91	87	59	54	57	80	32	599	67
Total	1237	1494	1522	1540	1252	1239	1285	1308	1234	10783	1323

*Source : Botswana Police Service Reports ** Note Mahalapye Police District Total & Average Are For 2 years*

Figure 9 : Eight Year Average Reported Serious Injuries By Police Districts (2006 - 2014)



Source : Botswana Police Service Reports

2.7: Road Casualties by Police Districts

Table 9 below illustrates casualties for the past six years, 2009-2014, by Police Districts and Police Stations. In 2014 Gaborone West Police District registered a higher number of fatalities at 68 which was an increase of 7 deaths from 61 in 2013. Serowe Police District recorded 52 fatalities, a decrease of 7 compared to 59 in 2013. Kanye, Mahalapye, and Molepolole Police Districts recorded 38, 32 and 31 fatalities respectively. Kanye and Molepolole police district fatalities remained the same with no increase or decrease experienced when compared to the previous year, while Mahalapye increased by 4 fatalities compared to the previous year.

Table 9 : Road Casualities By Police Districts (Changed)

Police District		Fatalities						Serious Injuries						Minor Injuries					
	Police Station	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014
Kutlwano	Kutlwano	25	5	6	5	10	4	37	19	25	20	33	22	117	136	148	168	118	118
	Tatitown	12	6	15	14	5	10	36	27	30	34	40	19	167	122	93	59	79	61
	Matsiloje	6	0	1	0	1	0	27	4	10	2	0	1	136	14	33	6	6	6
	Tonota	1	9	4	10	4	5	2	24	17	28	24	21	25	95	77	84	82	99
	Gerald						3							4					20
	Dukwi	5	4	9	4	2	1	18	8	15	7	8	9	23	37	41	19	18	26
	Sub total	44	20	26	29	20	23	102	74	82	84	97	76	445	367	351	317	285	330
Serowe	Palapye	24	15	21	20	30	29	45	36	44	26	36	69	270	166	192	139	144	205
	Serowe	24	8	19	7	12	16	46	45	49	34	45	40	216	185	180	179	177	189
	Maunatlala	1	2	1	5	2	2	14	4	10	7	19	4	40	24	33	26	52	20
	Serule	11	5	7	12	15	5	39	20	17	37	8	18	73	51	43	58	24	31
	Sub total	60	30	48	44	59	52	144	105	120	104	108	131	599	426	448	402	397	445
Gaborone	Broadhurst	23	13	13	17	18	7	64	55	49	44	40	53	276	190	247	233	251	254
	Central	4	1	6	4	3	3	14	24	18	19	17	14	149	137	135	161	125	153
	Borakanelo	3	5	3	1	2	1	13	21	16	21	21	23	97	118	110	102	149	141
	Tlokweng	9	4	11	7	6	0	20	20	21	19	18	9	124	85	120	99	105	97
	Sub total	39	23	33	29	29	11	111	120	104	103	96	99	646	530	612	595	630	645
Lobatse	Lobatse	7	6	12	7	8	2	14	17	33	14	26	24	85	70	71	50	76	39
	Ramatlabama	6	0	1	2	5	1	13	8	3	3	8	2	21	7	11	14	26	13
	Woodhall	4	4	6	5	6	2	17	23	15	15	17	13	71	58	63	39	63	34
	Goodhope	6	2	1	4	3	0	12	7	7	13	6	4	27	35	14	19	31	20
	Sub total	23	12	20	18	22	5	56	55	58	45	57	43	204	170	159	122	196	106
Maun	Maun	6	12	17	7	7	11	39	59	43	54	43	59	181	125	131	157	170	188
	Sehitwa	4	5	2	5	9	3	12	4	10	16	31	12	52	26	31	27	36	84
	Seronga	1	0	0	0	1	0	5	1	0	0	0	4	22	6	4	4	6	10
	Shakawe	3	1	1	2	1	2	7	17	8	8	7	7	23	33	12	20	12	17
	Gumare	1	0	1	0	2	1	8	19	4	14	9	9	42	28	15	16	16	27

Police District		Fatalities						Serious Injuries						Minor Injuries					
	Police Sta	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
	Gweta	2	5	3	5	5	6	20	9	5	7	9	14	32	28	17	31	23	22
	Sub total	**15**	**18**	**21**	**14**	**20**	**23**	**71**	**100**	**65**	**92**	**90**	**105**	**320**	**218**	**193**	**224**	**240**	**348**
Ghanzi	Gantsi	15	9	7	11	7	8	29	27	26	34	22	30	63	110	49	60	88	45
	Kalkfontein	2	0	0	0	0	1	3	2	9	7	2	2	14	14	20	16	5	9
	Charlsehill	1	1	3	2	3	2	9	3	7	1	7	9	11	8	18	15	13	11
	Nojane	1	0	2	0	1	0	6	6	15	2	1	1	36	20	18	16	7	14
	Sub total	**19**	**10**	**12**	**13**	**11**	**11**	**47**	**38**	**57**	**44**	**32**	**42**	**124**	**152**	**105**	**107**	**113**	**79**
Kasane	Kasane	1	7	2	8	0	3	3	7	10	13	9	16	17	16	22	22	60	20
	Kachikau	1	3	0	0	1	2	2	5	1	1	4	5	3	15	1	12	5	10
	Pandamatenga	9	8	9	10	5	10	27	16	24	15	23	32	33	28	11	13	32	18
	Sub total	**11**	**18**	**11**	**18**	**6**	**15**	**32**	**28**	**35**	**29**	**36**	**53**	**53**	**59**	**34**	**47**	**97**	**48**
Letlhakane	Letlhakane	9	8	5	3	9	14	28	13	13	25	23	18	53	53	59	47	42	47
	Orapa	7	9	0	1	5	3	14	20	7	6	14	9	51	23	26	31	34	15
	Rakops	4	0	0	7	3	1	15	6	10	5	14	5	20	33	78	38	78	33
	Sub total	**20**	**17**	**5**	**11**	**17**	**18**	**57**	**30**	**30**	**36**	**51**	**32**	**124**	**109**	**163**	**116**	**154**	**95**
Tsabong	Bokspits	0	0	0	0	1	0	1	0	0	0	0	2	8	9	6	4	3	2
	Kang	3	7	6	2	1	3	11	7	7	11	12	16	28	36	46	36	41	17
	Tsabong	3	2	2	2	2	0	4	6	9	9	2	5	26	11	28	9	8	17
	Tshane	0	0	2	3	1	2	5	3	7	11	3	13	27	23	17	40	8	33
	Werda	1	1	1	2	4	1	4	0	1	5	4	0	36	25	15	14	5	8
	Middlepits	3	2	4	0	3	1	6	1	3	0	9	3	13	11	18	2	10	6
	Sub total	**10**	**12**	**15**	**9**	**12**	**7**	**31**	**17**	**27**	**36**	**30**	**39**	**138**	**115**	**130**	**105**	**75**	**83**
Selibe Phikwe	Bainsdrift	3	1	5	3	0	0	7	3	4	9	1	6	33	36	22	3	13	13
	Bobonong	1	2	1	2	3	5	9	14	10	7	13	5	38	53	30	29	35	22
	Botshabelo	7	4	4	5	9	2	30	15	26	35	19	16	56	45	41	29	38	25
	Selebi-Phikwe	6	8	22	7	11	4	34	31	34	32	29	14	138	100	108	110	131	75
	Semolale	0	0	0	1	1	2	0	2	0	2	3	2	10	11	2	5	3	2
	Sub total	**17**	**15**	**32**	**18**	**24**	**13**	**80**	**65**	**74**	**85**	**65**	**43**	**275**	**245**	**203**	**176**	**220**	**137**
Molepolole	Letlhakeng	6	0	1	2	4	1	26	2	8	15	21	15	69	40	50	30	68	30
	Molepolole	9	17	12	30	6	12	33	46	23	39	40	27	296	262	185	226	165	151
	Thamaga	7	14	12	15	15	15	36	17	33	32	40	34	150	157	148	130	101	124
	Takatokwane	0	0	8	2	4	3	8	2	3	2	6	2	8	11	19	13	13	13
	Sojwe	0	2	2	4	2	0	11	4	6	11	6	4	25	20	39	16	11	12
	Sub total	**22**	**33**	**35**	**53**	**31**	**31**	**114**	**71**	**73**	**99**	**113**	**82**	**548**	**490**	**441**	**415**	**358**	**330**
Mochudi	Mochudi	27	34	18	13	14	12	91	95	66	69	86	52	251	177	165	226	171	190
	Olifants	0	0	0	0	0	0	2	2	2	0	3	0	7	5	6	5	1	4
	Sikwane	2	0	2	2	2	2	7	2	3	10	3	2	19	26	19	14	21	11

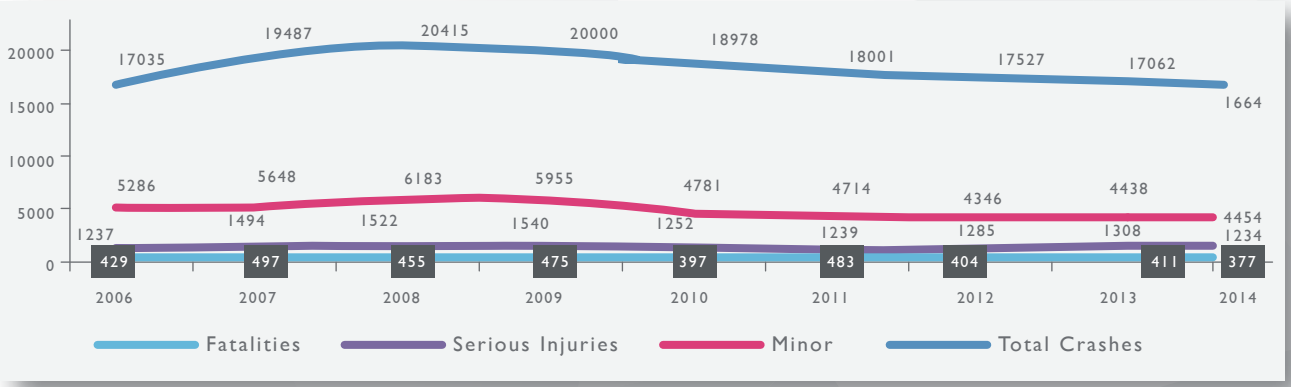
Police District		Fatalities						Serious Injuries						Minor Injuries					
	Police Sta	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
	Sub total	29	34	20	15	16	14	100	99	71	79	92	54	277	208	190	245	193	205
Gaborone West	G-West	12	7	14	17	9	22	45	43	36	44	38	31	285	217	282	215	175	211
	Naledi	8	4	10	3	5	5	21	17	19	19	20	15	102	87	78	69	90	52
	Ramotswa	9	13	12	6	11	11	28	29	26	19	28	15	89	82	77	69	68	63
	SSK Airport	3	3	5	3	2	5	10	9	11	21	31	25	52	34	46	44	57	81
	Mogoditshane	23	22	31	21	34	25	77	67	58	65	67	77	366	302	296	339	298	385
	Sub total	55	49	72	50	61	68	181	165	150	168	184	163	894	722	779	736	688	792
Kanye	Sejelo	13	11	8	5	23	19	56	41	40	43	31	28	162	124	107	103	103	90
	Jwaneng	11	7	14	4	7	2	17	14	28	14	23	20	76	46	67	69	59	80
	Moshupa	8	1	3	4	2	5	21	10	13	13	12	23	80	46	45	53	65	50
	P/Molopo	0	0	0	0	0	1	3	3	8	2	0	4	23	11	6	4	1	7
	Mabutsane	5	6	10	6	6	11	14	17	19	18	11	9	54	56	28	22	15	36
	Sub total	37	25	35	19	38	38	111	85	108	90	77	84	395	283	253	251	243	263
Francistown	Francistown	8	3	6	3	1	2	30	15	20	21	33	29	213	161	132	119	135	137
	Tshesebe	0	4	5	6	5	1	15	3	4	6	13	5	53	38	21	28	34	11
	Tutume	2	4	3	3	3	2	17	13	11	15	5	7	27	67	38	30	41	43
	Masunga	1	3	1	1	0	5	13	10	6	6	6	16	45	24	16	22	23	14
	Nata	3	4	9	4	1	6	8	6	4	13	11	23	46	25	27	20	29	43
	Sua Pan	0	1	0	0	0	0	4	6	5	1	1	0	9	2	12	10	5	6
	Sub total	11	14	15	13	9	16	75	41	41	48	57	80	338	290	207	199	233	254
Mahalapye	Mahalapye	29	29	32	25	14	11	88	59	61	71	33	43	202	165	186	105	124	182
	Shoshong	2	2	2	0	2	2	12	9	2	6	5	1	54	26	24	18	15	13
	Machaneng	11	4	2	3	1	2	14	12	12	12	8	12	28	14	33	19	17	26
	Martindrift	4	3	3	0	2	1	10	11	3	4	6	0	46	45	15	6	12	123
	Dibete	7	15	22	10	9	16	54	23	37	22	42	50	134	55	91	61	73	59
	Sub total	53	53	61	38	28	32	178	114	115	115	94	106	464	305	349	209	241	403
	Sub total	**475**	**397**	**482**	**404**	**411**	**377**	**1540**	**1245**	**1239**	**1285**	**1308**	**1234**	**5954**	**4781**	**4714**	**4346**	**4438**	**4454**

2.8 Crashes, Fatalities and Serious Injuries Trends

Road crash trends below show the road crash performance between 2006 and 2014. The graph indicates that the road crash safety indicators such as total crashes, fatalities and serious injuries have changed significantly between 2013 and 2014. In 2014, the total number of recorded crashes was 16641, a decrease from 17062 recorded in 2013, but the overall trend indicates that total recorded crashes started decreasing from 2008.

There is a positive relationship between total recorded Crashes and fatalities and serious injuries, a decrease in total recorded crashes results in a decrease in both fatalities and serious injuries. The overall trend for the period shows the relationship, in 2014 total recorded fatalities stood at 377, a decrease from 411 in 2013 and this was against a decrease in total recorded crashes from 321 in 2013 to 288 in 2014.

Figure 10 : Total Crashes, Fatalities & Serious Injuries Trends (2006 - 2014)



Source : Botswana Police Service

2.9 Casualties by Junction Type (2006 - 2014)

The trend shows that sections of the road without junctions accounted for more fatalities during the past nine years, 2006-2014. The average percentage of people killed in none junction portion of the roads was 87.4% for the period 2006 to 2014. The prevailing trend shows that more fatalities happen in open roads and corridors, suggesting that road without junctions have different factors compared to other road sections in terms of fatal accidents and fatalities. The leading factor on crashes on open roads can be speeding, though in-depth analysis has not been conducted of actual causes of these crashes and assumption can be made that speed is the main factor because average speed on open roads is higher when compared to other roads.

Table 10 : Fatalities By Junction Control

Junction Type	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average
Not Junction	366	455	379	415	347	411	356	356	347	381
Signals (Working)	13	9	20	37	11	13	16	11	14	16
Signals (Not Working)	0	0	1	6	0	1	2	3	5	2
Stop Sign	35	24	27	6	28	46	25	31	9	26
Yield Sign	5	3	5	6	2	7	4	1	0	4
Police controlled areas	0	0	0	0	0	0	0	1	0	0
Uncontrolled	0	6	23	5	9	5	1	8	2	8
Totals	**429**	**497**	**455**	**475**	**397**	**483**	**404**	**411**	**377**	**436**

Source : Botswana Police Service

Figure 11 : Total Crashes, Fatalities & Serious Injuries Trends (2006 - 2014)

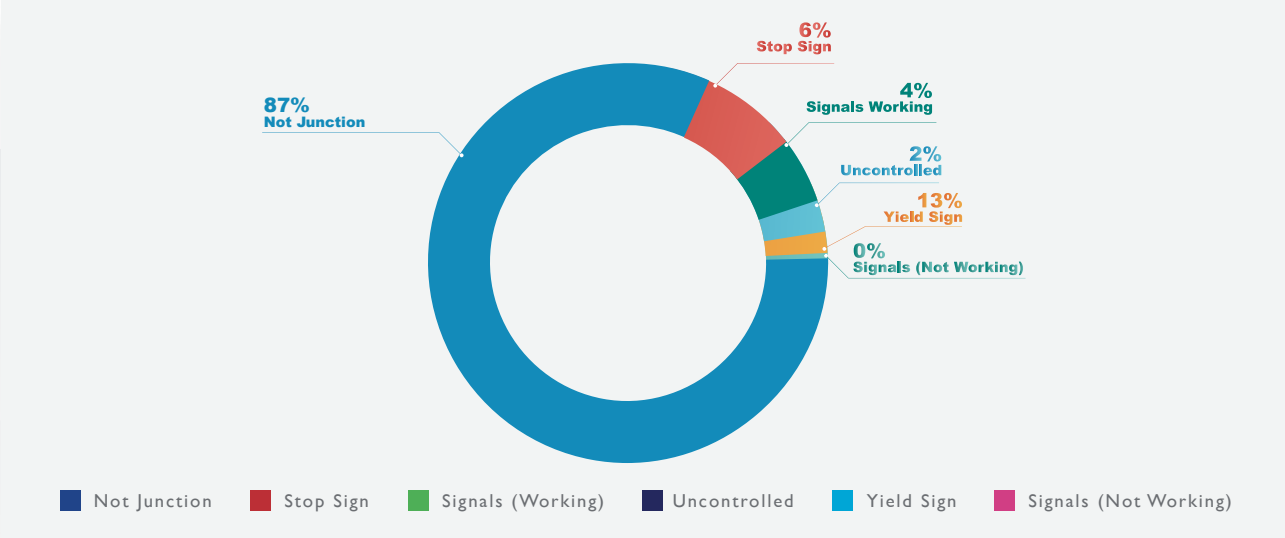


Table 11: Serious Injuries By Junction Type 2006 - 2014

Junction Type	2006	2007	2008	2009	2010	2011	2012	2013	2014
Not Junction	984	1294	1310	1327	1069	1044	1114	1128	1098
Signals (Working)	35	56	52	31	34	34	43	53	35
Signals (Not Working)	9	3	5	8	1	2	10	7	14
Stop Sign	150	95	102	131	100	105	91	101	66
Yield Sign	28	11	7	10	16	13	7	6	8
Police controlled areas	2	0	1	4	0	3	0	0	0
Uncontrolled	29	35	45	29	32	38	20	13	13
Totals	**1237**	**1494**	**1522**	**1540**	**1252**	**1239**	**1285**	**1308**	**1234**

Source : Botswana Police Service

2.10 Road Crashes by Corridors

Table 12 shows the distribution of crashes along the selected five main corridors from 2009 to 2014. During the period under review the A1 corridor accounted for most crashes when compared to the other corridors. In 2014 the A1 corridor accounted for 39.1% of crashes among the corridors followed by A12 (28.7%), A10 (13.3%, A3 (12.2%) and A2 (6.6%). The main causes of crashes along the five corridors in 2014 were Rear-End (695); animal on the road (617) and Side collisions (606). For the busiest corridor being the A1 the main cause of collisions was animals on the road , this is a clear indication that though the road is fenced to prevent domestic animals in the road reserve they still get into the road reserve. The reasons might be that the fence might be vandalized or farmers do not close the gates therefore domestic animals use the gates to get into the road reserve.

Table 12 : Road Crash Collision Type By Major Highways - 2009 - 2014

		Collision Type										
Major Highway	Year	Rear End	Side	Head On	Hit Pedes	Wild Animal	Domestic Animal	Obstacle On Road	Obstacle Off Road	Roll Over	Other	Total
A1	2009	256	211	36	38	18	230	18	37	138	128	1110
	2010	404	282	31	67	35	337	21	40	140	140	1497
	2011	332	253	29	37	35	356	21	32	134	176	1405
	2012	286	230	25	52	48	314	15	39	131	146	1286
	2013	271	229	30	31	41	441	18	42	118	148	1369
	2014	237	200	27	31	30	237	14	38	114	137	1065
A2	2009	28	19	6	23	21	119	3	9	36	29	293
	2010	34	31	7	16	26	138	2	6	27	46	333
	2011	23	30	3	10	16	78	5	6	32	18	221
	2012	18	33	5	9	14	73	5	5	34	23	219
	2013	23	24	3	6	14	17	3	3	31	25	149
	2014	20	21	6	6	10	65	2	6	29	16	181
A3	2009	17	31	7	7	5	92	1	6	34	11	211
	2010	28	24	10	6	12	136	3	4	39	31	293
	2011	30	37	1	2	14	147	3	6	63	18	321
	2012	31	30	5	9	24	108	3	7	50	15	282
	2013	34	30	6	8	27	139	5	7	58	28	342
	2014	31	29	6	4	34	149	1	7	53	20	334
A10	2009	84	59	7	19	0	77	1	8	27	39	321
	2010	166	98	10	28	10	109	3	14	22	46	506
	2011	147	103	28	25	4	67	5	7	23	66	475
	2012	145	112	10	30	6	69	4	16	32	49	473
	2013	140	104	11	25	2	55	2	7	29	36	411
	2014	125	107	14	19	4	40	1	11	13	29	363
A12	2009	141	123	11	39	0	29	2	6	11	29	391
	2010	232	209	27	66	3	55	4	25	16	73	710
	2011	190	141	10	43	2	27	3	11	8	77	512
	2012	258	286	10	89	7	87	5	17	22	94	875
	2013	259	255	11	52	4	63	5	18	10	66	743
	2014	282	249	10	81	2	46	1	10	14	89	784

Source : Botswana Police Service Reports

SECTION 3:

TIME AND ENVIRONMENT

This section focuses on road crashes and casualties by hour, day of the week, month and light conditions. The cited parameters are critical indicators in road safety because they highlight underlying road safety factors and conditions.

3.1 Road Crash Casualties by Hour of the Day (2006 - 2014)

The results in table 13 show that most fatalities and serious injuries recorded occur between 14:01-00:00 hrs. The proportion of fatalities recorded between 1401 – 00:00hrs was 62.3% compared to 53.8% in 2013 and 46.2% in 2012. In 2014 fatalities recorded between 00:01-1400hrs stood at 37.7% compared to 46.2% in 2013. The overall trend for the nine years shows that more fatalities and serious injuries were recorded between 18:01-20:00hrs followed by 16:01-18:00hrs. Times with less recorded fatalities and serious injuries were 02:01-04:00hrs followed by 04:01-06:00hrs.

Table 13 : Fatalities By Hour Of The Day (2006 - 2014)

TIME	2006	2007	2008	2009	2010	2011	2012	2013	2014
00:01 – 02:00	30	37	27	37	29	25	25	33	40
02:01 – 04:00	16	25	21	19	19	20	17	31	16
04:01 – 06:00	20	21	23	36	34	21	31	29	16
06:01 – 08:00	28	32	22	32	26	54	34	19	23
08:01 – 10:00	19	27	27	26	18	27	28	28	23
10:01 – 12:00	19	58	22	29	18	24	32	29	24
12:01 – 14:00	35	36	39	34	37	24	37	21	32
14:01 – 16:00	37	51	51	56	41	58	37	29	24
16:01 – 18:00	55	62	63	48	46	52	39	50	27
18:01 – 20:00	95	67	57	75	63	74	63	53	77
20:01 – 22:00	54	52	58	45	40	52	35	47	38
22:01 – 00:00	21	29	45	38	26	52	26	42	37
Total	**429**	**497**	**455**	**475**	**397**	**483**	**404**	**411**	**377**

Source : Botswana Police Service

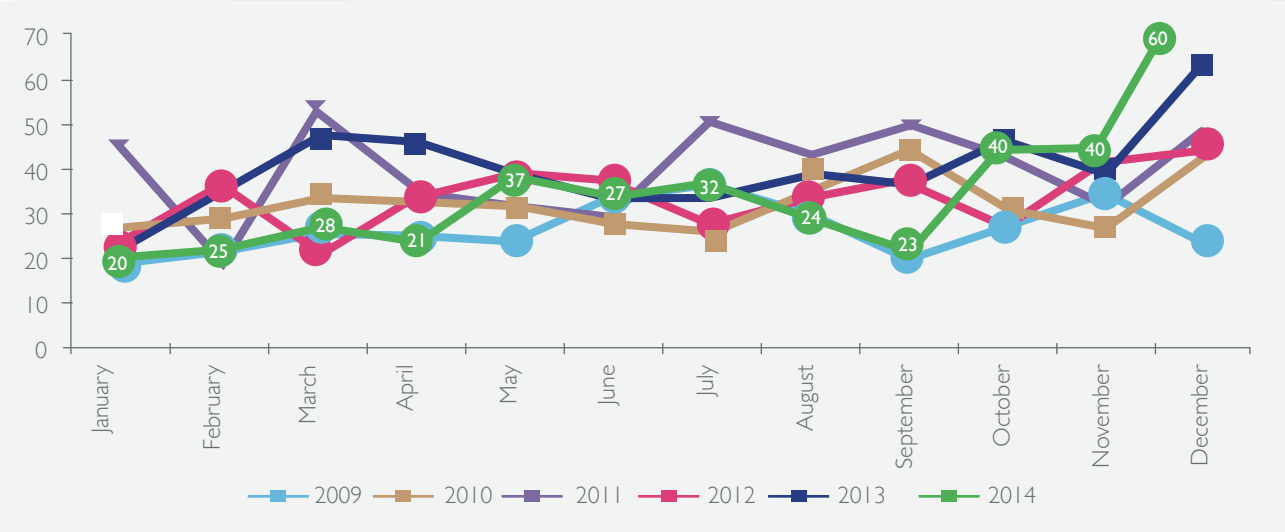
Table 14 : Serious Injuries By Hour Of The Day (2006 - 2014)

TIME	2006	2007	2008	2009	2010	2011	2012	2013	2014
00:01 – 02:00	65	81	113	91	59	60	81	78	82
02:01 – 04:00	36	39	52	42	53	38	60	47	45
04:01 – 06:00	42	71	42	75	48	52	49	55	45
06:01 – 08:00	81	106	104	132	90	106	104	68	83
08:01 – 10:00	83	112	82	83	61	75	79	93	63
10:01 – 12:00	72	129	88	91	94	91	87	90	60
12:01 – 14:00	111	141	139	120	126	78	144	81	119
14:01 – 16:00	119	158	169	165	135	151	142	143	114
16:01 – 18:00	183	202	213	220	133	136	142	173	136
18:01 – 20:00	242	188	229	238	203	175	195	199	226
20:01 – 22:00	125	184	179	164	156	157	97	158	150
22:01 – 00:00	78	83	112	119	94	120	105	123	111
Total	1237	1494	1522	1540	1252	1239	1285	1308	1234

Source : Botswana Police Service Reports

3.2 Fatalities by Month

The six year trend of monthly total fatalities shows that fatalities are usually low in the months of January and February. The last part of the year July to December records the highest number of fatalities annually and usually December records the highest number of fatalities compared to other months and this can be attributed to speeding, overcrowded roads and drinking-and-driving as they continue to be major contributors to road fatalities. Also at this period of the year pedestrians are also at high risk due to drinking and walking, and disobeying road rules like crossing in the middle of highways. In 2014 the month of December recorded increased fatalities when compared to the previous years. The six year trend has depicted a similar pattern over the years in terms of months with the highest or lowest fatalities.



3.3 Road Crashes by Day of the Week

The table 15 below shows recorded crashes by days of the week for the past nine years. According to the distribution, days of the week with high recorded crashes are Saturday, Friday and Sunday. During the year 2014, Saturday recorded the highest number of crashes at 2957 annually followed by Friday at 2827. Days with slightly lower number of recorded crashes in 2014 were Tuesday at 2087 and Monday at 2087. Factors that can be attributed to increased road crashes during the days of Friday, Saturday and Sunday are that these three days are characterized by increased travel, consumption of alcohol, speed and careless driving. To reverse the current trend MVA Fund and other road safety stakeholders enhanced road traffic law enforcement through the introduction of initiatives like sobriety and saturation patrols, highway speed management equipment and pedestrian campaigns in high risk areas.

Table 15: Road crashes by day of the week (2006 - 2014)

	Year									
Day	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Sunday	2322	2730	2844	2722	2494	2365	2360	2400	2316	22553
Monday	2249	2535	2632	2666	2501	2386	2371	2145	2093	21578
Tuesday	2247	2405	2642	2497	2379	2298	2252	2074	2087	20881
Wednesday	2143	2539	2603	2567	2506	2343	2200	2189	2102	21192
Thursday	2170	2468	2599	2818	2608	2343	2329	2314	2259	21908
Friday	2797	3324	3502	3344	3210	3138	2909	2856	2827	27907
Saturday	3107	3486	3593	3386	3280	3128	3106	3084	2957	29127
Total	17035	19487	20415	20000	18978	18001	17527	17062	16641	165146
Average Crashes Per Day	**2434**	**2784**	**2916**	**2857**	**2711**	**2572**	**2504**	**2437**	**2377**	**23592**

Source : Botswana Police Service Reports

Road Casualties mainly occur during weekends. The results in table 16 below show that the majority of fatalities, serious and minor injuries happen between Friday, Saturday and Sunday. During the year 2014 17.8% of all casualties happened on Fridays, 21.9% occurred on Saturdays while 17.3% were recorded on Sundays. For the six year period between 2009 and 2014 a similar pattern can be observed with weekend days experiencing increased road accidents.

Table 17 below illustrate that car crash casualties mainly occur during the day, in 2014 57.2% of all casualties occurred during daylight 31.1% occurred on a dark road environment while 11.1% occurred on a night street lit road environment. The severity of crashes also follows a similar pattern to total casualties. The results in table 17 show that most fatalities, serious injuries and minor injuries occurred on daylight road environment followed by dark road environment and night street lit roads. It must be noted however that the level of car movement during daylight is significantly different from the other times of the day.

Table 16: Casualties by Day of the Week (2009 - 2014)

	Fatalities						Serious						Minor					
Day	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014
Sunday	103	76	91	104	98	77	297	238	245	286	276	241	1046	909	810	730	813	764
Monday	52	53	40	35	23	31	158	131	126	141	117	101	690	517	513	522	447	413
Tuesday	36	37	53	39	44	30	130	120	118	129	141	151	490	549	472	509	508	543
Wednesday	46	40	42	39	45	34	155	131	129	123	142	134	715	508	533	468	489	442
Thursday	62	48	54	24	48	34	167	146	128	143	129	122	815	542	563	479	531	571
Friday	91	55	85	60	50	77	252	200	204	170	173	210	998	752	746	694	694	760
Saturday	85	88	118	103	103	94	381	286	289	293	330	275	1201	1004	1077	944	956	961
Total	475	397	483	404	411	377	1540	1252	1239	1285	1308	1234	5955	4781	4714	4346	4438	4454
Average	68	57	69	58	59	54	220	179	177	184	187	176	851	683	673	621	634	636

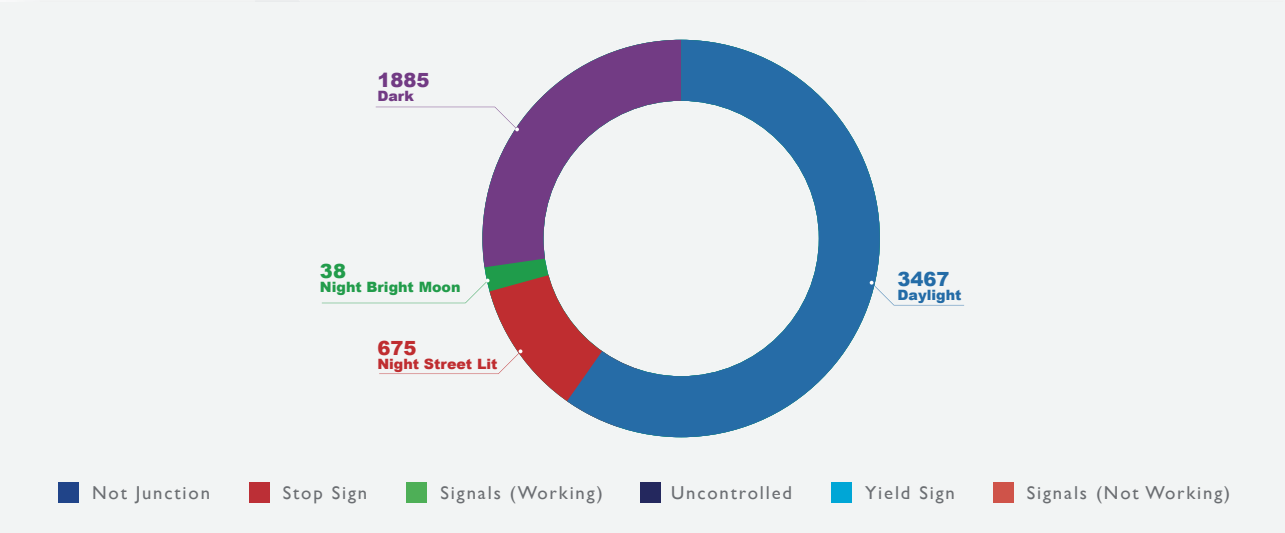
Source : Botswana Police Service Reports

Table 17: Injuries by Different Times of the Day (2009 - 2014)

		Time of the Day					
	Year	Daylight	Dusk	Night Street lit	Night bright moon	Dark	Total
Fatalities	2009	236	14	34	8	183	**475**
	2010	196	11	19	18	153	**397**
	2011	259	0	38	8	178	**483**
	2012	227	0	43	10	124	**404**
	2013	183	0	35	3	190	**411**
	2014	174	0	48	8	147	**377**
Serious Injuries	2009	765	29	144	51	551	**1540**
	2010	658	25	97	36	436	**1252**
	2011	700	0	92	18	429	**1239**
	2012	754	0	115	18	398	**1285**
	2013	693	0	129	23	463	**1308**
	2014	661	0	120	9	444	**1234**
Minor Injuries	2009	4026	115	493	90	1231	**5955**
	2010	2833	62	422	61	1403	**4781**
	2011	2745	0	518	74	1377	**4714**
	2012	2631	0	471	56	1188	**4346**
	2013	2468	0	486	64	1420	**4438**
	2014	2632	0	507	21	1294	**4454**

Source : Botswana Police Service

Figure 13 : Injuries By Different Times Of The Day (2014)



SECTION 4:

PEOPLE INVOLVED IN TRAFFIC CRASHES

4.1 Fatalities by Age Group

Demographics are important components in road safety management. This section therefore presents fatalities by demographics.. Fatalities are presented by age groups, gender and road user category. These demographics are critical given the existing disparities in terms of risk behavior among age groups, gender and road user category.

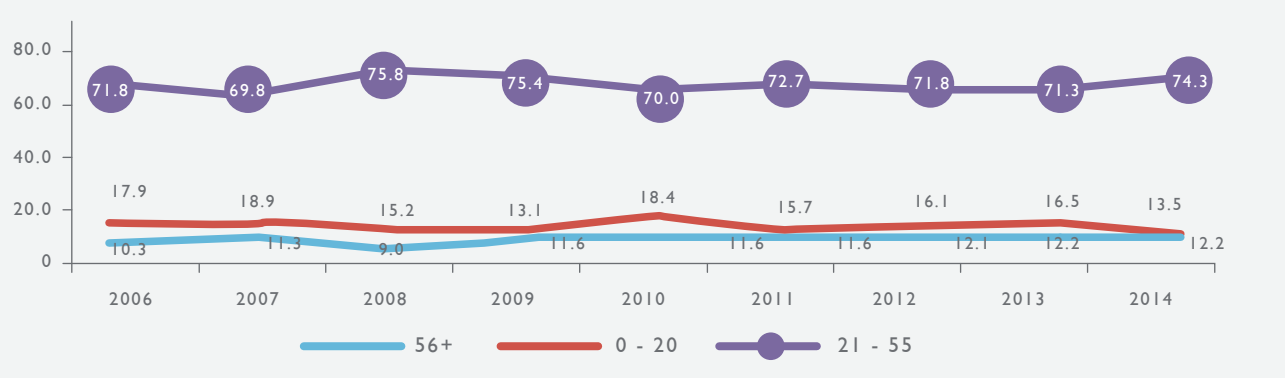
Table 18 and Figure 14 below show fatalities by age groups for the past nine years and the trend indicates that the youth is the most affected in road crashes. The overall trend indicates that young people aged 21-45 years accounts for around 63% of people killed in road crashes between 2006 and 2014. In 2014 66.8% people killed were in the age group 21-45, 19.6% were on age group 46+, and 13.5% were on age group 01-20 years.

Table 18 : Fatalities For The Past Nine Years By Age Groups

	Number Of Fatalities									Percentage								
Age Grp	2006	2007	2008	2009	2010	2011	2012	2013	2014	2006	2007	2008	2009	2010	2011	2012	2013	2014
01 - 05	20	21	24	18	25	25	24	26	19	4.7	4.2	5.3	3.8	6.3	5.2	5.9	6.3	5
06 - 10	20	27	15	13	18	18	20	13	9	4.7	5.4	3.3	2.7	4.5	3.7	5	3.2	2.4
11 - 15	10	16	11	6	9	9	4	8	4	2.3	3.2	2.4	1.3	2.3	1.9	1	1.9	1.1
16 - 20	27	30	19	25	21	24	17	21	19	6.3	6	4.2	5.3	5.3	5	4.2	5.1	5
21 - 25	56	53	70	63	43	72	60	40	48	13.1	10.7	15.4	13.3	10.8	14.9	14.9	9.7	12.7
26 - 30	75	97	81	90	55	74	66	83	75	17.5	19.5	17.8	18.9	13.9	15.3	16.3	20.2	19.9
31 - 35	61	72	71	67	53	63	58	61	53	14.2	14.5	15.6	14.1	13.4	13	14.4	14.8	14.1
36 - 40	49	54	54	45	43	55	38	41	42	11.4	10.9	11.9	9.5	10.8	11.4	9.4	10	11.1
41 - 45	27	27	30	36	37	38	27	24	34	6.3	5.4	6.6	7.6	9.3	7.9	6.7	5.8	9
46 - 50	24	25	24	26	24	27	17	27	17	5.6	5	5.3	5.5	6	5.6	4.2	6.6	4.5
51 - 55	16	19	15	31	23	22	24	17	11	3.7	3.8	3.3	6.5	5.8	4.6	5.9	4.1	2.9
56 - 60	15	18	8	17	17	16	18	20	14	3.5	3.6	1.8	3.6	4.3	3.3	4.5	4.9	3.7
61 - 65	6	7	8	14	12	8	8	5	10	1.4	1.4	1.8	2.9	3	1.7	2	1.2	2.7
66 - 70	8	13	7	6	4	13	10	8	11	1.9	2.6	1.5	1.3	1	2.7	2.5	1.9	2.9
71 - 75	6	7	8	5	2	8	7	10	6	1.4	1.4	1.8	1.1	0.5	1.7	1.7	2.4	1.6
>75	8	11	10	13	11	11	6	7	5	1.9	2.2	2.2	2.7	2.8	2.3	1.5	1.7	1.3
Unknown	1	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0
Total	**429**	**497**	**455**	**475**	**397**	**483**	**404**	**411**	**377**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source : Botswana Police Service

Figure 14: Trend of Fatalities by Age Ranges



Source : Botswana Police Service

4.2 Fatalities by Road user Classes and Age Groups

Fatalities by road user classes show that more passengers were killed than other road users between 2010 and 2014, passengers accounted for 48.0% over the period, followed by pedestrians at 26.0% and drivers at 26.0%. In 2014 passengers accounted for 49.3% of recorded fatalities and drivers accounted for 25.7% while pedestrians were 24.9% of recorded fatalities. The distribution of casualties by age groups shows that around 56.4% of casualties are people age below 35 years of age while around 39.3% were aged between 36 and 65 years of age. The clearly demonstrate that the economically active population is the most affected in road crashes accounting to around 80.0% of all casualties annually.

Table 19 : Fatalities By Road User Classes & Age Groups (2010 - 2014)

	Fatalities														
	Drivers					Passengers					Pedestrians				
Age Of Victims	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
01-05	0	0	0	0	0	7	14	15	12	10	18	11	9	14	9
06-10	0	0	0	0	0	5	4	9	3	2	13	14	11	10	7
11-15	1	0	0	0	0	4	3	3	5	2	4	6	1	3	2
16-20	1	3	2	0	1	13	17	10	14	13	7	4	5	7	5
21-25	6	14	9	9	10	29	42	36	25	30	8	16	15	6	8
26-30	18	20	24	28	22	26	50	31	40	38	11	4	11	15	15
31-35	21	23	22	17	16	25	30	23	31	27	7	10	13	13	10
36-40	17	23	19	12	13	21	25	11	17	21	5	7	8	12	8
41-45	13	17	15	7	18	15	13	9	12	12	9	8	3	5	4
46-50	11	7	4	8	5	7	12	11	11	8	6	8	2	8	4
51-55	8	7	11	6	3	5	10	7	6	6	10	5	6	5	2
56-60	4	1	6	5	6	8	8	5	10	4	5	7	7	5	4
61-65	4	1	0	2	1	5	5	4	2	6	3	2	4	1	3
66-70	0	3	1	1	2	0	5	1	6	3	4	5	8	1	6
71-75	0	3	2	2	0	1	3	5	5	3	1	2	0	3	3
76-80	0	1	0	1	0	2	4	2	0	0	4	1	1	2	1
81-85	1	1	0	0	0	0	1	1	0	0	1	1	0	1	1
86-90	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1
91-95	0	0	0	0	0	1	1	0	2	0	0	0	0	1	0
96-100	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	105	124	115	98	97	174	247	184	201	186	118	112	105	112	94

Source : Botswana Police Service Reports

Table 20 : Serious Injuries By Road User Classes & Age Groups

	Fatalities														
	Drivers					Passengers					Pedestrians				
Age	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
0-5	0	0	0	0	0	7	14	15	12	10	18	11	9	14	9
06-10	0	0	0	0	0	5	4	9	3	2	13	14	11	10	7
11-15	1	0	0	0	0	4	3	3	5	2	4	6	1	3	2
16-20	1	3	2	0	1	13	17	10	14	13	7	4	5	7	5
21-25	6	14	9	9	10	29	42	36	25	30	8	16	15	6	8
26-30	18	20	24	28	22	26	50	31	40	38	11	4	11	15	15
31-35	21	23	22	17	16	25	30	23	31	27	7	10	13	13	10
36-40	17	23	19	12	13	21	25	11	17	21	5	7	8	12	8
41-45	13	17	15	7	18	15	13	9	12	12	9	8	3	5	4
46-50	11	7	4	8	5	7	12	11	11	8	6	8	2	8	4
51-55	8	7	11	6	3	5	10	7	6	6	10	5	6	5	2
56-60	4	1	6	5	6	8	8	5	10	4	5	7	7	5	4
61-65	4	1	0	2	1	5	5	4	2	6	3	2	4	1	3
66-70	0	3	1	1	2	0	5	1	6	3	4	5	8	1	6
71-75	0	3	2	2	0	1	3	5	5	3	1	2	0	3	3
76-80	0	1	0	1	0	2	4	2	0	0	4	1	1	2	1
81-85	1	1	0	0	0	0	1	1	0	0	1	1	0	1	1
86-90	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1
91-95	0	0	0	0	0	1	1	0	2	0	0	0	0	1	0
96-100	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	105	124	115	98	97	174	247	184	201	186	118	112	105	112	94

Source : Botswana Police Service Reports

4.3 Casualties by Road User Class

Casualties by road user class shows that for the past six years passengers were the most affected road users in road crashes followed by pedestrians and then drivers. In passengers accounted for 47.1% of all causalities followed by drivers at 30.7% while pedestrians were at 22.2% of all causalities.

Table 21 : Casualties By Road Users Class

	Fatalities						erious						Minor					
Casuality	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014
Driver	150	105	124	115	98	97	388	330	307	316	344	324	2026	1546	1483	1448	1454	1439
Passenger	211	174	247	184	201	186	809	599	650	623	698	630	2777	2202	2239	1964	2011	2042
Pedestrian	114	118	112	105	112	94	343	323	282	346	266	280	1152	1033	992	934	973	973
Total	**475**	**397**	**483**	**404**	**411**	**377**	**1540**	**1252**	**1239**	**1285**	**1308**	**1234**	**5955**	**4781**	**4714**	**4346**	**4438**	**4454**

Source : Botswana Police Service

The distribution of road causalities by gender shows that males are the most affected in road crashes compared to females. In 2014 the proportion of male killed in road crashes was 69.2% compared to 30.8% females. The proportion of males who sustained serious injuries was 64.0% compared to 40.0% females in 2014. The trend of casualties between males and females is almost the same for the past six years, males account for almost 70.0% of all road casualties, a number of reasons can explain this pattern. The first reason in that the proportion of male drivers is higher than female drivers and the other reason might be that male drivers have low risk perception when driving compared to their female counter parts.

Table 22 : Casualities By Gender Of Road Users

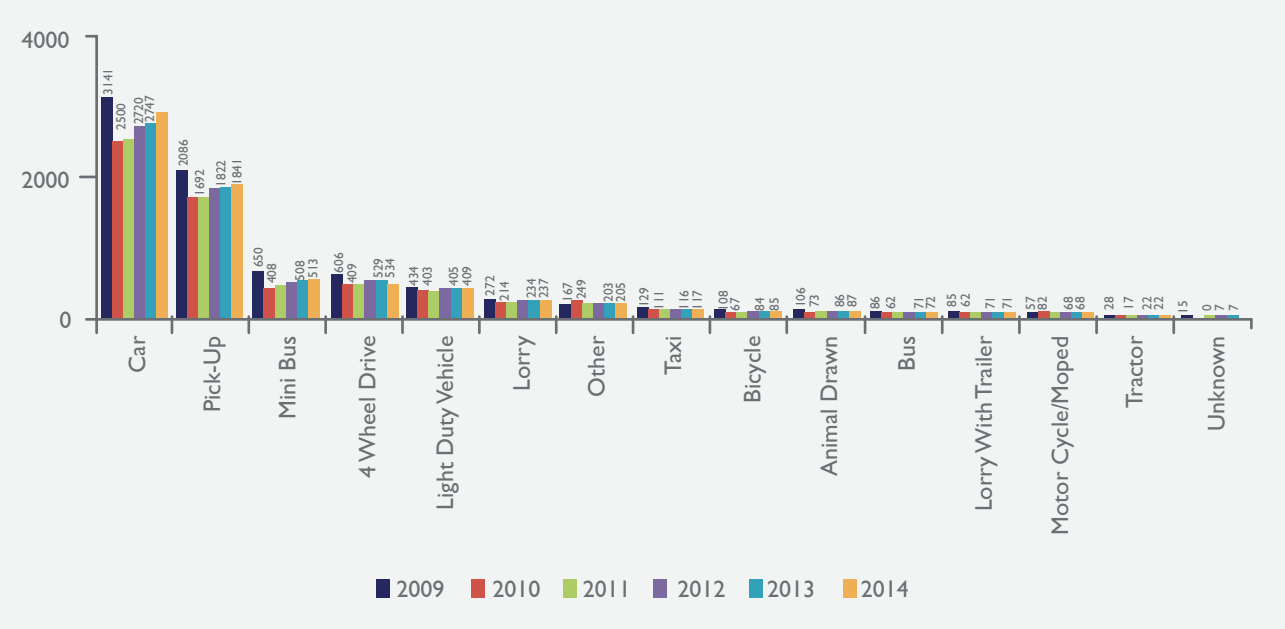
Numbers												
Year	2009		2010		2011		2012		2013		2014	
Casuality	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Fatalities	354	121	287	110	344	139	272	132	304	107	261	116
Serious	1016	524	845	407	821	418	846	439	830	478	790	444
Minor	3932	2023	3065	1716	3031	1683	2788	1588	2886	1552	2760	1694
Percentage												
Year	2009		2010		2011		2012		2013		2014	
Casuality	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Fatalities	74.5	25.5	72.3	27.7	71.2	28.8	67.3	32.7	74.0	26.0	69.2	30.8
Serious	66.0	34.0	67.5	32.5	66.3	33.7	65.8	34.2	63.5	36.5	64.0	36.0
Minor	66.0	34.0	64.1	35.9	64.3	35.7	64.2	35.8	65.0	35.0	62.0	38.0

SECTION 5:

VEHICLES INVOLVED IN TRAFFIC CRASHES

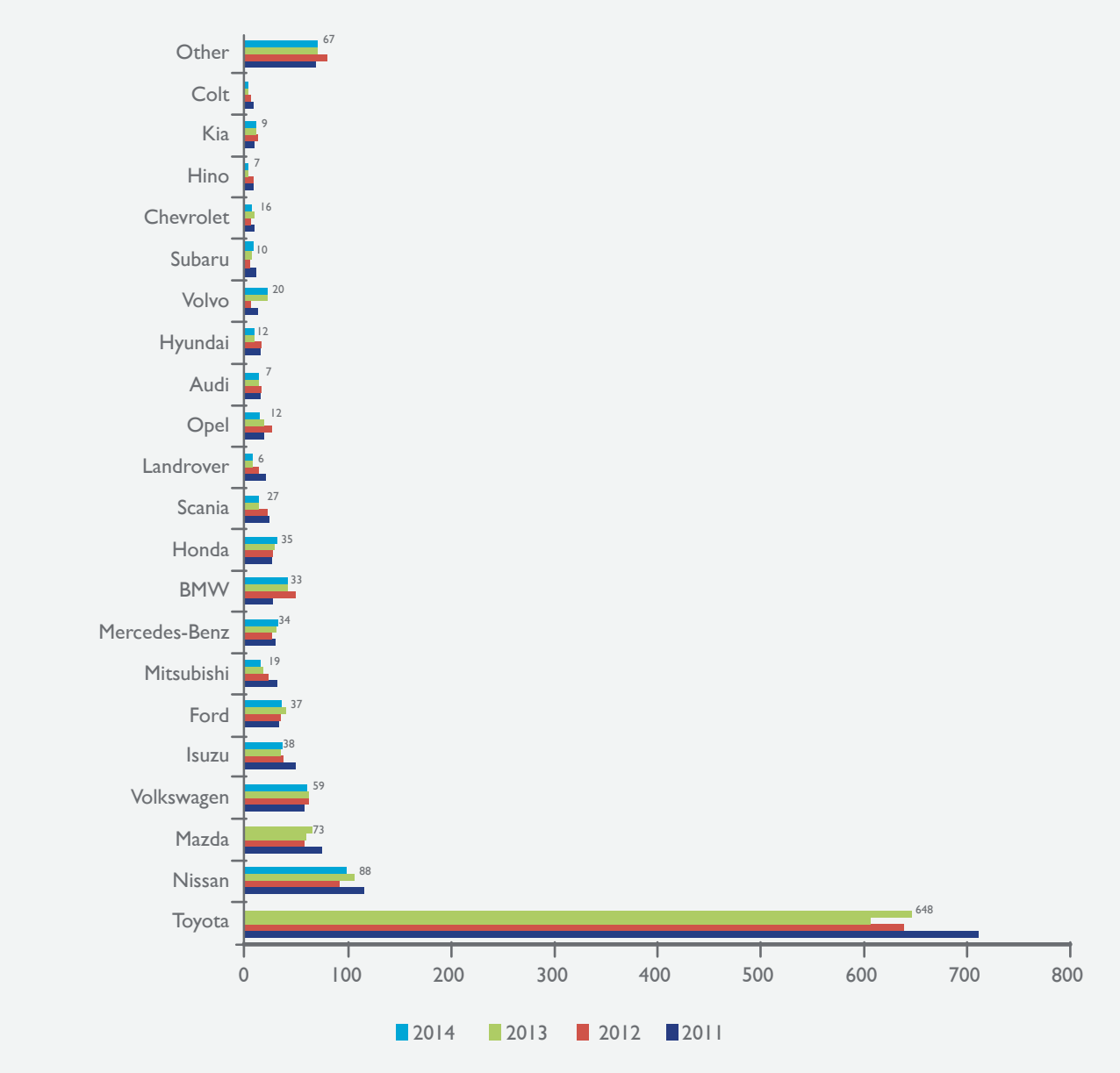
The figure below presents statistics of vehicles involved in road crashes from the MVA Fund claims database for the years 2009 and 2014. The trend shows that most vehicles involved in traffic crashes were cars followed by pick-ups and mini-buses. These distributions are similar to national registered cars by make or model, therefore the proportion of vehicles involved in crashes is proportional to the population of vehicle types.

Figure 15 : Vehicle Types Involved In Crashes From MVA Fund Claims Database (2009-2014)



Source : MVA Fund Database

Figure 16: Vehicle Makes Involved In Car Crashes In 2011 - 2014 (Mva Fund Database)



Source : MVA Fund Database

5.1 Vehicle Maneuver

The majority of vehicles involved in crashes were moving on a straight direction. The percentage of Crashes involving cars going straight was 64.6% in 2014. The second hazardous vehicle maneuver is turning to the right accounting for 7.0%, these could be due to drivers ability to clear the road before turning. The general trend reveals that since 2009 more that 60.0% of crashes involve cars going straight which suggests that excessive speed on those crashes could be a factor.

Table 23: Total Vehicle's & Vehicle Maneuver (2009 - 2014)

	Year					
Vehicle maneuvers	2009	2010	2011	2012	2013	2014
Going straight	21 459	19 955	19 003	18 484	17 686	17 416
Turning right	2 193	2 143	2 072	2 128	2 023	1 892
Turning left	984	1 045	962	977	960	936
Crossing Stream	139	104	132	122	87	105
Overtaking	461	487	514	438	397	432
U-Turning	155	158	144	136	111	102
Merging	83	72	116	67	88	89
Diverging	151	107	77	63	64	89
Reversing	1 675	1 721	1 567	1 563	1 578	1 563
Sudden Start	77	65	44	45	52	43
Sudden Stop	132	99	87	93	76	73
Parked off road	1 435	1 459	1 393	1 304	1 340	1 296
Parked on road	207	201	161	109	122	155
Other	2 549	2 414	2 533	2 575	2 614	2 751
Totals	**31 700**	**30 030**	**28 805**	**28 104**	**27 198**	**26 942**

Source : Botswana Police Service

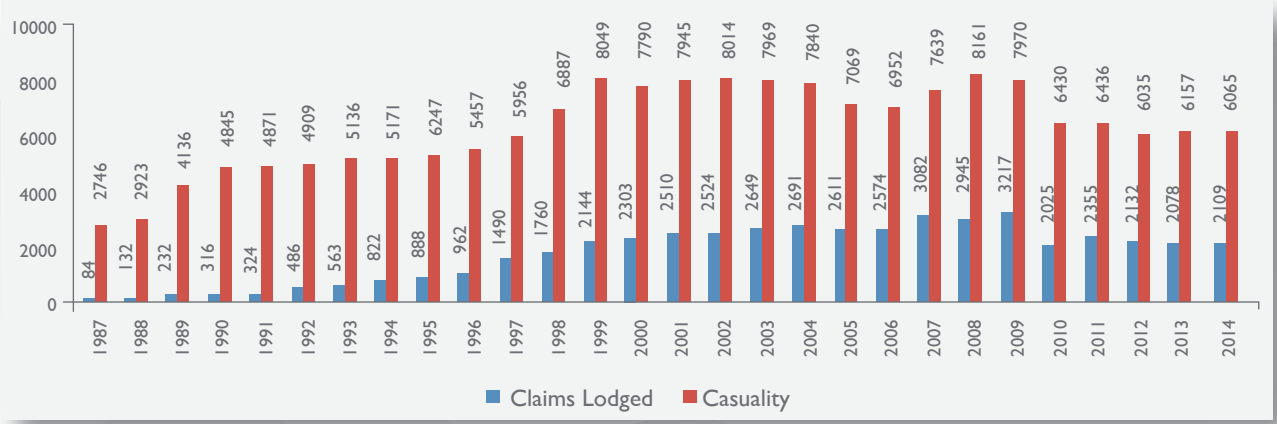
SECTION 6:

MVA FUND CLAIMS ANALYSIS

6.1 Claims Lodged with MVA Fund (1987 - 2014)

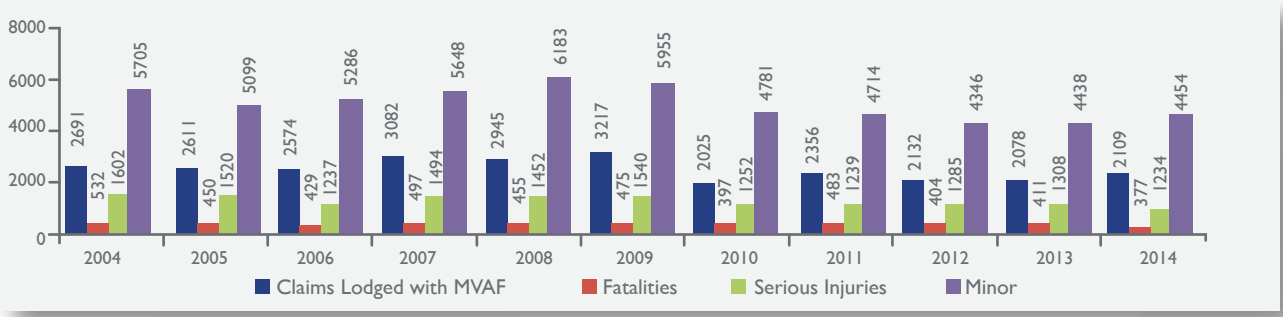
All road users who are involved in road crashes are eligible to lodge claims for assistance from the MVA Fund in terms of the MVA Fund Act. The total number of claims lodged with MVA Fund since 1987 to end of 2014 was 48 009. These claims were from a total of 174 805 casualties within the same period. This translates to 27.5% of claims lodged against total casualties for the period. The annual claims lodged with MVA Fund are less than 50.0% of annual recorded casualties. Taking into account that the MVA Fund Act changed during period to accommodate all road crash victims the numbers of claims lodged per annum is slightly low. The reasons for the low number of claims lodged might be that most car crash victims receive medical assistance at government hospitals therefore they might think it's not necessary to lodge claims with MVA Fund and the other reason might be that majority of car crash victims who sustain minor injuries do not lodge claims because they feel they are okay.

Figure 17: Claims Lodged With Mva Fund & Total Casualties (1987 - 2014)



Source: MVA Fund Data base

Figure 18: Claims Lodged & Casualties – (2004-2014)



Source: MVA Fund Data base

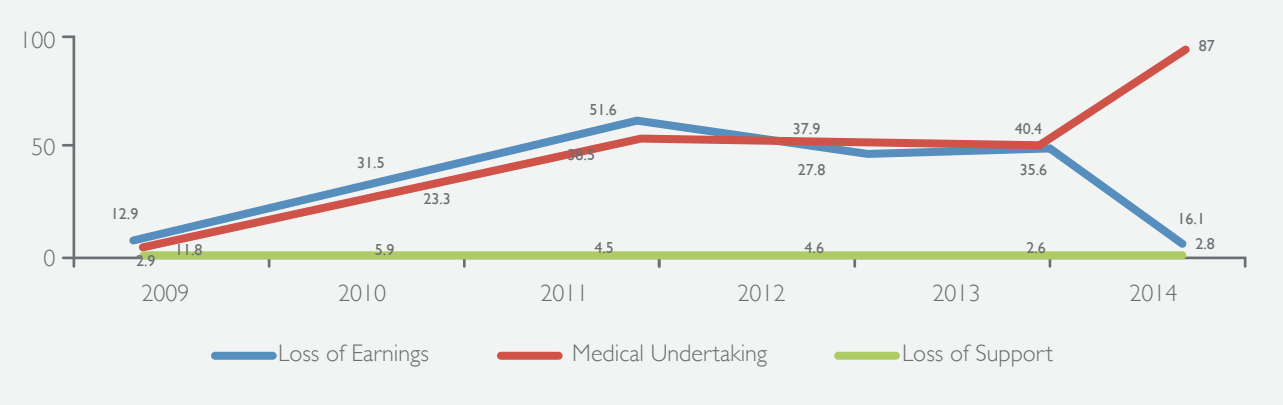
In 2014 the proportion of claims lodged with the Fund stood at 34.8% against 6065 reported casualties compared to 33.8% out of 6 157 casualties in 2013, an increase of 1.0% compared to 2013. The highest proportion of claims lodged was 40.4% in 2009 while the lowest was 3.1% in 1987.

6.2 Total Reserves and Payments 2010 – 2014

The Fund makes provision of monies for use in future to settle various claims when they either arise or fall due . During the year under review, there was a large increase in the value of the reserve for medical undertaking from P40.4 million for 1 161 in 2013 to P87 million for 1233 in 2014. The Fund paid 38.0 million in medical costs during the reporting period. The Fund experienced a decrease in reserves for loss of support from P35.6 million in 2013, to P16.1 million 2014, Loss of earnings reserves increased from

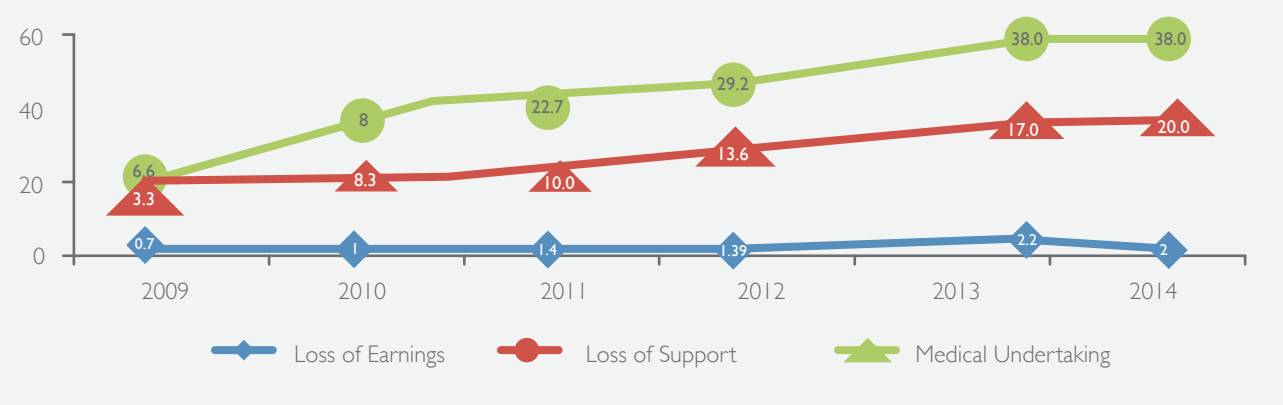
P2.6 million in 2013 to P2.8 million in 2014 while payouts for loss of earnings decreased to P2 million from P2.2 million in 2013 and the decrease was mainly due to the reduction in the number of beneficiaries during the period. The increase in the total number lodged at Maun office was in line with the total number of recorded crashes in the Maun region and it's catchment areas.

Figure 19 : Reserves By Benefit Type (P Millions)



Source: MVA Fund Data base

Figure 20: Payments by Benefits Type (P Millions)



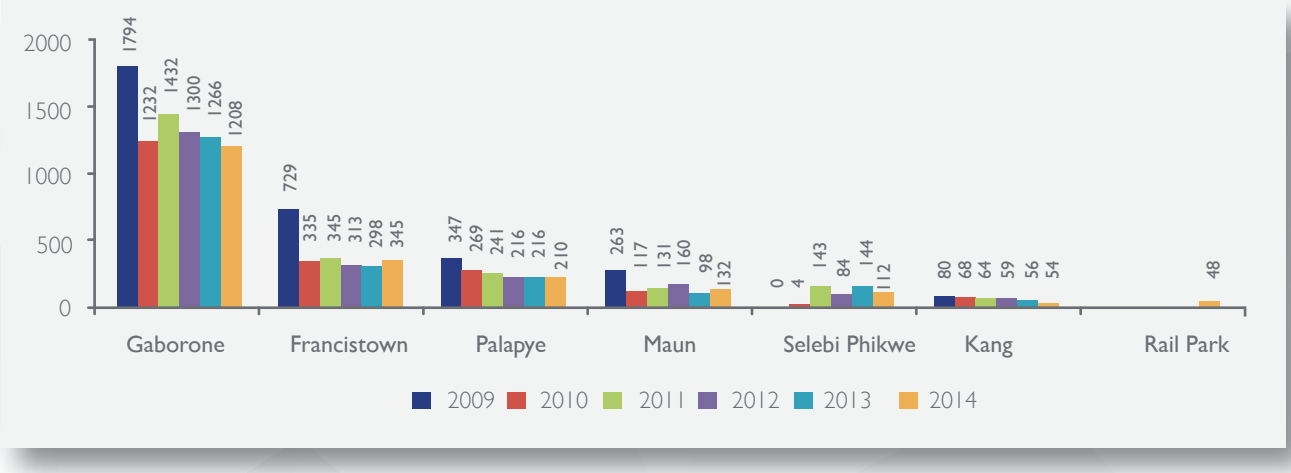
Source: MVA Fund Data base

6.3 Claimants by Region

Table 24 below shows the distribution of claims lodged with the Fund in 2009 to 2014. The number of claims received from the Gaborone region was the highest for all the years during the six year period. The other regions with high number of claims received from were Francistown, Maun and Tsabong. The 2014 claims data shows that Tsabong experienced significant increases in the number of claims received between 2013 and 2014. Areas with significant drops on claims received in 2014 were Letlhakane, Kanye and Serowe.

The table further shows that the total number of claims lodged with MVA Fund decreased by 7.1% between 2013 and 2014.

Figure 21 : Claims Lodged With MVA Fund Offices (2009 - 2014)



6.4 Monthly Claims Lodged with MVA Fund by Office

As indicated earlier, Gaborone office received the most claims lodgements than the other MVA Fund Offices followed by Francistown and Palapye. Monthly claims lodged did not vary significantly between months, safe for the months of October and December. In December claims lodged went up mainly because car crashes go up during the holiday period as many people are traveling to their home villages, and this trend would usually be observed in the high number of claims lodged in January, as people would be returning from the holidays.

Table 24 : Claimants By Regions (2009 - 2014)

	Year					% Changes				
Regions	2009	2010	2011	2012	2013	(2009/2010)	(2010/2011)	(2011/2012)	(2012/2013)	(2013/2014)
Gaborone	883	615	731	754	716	-30.4	18.9	3.1	-5	-14.8
Francistown	434	190	274	239	212	-56.2	44.2	-12.8	-11.3	10.4
Molepolole	188	140	124	105	99	-25.5	-11.4	-15.3	-5.7	9.1
Kanye	187	138	126	132	112	-26.2	-8.7	4.8	-15.2	-63.4
Maun	182	104	107	152	97	-42.9	2.9	42.1	-36.2	42.3
Selebi Phikwe	157	81	158	103	127	-48.4	95.1	-34.8	23.3	-19.7
Lobatse	149	83	79	95	91	-44.3	-4.8	20.3	-4.2	-24.2
Mochudi	129	91	128	79	84	-29.5	40.7	-38.3	6.3	-10.7
Serowe	127	82	92	67	93	-35.4	12.2	-27.2	38.8	-24.7
Palapye	184	124	89	86	95	-32.6	-28.2	-3.4	10.5	-17.9
Mahalapye	154	95	101	90	57	-38.3	6.3	-10.9	-36.7	7.0
Tutume	99	42	44	27	33	-57.6	4.8	-38.6	22.2	6.1
Ramotswa	58	37	64	27	46	-36.2	73	-57.8	70.4	-19.6
Tsabong	74	63	82	65	48	-14.9	30.2	-20.7	-26.2	179.2
Letlhakane	94	57	56	6	61	-39.4	-1.8	-89.3	916.7	-50.8
Ghanzi	46	34	50	29	37	-26.1	47.1	-42	27.6	2.7
Kasane	27	7	17	19	12	-74.1	142.9	11.8	-36.8	0.0
Foreign	45	44	34	57	22	-2.2	-22.7	67.6	-61.4	9.1
Total	3217	2025	2356	2132	2042	-37.1	16.3	-9.5	-4.2	-7.1

6.5 Right of Recovery

The MVA Fund Act of 2007 from which the Fund derives its mandate entitles the Fund, in some instances to recover the money it has paid out as compensation. Section 30, of the Act, gives the Fund the right to recover 'such sum from the person who caused the vehicle accident giving rise to the claim[s] in question'. The said section outlines instances in which such right of recourse shall arise.

Table 25: Monthly Claims Lodged with MVA Fund by Offices 2009– 2014

Office	Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Gaborone	2009	257	259	289	166	163	120	155	157	130	158	116	131	**2101**
	2010	83	114	130	93	133	106	88	86	75	105	124	95	**1232**
	2011	123	83	124	91	146	151	88	134	132	127	111	122	**1432**
	2012	98	112	123	83	117	113	100	137	110	100	113	93	**1299**
	2013	102	115	105	105	121	83	106	134	106	98	108	83	**1266**
	2014	121	88	93	102	105	102	115	91	99	108	90	94	**1208**
Francistown	2009	0	0	19	46	23	63	35	58	50	59	37	68	**458**
	2010	44	34	31	26	25	24	26	23	25	22	26	29	**335**
	2011	32	29	30	34	28	26	22	40	27	27	24	26	**345**
	2012	30	23	31	20	26	31	27	26	26	28	27	19	**314**
	2013	17	26	28	23	23	38	20	18	19	34	15	37	**298**
	2014	22	34	16	28	31	27	34	31	19	38	26	39	**345**
Palapye	2009	0	0	9	20	27	41	34	53	56	52	33	23	**348**
	2010	29	19	29	19	23	23	24	19	22	16	20	26	**269**
	2011	18	13	17	16	15	27	23	31	29	13	23	16	**241**
	2012	14	15	17	16	26	30	13	23	19	10	20	15	**218**
	2013	34	13	17	21	14	18	23	19	16	13	18	10	**216**
	2014	15	16	8	16	8	12	19	19	18	24	15	440	**210**
Maun	2009	11	51	14	8	16	31	21	35	15	4	37	27	**270**
	2010	20	1	8	16	14	7	11	10	5	7	5	13	**117**
	2011	7	16	5	0	10	6	5	15	25	21	9	12	**131**
	2012	11	13	11	7	17	9	15	13	17	19	11	17	**160**
	2013	4	8	6	12	7	6	10	12	9	6	9	9	**98**
	2014	8	11	19	14	14	14	9	13	10	16	7	6	**132**
Selebi Phikwe	2010	0	0	0	0	0	0	0	0	0	0	1	3	**4**
	2011	6	11	22	10	4	17	16	10	10	11	9	17	**143**
	2012	10	4	11	3	10	4	7	7	12	9	3	3	**83**
	2013	5	2	7	7	11	31	12	13	10	31	12	3	**144**
	2014	4	6	11	4	10	12	10	8	16	13	8	10	**112**
Kang	2009	0	0	0	0	0	0	8	4	5	5	10	8	**40**
	2010	2	6	9	9	10	2	5	9	1	7	3	5	**68**
	2011	7	0	4	0	0	5	6	7	5	16	10	4	**64**
	2012	4	4	15	3	8	8	10	1	0	1	1	3	**58**
	2013	2	1	11	1	5	6	12	4	3	8	0	3	**56**
	2014	4	3	6	2	1	3	7	2	6	9	6	5	**54**
Rail Park	2014	0	0	0	0	0	0	0	0	0	0	16	32	**48**

They are;

i. Where one causes an accident by driving under the influence of alcohol,
ii. driving recklessly,
iii. driving a vehicle without being a holder of a valid driver's license,
iv. driving a defective vehicle and such a defect causes or contributes to the accident,
v. driving a stolen vehicle knowingly or when one ought to have known that it was stolen and lastly
vi. being an owner, lawful possessor or custodian of a vehicle, one permits that vehicle to be driven in any of the circumstances set out above.

Table 26 below shows the Funds collections by year and month. The Fund collected P528 229.00 in 2014, which is an increase of 24.7% in collection when compared to P423 755.00 in 2013. The month of October was the highest collection month for the Fund in 2014. Since 2006 the trend for collections has not been a consistent one, and this is due to usually offenders changes in living standard, whether for the better or worse. This impacts collections as it affects the amount one would be able to commit on a monthly basis.

Table 26 : Right Of Recovery Collections By Year

Month	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	38789.00	25253.00	13020.00	8109.00	17303.00	26194.00	20905.00	40000.00	26900
February	23320.00	22056.00	18654.00	12848.00	39244.00	50674.00	38161.00	29591.14	30708
March	20404.00	38675.00	25995.00	13613.00	30179.00	25725.00	39249.00	26931.00	36109
April	56272.00	25288.00	42330.00	8680.00	14849.00	38775.00	36899.00	37683.28	32954
May	23562.00	23229.00	28661.00	21189.00	17049.00	29136.00	43495.00	41374.14	57826
June	15987.00	23076.00	30990.00	30940.00	19085.00	705.45	56535.00	36000.00	34273
July	51137.00	15547.00	42461.00	10843.00	36159.00	105320.15	44308.28	40898.28	41254
August	27022.00	20063.00	15806.00	5026.00	63989.00	49306.01	49966.14	43517.89	57287
September	39075.00	26534.00	16641.00	8530.00	25896.00	31976.00	54583.60	23855.00	50850
October	46444.00	20399.00	16354.00	39795.00	27132.00	24513.80	47844.28	38475.00	73900
November	29498.00	21783.00	29236.00	17901.00	62144.00	51996.53	44500.14	26690.00	39700
December	40144.00	12449.00	25613.00	18792.00	21418.00	52371.80	35904.14	27629.74	46468
Total	**411654.00**	**274352.00**	**305761.00**	**196266.00**	**374447.00**	**422741.74**	**512350.58**	**412645.47**	**528229**

SECTION 7:
MVA FUND ROAD SAFETY INITIATIVES IN 2014

Road Safety as one of the core mandates of the MVA Fund has influenced the need for continuous collective effort with its national strategic partners to raise awareness on Road Safety issues, which are attributed to behavior and road safety education. This is to align with national investment of creating a prevention focused nation, instead of cure based when it comes to road crashes.

Strategic partners of the MVA Fund are Botswana Police Service, Department of Road Transport and Safety, District Road Safety Committees, Road Safety Clubs and Community Groups through the Community Road Safety Grant Scheme programme. MVA Fund, together with other stakeholders has implemented strategic initiatives to mitigate the effects of road crashes across the country. The total expenditure for road safety during the year was P16.4 Million. The budget financed various initiatives as follows:

Table 27 : 2014 Road Safety Initiatives

Initiative	Objective/Rationale	Performance
Community Road Safety Grant Scheme	The purpose of the CRSGS which was started in 2010 is to cultivate community participation with the aim to prevent or reduce road crashes, through a number of road safety education activities.	In 2014 six groups were active and had conducted a number of activities to promote road safety. To date the scheme has a total of 18 registered community groups.
Road Safety Research	Research is conducted continually, so as to provide for informed decision making or planning in Road Safety management. In the year 2014 the Road User Behavior Survey Report was concluded.	2013 Crash and Claims Report and Road User Behaviour Survey Reports were released. The Road User Behaviour Survey profiled the general behaviours of road users on the road.
Youth Road Safety Clubs	This collaboration involves facilitation of Youth Road Safety Clubs. They foster ownership by the youth to promote road safety, through peer education.	The fund continues to promote the formation of in-school and out-of-school traffic safety clubs through its Branch Offices. The total number of the Funds youth clubs is eleven, and they continue to spread road safety awareness by carrying out road safety educational activities in their respective areas.
Occupational Road Risk Seminars	Tackles the key issues of road safety within the pre-existing framework for managing health and safety at work. This is done through presentations to various organizations across the nation.	In 2014 the Fund continued with the implementation of the occupational road risk programme whose main objective is to encourage organisations to incorporate road safety in their occupational health and safety programmes to build a road safety culture within their workforce.
Bus Shelter Advertising	Construction of bus shelters at district level to serve as platforms for disseminating information on Road Safety and the Fund's products and services.	The Fund has so far constructed bus shelters at Bobonong, Molalatau, Kanye, Letlhakane, Tsabong, Mahalapye, Kasane, Maun, Jwaneng, Gaborone, Ghanzi, Manyana, Sekoma and Shakawe. In 2014, other bus shelters were constructed at Manyana, Sekoma, Tutume, Gumare and Molalatau. Performance
First Aid Documentary	Collaboration initiative with Botswana Red Cross Society, which produced and aired a First Aid documentary series on BTV.	The First Aid TV programme called First Aid 101, has continued to flight on Botswana Television in both English and Setswana.

Initiative	Objective/Rationale	Performance
Outreach to Special Groups	Audience focused Road Safety education for people living with disabilities, children and the elderly.	To reach out to those living with disabilities, the Fund continued to translate all its adverts published in 2014 into sign language. In addition, the Fund transcribed the 'How to Get Help from MVA Fund' brochure into braille. The development catered for those living with visual impairments and to ensure that they independently learn about the MVA Fund products and services.

7.1: Public Education and Publicity of the Fund

7.1.1 Mobile Children Traffic School

The Mobile Children Traffic School (MCTS) equipped with quad bikes, traffic lights, road signs, cones, television and computers reached out to children in all parts of the country. The tours continue to influence a culture skewered towards road safety in children, and ensures that they are knowledgeable about the requirements of staying safe on the roads. 2014 has seen an expansion in coverage of the MCTS, as it covered the Districts of Kgalagadi South, Ghanzi, North East, North West, South East, Gaborone, Bobirwa and the Tswapong region. A total of 37 towns and villages were visited resulting in a total of 23 514 children being interacted with.

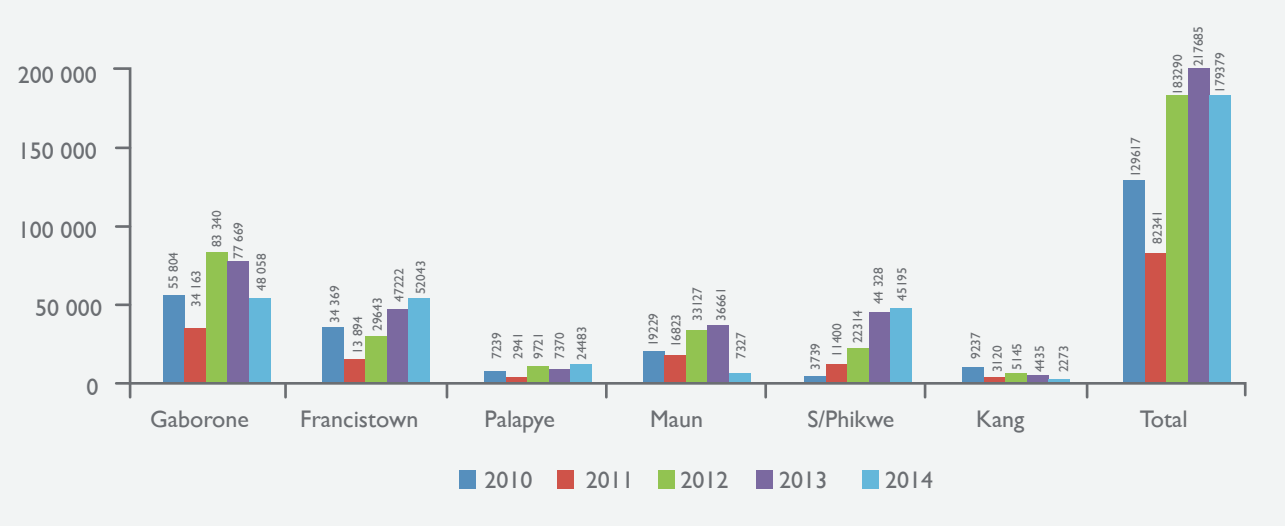
7.1.2 Child Safety Media Campaign

Child safety promotion continues to be executed in a diverse manner, so as to maximise impact. Child safety adverts have been developed, with an onus to emphasise the use of Child Restraints and to stress the penalties for failure to secure children in vehicles. Child passenger safety seems to be an under estimated hazard by most parents and guardians in Botswana. The Road User Behaviour Survey which was conducted by Motor Vehicle Accident Fund in collaboration with the University of Botswana suggests so.

7.1.3 Public Education Forums

During the year selections of forums have been utilized to reach different communities, to encourage discussions around Road Safety, whilst also educating. These forums have promoted one on one interaction with the public, which helps inform what the knowledge gap in terms of public education is in specific areas. In addition they provide an opportunity to promote and familiarise people with the MVA Fund brand. The forums have been in the form of wellness programmes, corporate presentations, scholar patrols, seminars, agricultural shows, consumer fair and MVA Fund major campaigns.

Figure 22 : People Interacted With By MVA Fund Offices (2010 & 2014)



SECTION 8:

IMPACT ASSESSMENT OF ROAD SAFETY INITIATIVES 2009 – 2014.

8.1 Background Information

8.1.1 During the 2015 First Quarter briefing to His Excellency the President of Botswana, by the Ministry of Finance and Development Planning and all its custodial Parastatal Heads, the Office of the President directed all road safety stakeholders to conduct an impact assessment of road safety initiatives in Botswana.

8.1.2 It was directed that the assignment should be coordinated by MVA Fund as one of the key stakeholders. The purpose of the Assessment was to determine the return on investment of all road safety initiatives in reducing crashes and related injuries in Botswana.

8.2 Methodology

8.2.1 The Assessment was based on a desktop analysis of official data released through various Road Safety Reports. It covered the period between the years 2009 and 2014.

8.2.2 A Task Team comprising of representatives of all road safety stakeholders such as Botswana Police Traffic Division, Department of Road Traffic and Safety, Department of Roads and the Motor Vehicle Accident Fund was formed. The stakeholders had to submit their respective and collaborative road safety initiatives together with the corresponding budgets, objectives, target groups and the performance measures for each initiative. The base year for comparison was 2009 and for the initiatives introduced after 2009, the first year of implementation was used as a base for comparison.

8.2.3 The Assessment was aligned to the United Nations Decade of Action for Road Safety (2011 -2020), to which the Government of Botswana is a signatory. The Decade of Action is a global framework on road safety that seeks to reduce road crashes and fatalities by 50% by the year 2020 globally. The National Road Safety Strategy was also a point of reference in conducting the Assessment.

8.2.4 The next phase of the Assessment was to determine the actual impact of implemented initiatives during the period based on their respective intended objectives.

8.2.5 For ease of presentation and alignment to the Decade of Action, the Report will discuss the findings based on the five Pillars of the Decade of Action, namely; Road Safety Management, Road User Behavior, Safer Roads and Mobility, Safe Vehicles and Post-Crash Care as these are global measurement tools in road safety performance.

8.3 Road Safety Management

8.3.1 The Road Safety Management Pillar emphasizes the creation of multi-sectoral partnerships in road safety, the development and implementation of plans by various stakeholders, and the designation of lead agency in road safety. The Committee assessed all these critical components of the Decade of Action Plan as they are important components in the sustainable response to road safety and the achievement of the national and global road safety plans.

8.3.2 The proposed measure of performance on this pillar will be the number of multi-sectoral partnerships established and the levels of implementation of approved road safety plans. The assessment will also establish the state of functional road safety structures as an indication of performance.

8.3.3 The assessment indicates that there is a clear road safety management structure in the country which can support road safety plans. According to the assessment the National Road Safety Committee as the lead agency is responsible for the overall road safety policy and strategy in the country. It ensures stakeholder involvement, approves road safety action plans and secures the necessary human and capital resources for implementation. The review also shows that the country has

developed the National Road Safety Strategy which is a guiding document in Road Safety Management. The strategy spells out priority areas for the country, has clear targets and also outlines lead departments in specific road safety management areas.

8.3.4 The assessment shows that during the period more multi-sectoral partnerships were signed between road safety stakeholders compared to the previous years. The review of investment in Road Safety or Funding shows that there was growth in road safety funding between 2009 and 2014; this is an indication of commitment by road safety stakeholders. Road Safety Funding was high in 2011 compared to the other years due to the introduction of Booze Buses by both Botswana Police Service and Motor Vehicle Accident Fund.

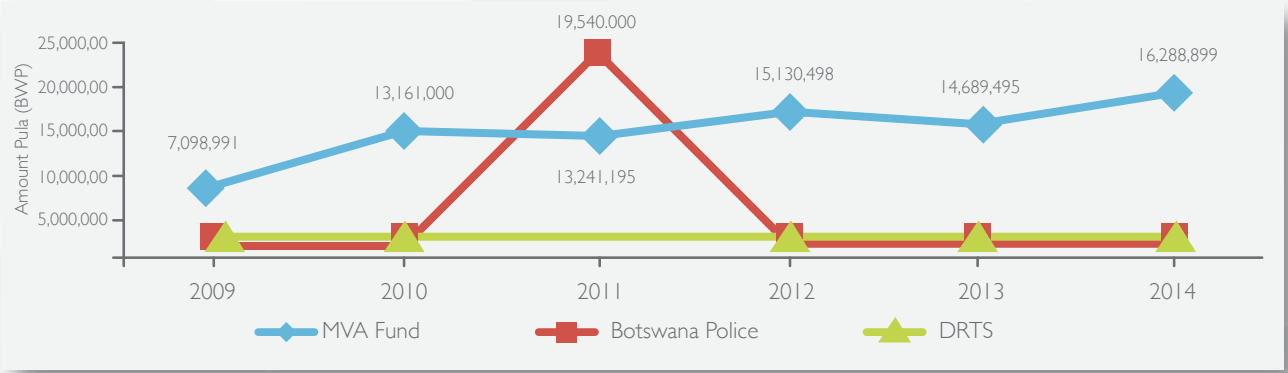
8.3.5 The review of departmental investment below show that over the period, the total investment in road safety was increased, from approximately P 8 million in the year 2009 to around P 19 million in 2014. The assessment of investment by

Table 28 : Annual Road Safety Investment By Deparments

	Amount In Pula (BWP)						
Organisation	2009	2010	2011	2012	2013	2014	Total
MVA Fund	7 098 991	13 161 000	13 214 195	15 130 498	14 689 495	16 288 899	79 583 078
Botswana Police	347 00	410 000	19 540 000	770 000	1 041 810	1 155 477	23 264 287
DRTS	1 375 000	1 480 769	1 750 000	1 925 000	1 340 000	1 410 000	9 280 000
Total	8 820 991	15 051 769	34 504 195	17 825 498	17 071 305	18 854 376	112 128 134

Source : Annual Budgets (MVA Fund, DRTS, Botswana Police)

Figure 23 : Road Safety Funding 2009 - 2014



Source : Annual Budgets (MVA Fund, DRTS, Botswana Police)

Table 29 : Road Safety Collaborations

Road Safety Stakeholders	Road Safety Partners
Department Of Road Transport & Safety	Emergency Medical Service Provider (MRI, Netcare 911 & Emergency Assist)
Motor Vehicl Accident Fund	Botswana Red Cross Society
Botswana Police Service	Men's Sector
Ministry Of Health	Shell Oil Botswana
Ministry Of Education	Kgalagadi Breweries
Department Of Roads	BoMAID
Roads Department	Road Safety Youth Clubs
Ministry Of Education	Bouswana United States Of America / Centre Of Disease Control
	Community Projects
	UB Trauma Group
	Botswana National Youth Centre
	Botswana Bus Operators Association
	Botswana Track Association
	Botswana Alcohol Industry Association
	District Road Safety Committees
	Schools
	Community Leaders
	Botswana Railways
	Insurance Companies

department shows that the MVA Fund was contributing more than 80.0% of the annual national investment during the period, except in 2011 when it contributed around 38.0% of the total investment. The total investment in road safety between 2009 and 2012 was P112 million and MVA Fund invested around P79 million. Botswana Police Service invested P23 million during the period while Department of Road Transport and Safety invested around P9 million.

8.4 Road User Behavior

8.4.1 The Safe Road Users pillar is aimed at improving road user behaviour. The objective is to increase road user's knowledge, skills, attitudes and behaviours to be responsible in the traffic environment. The proposed performance indicators under this pillar are the level of awareness in road safety, reduction in road traffic crashes and the level of implementation of road safety campaigns plan.

8.4.2 To assess the impact of road safety initiatives under this pillar the Committee evaluated the implementation of all planned initiatives under this pillar. The second stage of impact assessment was the assessment of actual outcomes of the initiatives which are the awareness level of road safety, the rate of violations of road traffic laws and the recorded road crashes annually. To determine the outcomes Annual Reports on recorded violations and the level of road safety awareness will be used.

Table 30 : Total Number Of Registered Vehicles By DRTS Offices

Station	2009	2010	2011	2012	2013	2014
Public Holidays Road Safety Campaigns	Done	Done	Done	Done	Done	Done
Road Safety Mini Campaigns	Done	Done	Done	Done	Done	Done
Drive to Live	Done	Done	Done	Done	Done	Done
Tripartite agreement on Road Safety	Done	Done	Done	Done	Done	Done
Road safety research initiatives	Done	Done	Done	Done	Done	Done
Road safety youth clubs	Done	Done	Done	Done	Done	Done
Road Safety Strategy (MVAF)	Done	Done	Done	Done	Done	Done
Community Road Safety Schemes Funding	Done	Done	Done	Done	Done	Done
District Road Safety Committees Funding	Done	Done	Done	Done	Done	Done
National Road Safety Conference	Done	Done	Done	Done	Done	Done
Road Safety Awareness Audit	Done	Done	Done	Done	Done	Done
Public Education & Relations	Done	Done	Done	Done	Done	Done
Back to school campaign	Done	Done	Done	Done	Done	Done
Safe scholar crossings	Done	Done	Done	Done	Done	Done
Youth Debate	Done	Done	Done	Done	Done	Done
Youth Convention	Done	Done	Done	Done	Done	Done
Youth Driver Education Program	Done	Done	Done	Done	Done	Done
Tertiary Institutions Outreach	Done	Done	Done	Done	Done	Done
People living with Disability campaign	Done	Done	Done	Done	Done	Done
Safe cycling awareness campaign	Done	Done	Done	Done	Done	Done
Religious Candle light Ceremony	Done	Done	Done	Done	Done	Done
Children traffic education	Done	Done	Done	Done	Done	Done
Sobriety and saturation patrols	Done	Done	Done	Done	Done	Done
Highway speed relay operations	Done	Done	Done	Done	Done	Done
Red Light violation operations	Done	Done	Done	Done	Done	Done
Media campaigns	Done	Done	Done	Done	Done	Done
Booze bus Operation	Done	Done	Done	Done	Done	Done
Permanent roadblocks and 24/7 shift highway patrols along A1 road	Done	Done	Done	Done	Done	Done
Safe city	Done	Done	Done	Done	Done	Done
60 days of action on Crime and Road safety	Done	Done	Done	Done	Done	Done

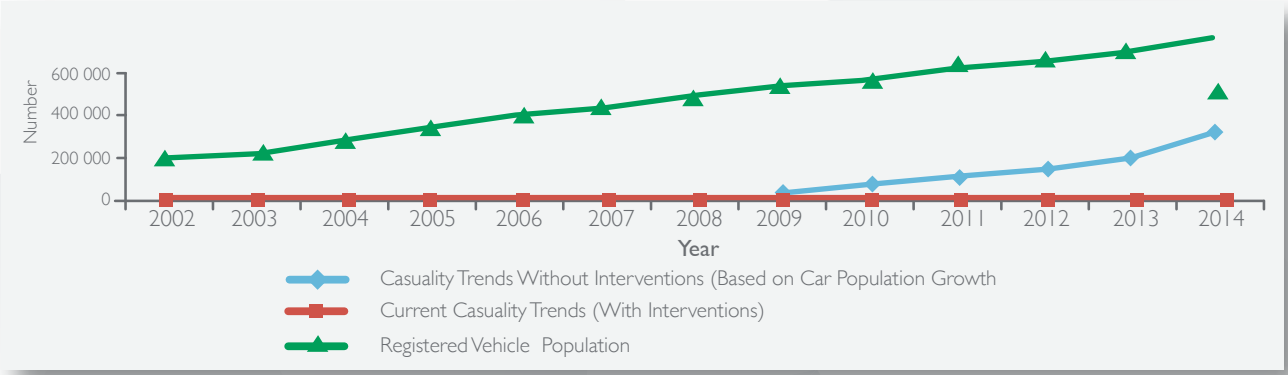
Table 31 : Annual Budgets & Year Plans (MVAF, DRTS & BPS)

Year	Crashes	Year On Year Growth In Crashes	Six Average Average Growth	Reg. Vehicles	Year On Year Growth Car In Population	Six Year Average Growth
2002	18610		1.74%	18 6865		9.91%
2003	18329	-1.51		20 4228	9.29	
2004	18136	-1.05		22 5182	10.26	
2005	17522	-3.39		24 6681	9.55	
2006	17035	-2.78		26 7117	8.28	
2007	19487	14.39		29 3755	9.97	
2008	20415	4.76		32 9270	12.09	
2009	20000	-2.03	(-3.34%)	35 9223	9.1	9.15%
2010	18978	-5.11		39 4401	9.79	
2011	18001	-5.15		43 0594	9.18	
2012	17527	-2.63		47 3530	9.97	
2013	17062	-2.65		51 5270	8.81	
2014	16641	-2.47		55 6737	8.05	

Source : 2013 Annual Road Crash & Claims Report, Botswana Police Reports

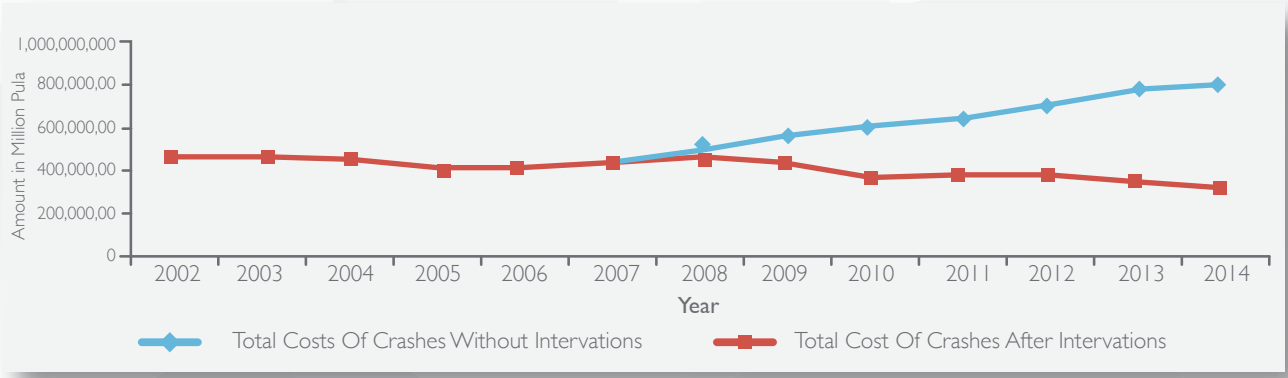
8.4.3 The assessment show that during the period a large amount of road safety funding went under this pillar compared to the other pillars. The analysis also shows that most planned projects under this pillar were implemented as planned. The assessment indicates that most of the initiatives under this pillar were aimed at increasing the level of awareness in road safety among all road users and the expected outcomes therefore is high awareness level in road safety.

Figure 24 : Analysis Of Vehicle Crash Trends Before & After Interventions



Source : 2013 Annual Road Crash & Claims Report, Botswana Police Reports

Figure 25 : Annual Trends 2002 - 2014 (Fatalities / 10 000 Vehicles & Fatalities / 100 000 Populations)

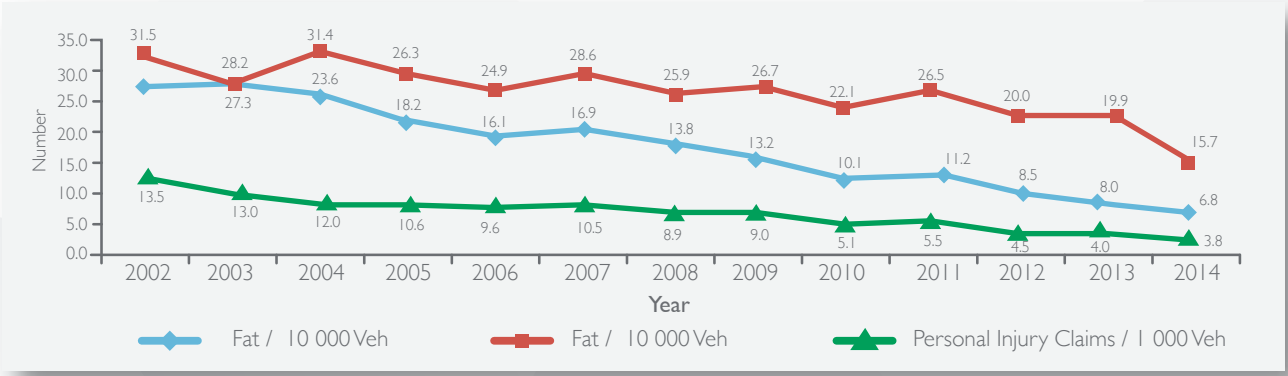


Source : 2013 Annual Road Crash & Claims Report, Botswana Police Reports

8.4.4 The above analysis shows that average growth of recorded crashes was high between 2002 and 2008 compared to 2009 and 2014. The previous period average growth rate was 1.74% while between 2009 and 2014 crashes decreased by 3.34%. The analysis of growth in vehicle population for the same period shows that average growth for the two periods (years 2002 - 2008 and years 2009-2014) was 9.91% and 9.15% respectively. The growth in Vehicle population was almost constant for the two sets of years.

8.4.5 The review shows that total recorded crashes moved in the same direction with total registered vehicles assuming that proportional growth in vehicle population will result in the same growth in registered vehicle crashes. The trend indicates that due to current road safety interventions and increase in road safety investment, the trend is moving in the opposite direction and a significant improvement is noticed between 2009 and 2014.

Figure 26: Annual Trends 2002 – 2014 (Fatalities/ 10 000 Vehicles and Fatalities/ 100 000 populations)

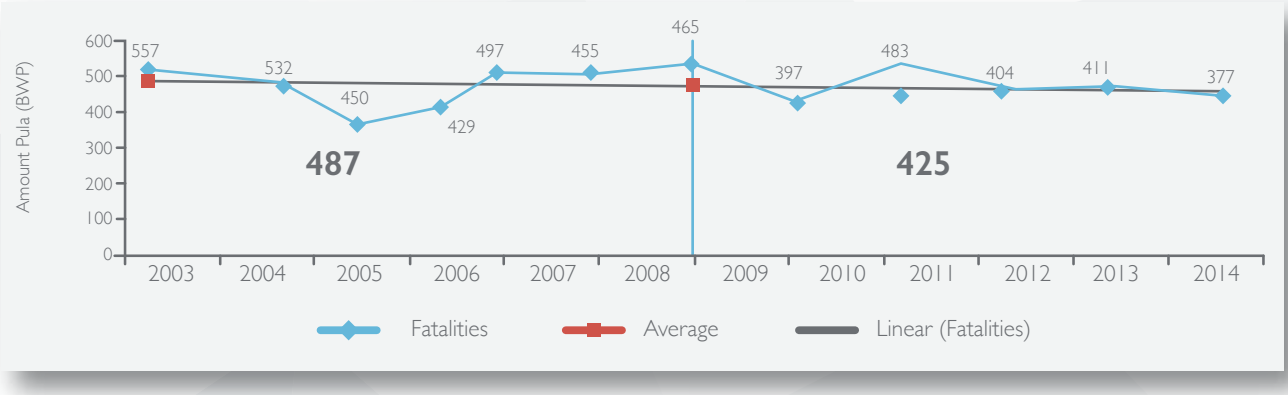


Source : 2013 Annual Road Crash & Claims Report, Botswana Police Reports

8.4.6 The financial review shows that the implemented initiatives made significant savings to the economy. The assessment indicates that when using casualty rate of P56 273.00 based on the average personal injury claims costs from the 2014 MVA Fund data, the financial cost of vehicles crashes if there was no intervention will have risen to P402 million, but due to the current investment and interventions the actual cost was P341 million saving around P61 million in 2014 only. However, a cumulative saving of P478 million was made based on the P56 273.00 cost per claim from MVA Fund database and assuming casualty growth rate of 18.0% derived from the vehicle population growth rate our the same period.

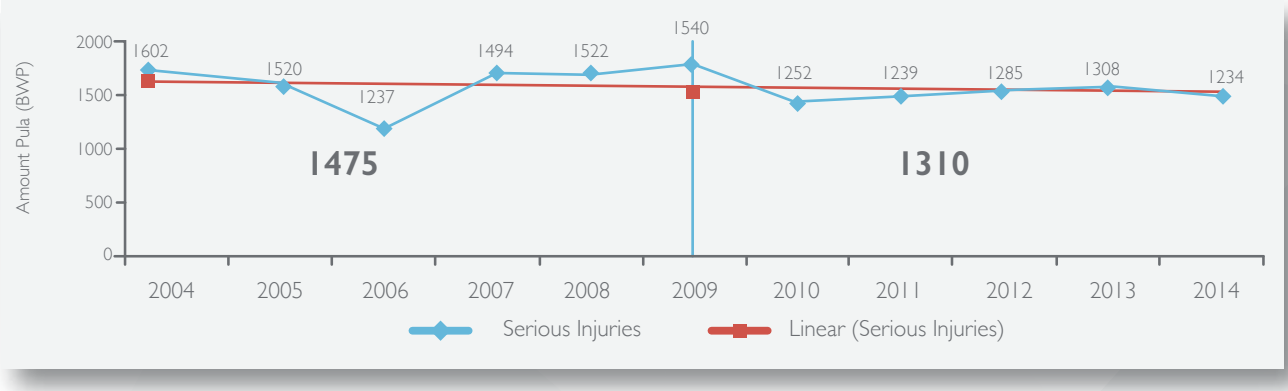
8.4.7 The assessment indicate that total recorded crashes, fatalities per 10 000 vehicles, fatalities per 100 000 populations and Personal Injury Claims/1000 vehicles went down faster between 2009 and 2014 compared to 2002 and 2008. The declines were against constant growth in vehicle population. Without changes in factors causing car crashes the level of growth in vehicle population should have resulted in proportional growth in recorded car crashes, fatalities per 10 000 vehicles and fatalities per 100 000 populations. The trend therefore indicates that initiatives and interventions implemented during the

Figure 27 : Fatality Trends 2003 - 2014



Source : 2013 Annual Road Crash & Claims Report, Botswana Police Reports

Figure 28 : Serious Injuries Trends 2004 - 2014



Source : 2013 Annual Road Crash & Claims Report, Botswana Police Reports

period had an impact in reducing the number of crashes compared to the previous period.

8.4.8 The personal Injury Claims/1000 vehicles trend shows that between 2008 and 2014, the performance indicator dropped significantly compared to 2002 and 2007. This is an important performance indicator to the MVA Fund sustainability because growth in vehicle population and the reduction in personal injury claims/1000 vehicles indicates growth in fuel levy income and reduction in claims pay-out per/1000 vehicles. Assuming a cost of P1 million per claim, the Fund would have paid around P4 million for the 3.8 claims in 1000 vehicles compared to P14 million for 13.5 claims per 1000 vehicles.

8.4.9 The assessment of annual recorded fatalities and serious injuries shows a decreasing trend between 2003 and 2014. The decrease in both fatalities and serious injuries is faster between 2009 and 2014 when compared to the previous period. The average annual recorded fatalities for the period 2003 – 2008 was 487 representing 62 more fatalities than the period

Table 32 : Causes Of Road Crashes 2009 - 2014

Assessment Area	Botswana Road Safety Campaign Survey Report (Tsela Consulting 2009)	Road User Behaviour Survey Report (MVAF 2013)
Knowledge	(%) Agree	(%) Agree
Drivers are required by Law to wear seatbelt	90.2%	99.8%
Front seat passengers are required by law to wear seatbelt	90.2%	99.5%
Back seat passengers are required by law to wear seatbelt	-	-
Perceptions (Attitudes)		% Agree
All passengers in the vehicle should be required by law to wear their seatbelts	-	92.9%
Seatbelts are necessary even if you are driving in the light traffic	-	87.7%
If I were in an accident, I would want to have my seatbelt on	-	92.7%
Practise		Rate Of Use (%)

Source: Botswana Police Annual Report, 2013 Annual Road Crash & Claims Report

2009 - 2014 at 425. For annual recorded serious injuries the average for the period 2004 - 2008 was 1475 compared to 1310 for the period 2009 - 2014. These general movements therefore suggest that initiatives and programs implemented during the period 2009 - 2014 had more impact when compared to the previous period.

8.4.10 The assessment recognizes that these changes have significant impact to the economy both at household and national level. Generally car crashes affect family bread winners who are still economically active; therefore saving of their lives benefits both their families and overall economy. The impact of the initiatives for the period 2009 - 2014 was high given the number of lives saved and lower level of serious injuries sustained compared to the previous period.

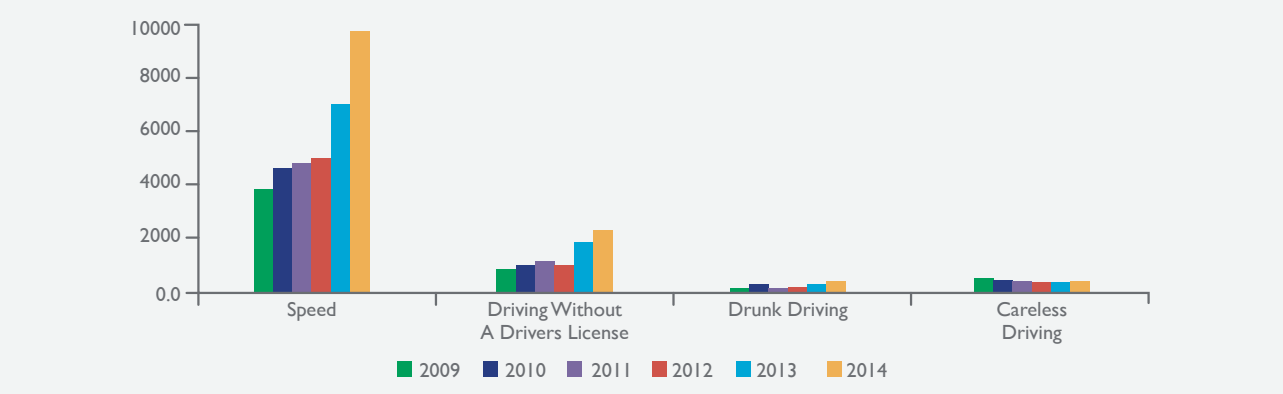
Table 33 : Level Of Acceptance Of Road Safety Laws

	2009	2013
	% Agree	% Agree
More Intense Enforcement For Traffic Violations	78.2%	
Traffic Police Should Regularly Stop Vehicles & Test Drivers alcohol Level		81.2%

Source: Botswana Police Annual Report, 2013 Annual Road Crash & Claims Report

8.4.11 The assessment of Road Safety Awareness shows that the levels of Knowledge and Perceptions (Attitudes) about road safety are very high but the actual application is slightly low when compared to the level of knowledge and perceptions. The survey conducted during the period show that there was growth in the level of knowledge, perception and practice in road safety. The knowledge of seatbelt law went up to 99.8% in 2013 from 90.2% in 2009. The proportion of drivers who

Figure 29 : Causes Of Road Crashes

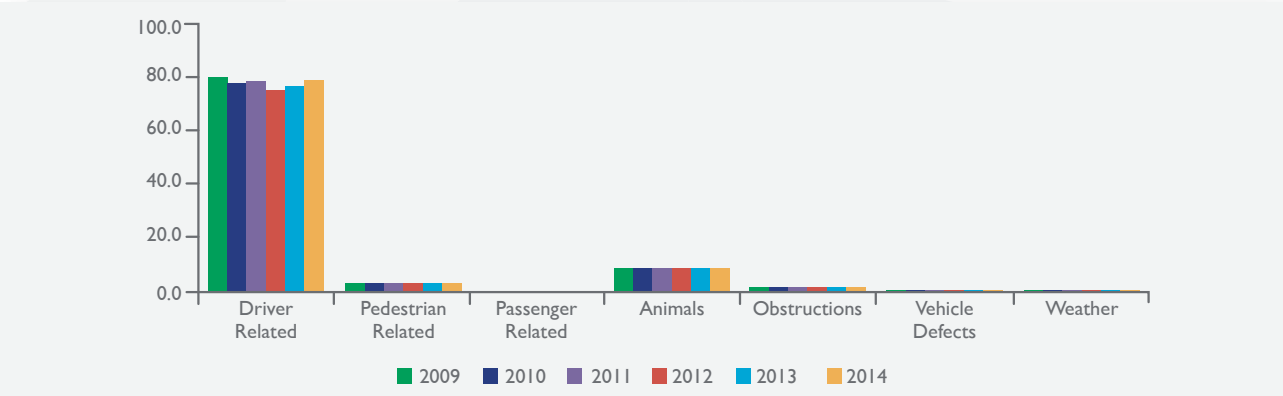


Source : Botswana Police Annual Report

reported that they break the speed limit went down between 2009 and 2013, in 2009 the rate was at 43.9% and currently it is at 21.4%. This therefore means that initiatives aimed at changing the knowledge and actual practice of road users on over speeding had a positive impact.

8.4.12 The level of acceptance of road safety law has gone up from 78.2% to 81.2%. In 2009, 78.2% of road users interviewed agreed that more intense enforcement for traffic violations must be carried out. Whereas in 2013, 81.2% agreed that traffic police should regularly stop vehicles and test driver's alcohol levels. The change indicates positive attitude in road users and this can be attributable to road safety education conducted during the period.

Figure 30 : Causes Of Road Crashes



Source : Botswana Police Annual Report, 2013 Annual Road Crash & Claims Report

8.4.13 According to the trends, traffic offences increased between the years 2009 and 2014. The increase in the recorded offences was attributed to the increase in the level of police enforcement. During these years, police enforcement was enhanced by initiatives such as Sobriety and Saturation Patrols, Introduction of Booze Buses, Highway Speed Patrol Cars among others. Enforcement is a critical factor that breeds positive behavior change in the long term.

8.4.14 The findings reveal that more than 80.0% of road crashes are human error related and mainly they are driver related. Most causes of crashes are related to driver error, and the top three causes of crashes among drivers are following too close from behind, Reversing Negligently and Losing Control of the vehicle accounting to 11.8%, 9.7% and 8.0% respectively. Among pedestrian the main causes of car crashes are crossing the road without due care and under the influence of drinks or drugs.

8.4.15 The second main causes of crashes are animals on the road and under this category the main causes are cattle on the road, other animals on the road and dog on the road. The list causes of car crashes according to the review are weather related causes, vehicle defects and obstructions on the road.

8.5 Safer Roads and Mobility

The pillar of Safer Roads and Mobility focuses on improving the link between land use and transport planning. To assess the impact of road safety initiatives on this pillar, road safety audit reports and traffic safety engineering were assessed to identify safety components of the road design to determine their impact on road safety.

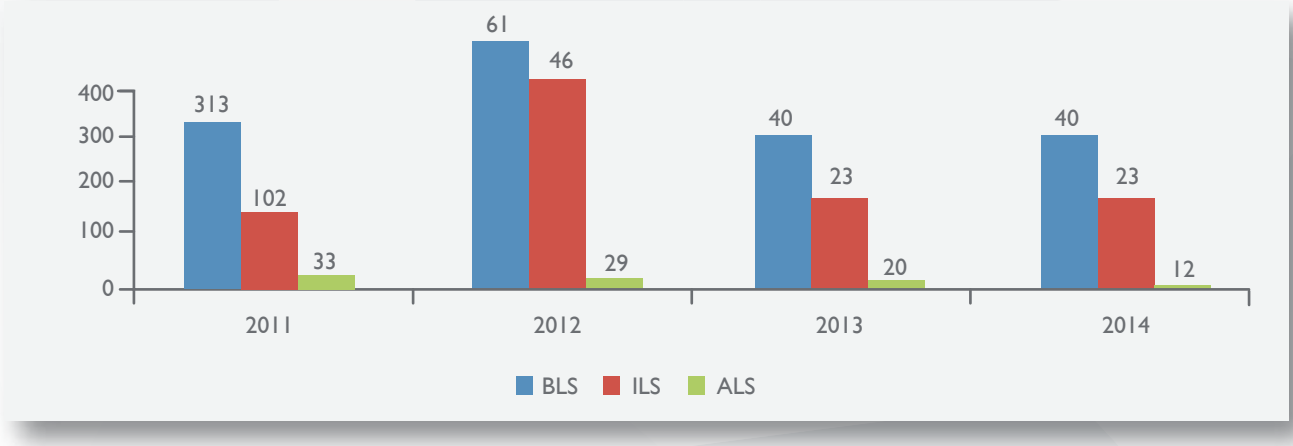
8.6 Safe Vehicles

On Safer Vehicles the team looked at the current laws relating to Safe Vehicle requirements and assessed performance against these laws. The number of vehicles tested for road worthiness Public and Private Vehicles were assessed together with the impact of initiatives that encouraged safer vehicles.

8.7 Post-Crash Care

8.7.1 On this pillar, an assessment of all initiatives aimed at increasing responsiveness to post crash emergencies was made. The level of impact will be determined by the total number of road safety victims evacuated within the golden hour by the level

Figure 31 : Number Of Crash Victims Evacuated By Level Of Support

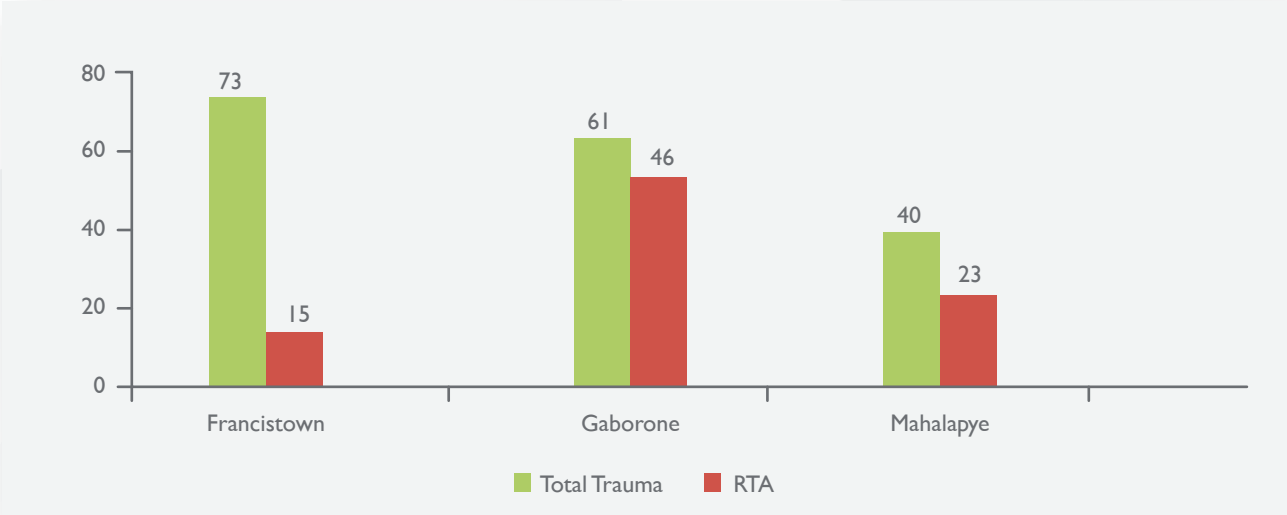


Source : 2013 Annual Road Crash & Claims Report, MVA Fund Annual Report

of support given. The assessment shows that during the reviewed period private emergency medical service providers were engaged to increase responsiveness to post crash emergencies and to improve crash scenes management. The Motor Vehicle Accident Fund donated ambulances to some government hospitals to capacitate them in pre-hospital trauma management. Other initiatives which were implemented during the period were training of Botswana Police Traffic offices and Ministry of Health Workers on Basic Life Support (BLS) Intermediate Life Support (ILS) and Advanced life Support (ALS). First aid documentaries were aired on Botswana Television to educate the public on crash scenes management.

8.7.2 Early medical intervention is the key to ensuring positive outcomes. It promotes early recovery and hence functional

Figure 32 : Trauma Patients (Inclusive RTA) & RTA Patients For Government EMS



Source : 2013 Annual Road Crash & Claims Report, MVA Fund Annual Report

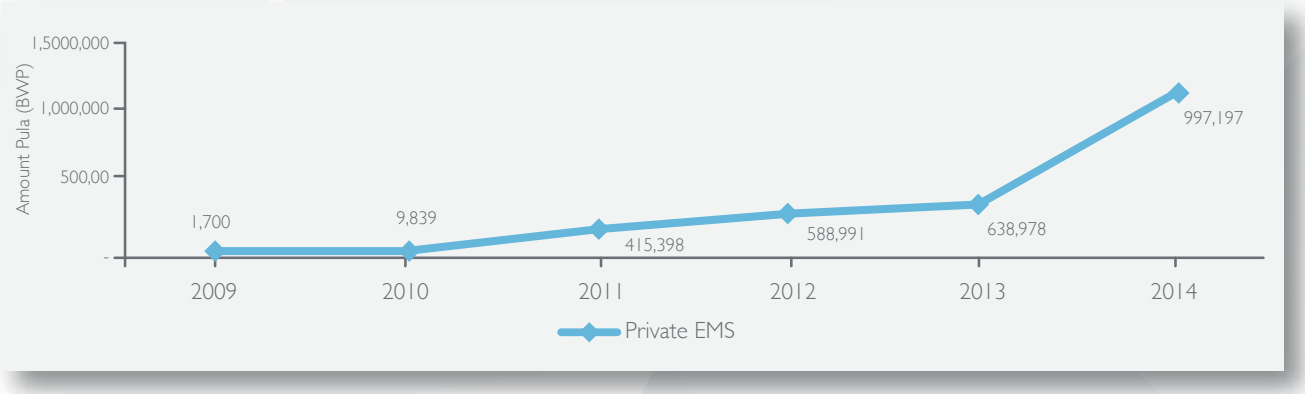
independence. The total number of people picked by both private and government hospitals ambulances indicates that more patients receive better care between accident scene and health facilities which significantly enhance their medical and rehabilitation outcomes. It has been established that the patients' chances of survival are greatest if they receive care within a short period of time after a severe injury. Triaging of patients by the evacuating officers ensures that the patient's injuries are categorized according to their severity and presenting conditions hence easier to determine the appropriate level of care to be administered.

Table 34 : Financial Impact Of Capacitating Government EMS (BWP)

Total Investment on 5 Ambulances	Total Number Of People Picked Per Annum	Average Unit Cost Per Person	Total Cost in 5 Years
P2 500 000.00	1008	1737	P8 754 480.00

Source : 2013 Annual Road Crash & Claims Report, MVA Fund Annual Report

Figure 34 : Cost Of Private EMS 2009 - 2014



Source : 2013 Annual Road Crash & Claims Report, MVA Fund Annual Report

8.7.3 Capacitating Government facilities with proper emergency medical facilities does not only enhance the quality of life for claimants, it increases the areas coverage of emergency assistance and also saves costs for both Government and the MVA Fund. The assessment strongly suggests that more investment must be done to capacitate Government facilities to achieve both the financial impact and increase service area for EMS coverage in the country. Currently both Government Ambulances and private EMS are mainly concentrated in cities and towns and along major highway exposing road crash victims to greater risk on other road networks.

8.7.4 The financial assessment of private and Government EMS above show that investing or capacitating Government EMS has long-term financial benefits especially to the MVA Fund. The assessment shows that the MVA Fund invested P2.5 million in five ambulances for Government hospitals. The review indicate that on average Government EMS pick around 1008 car crash victims per annum. When using the same rate charged by private EMS on claimants evacuated by Government EMS the total cost of evacuation would be P 8.7 million during the five year period (2009 – 2014). Therefore the P 2.5 million which was invested in procuring the five ambulances has resulted in a saving P6.2 million during the same period.

8.8 RECOMMENDATIONS

8.8.1 Legislation and Enforcement

- Road safety related legislation must be reviewed to be more punitive. This is based on the fact that the level of road safety awareness is very high compared to the actual practice. The review of the legislation will assist in improving road safety. Countries with good road safety records like Australia, New Zealand and Sweden have stringent road safety laws.
- Road Traffic Act enforcement must be enhanced. Consistent level of enforcement will change behaviour faster than education. If road users know that the level of detection for breaking road safety laws is high, the level of compliance with the law will also be very high and this will result in improved road safety performance.
- Concerted effort must be made by key stakeholders to cultivate political will because road safety is a global problem requiring immense support from the political leadership. This will help improve outreach, strengthen legislation, devote more resources in road safety management and create broader appeal to the community.

8.8.2 Road Safety Education and Awareness

- The intensity of public awareness on road safety must be increased through different forms of education. Road Safety education must be intensified targeting the most affected and vulnerable groups like children and youth.
- Community involvement in road safety must be increased. Mobilising community in road safety management will be very effective because communities know their road safety needs and they can assist in coming up with appropriate solutions to those problems.
- Road Safety Stakeholders must provide sufficient budget or investment in road safety. The provision of sufficient budget will assist to fund important and appropriate road safety initiatives.
- Concentration of road safety initiatives should be in high density population and vehicle areas. This will ensure optimization of resources.

8.8.3 Infrastructure Improvement

- Road Design; Engineering and Road Environment must have a strong component of safety. All roads must have basic safety features like walkways, separation of directional traffic and more forgiving road designs. This was based on the road safety Audit Report conducted in 2014, which revealed that some road design, signs and road environment exposes road users to higher risks of crashes.
- The road safety institutional framework must be reviewed to ensure that adequate capacity is dedicated to road safety especially road safety management.

8.8.4 Research and Development

- It is recommended that stakeholders in road safety must build capacity in road safety research to guide future road safety initiatives. The development of research in the road safety field will enable evidence based planning in road safety management hence maximize the return on investment. Most countries which are successful in road safety management have a strong research capacity in road safety to inform decision making and future interventions (e.g. Australia and Sweden).
- In future all road safety initiatives must be evaluated on continuous bases to establish their impact.

SECTION 9:
CONCLUSION

The 2014 Crash and Claims Report has indicated that total annual recorded crashes have been declining between 2000 and 2014. Total number of recorded crashes in 2014 was 16641, which is a notable decrease when compared to the 17062 crashes in 2013. Of the aforementioned crashes statistics, 288 of them were fatal crashes, with 377 fatalities. Fatality rate in 2014 decreased by 8.2 compared to the year 2013, as fatalities decreased from 411 to 377.

In terms of police districts with the highest number of crashes, for the past nine years those have been recorded in Gaborone West, Gaborone and Maun Districts.

The report shows that high concentrations of fatal crashes are along the major corridors of A1, A12, A10, A2 and A3 and mainly in and around major cities and towns (Gaborone, Francistown and Serowe/Palapye areas). Statistics also show that road crashes affect mainly the youth with age range of 20-54 years, in 2014 they account for 74.3% of people killed in road crashes during the year while between 2006 and 2014 they accounted for 71.5%.

Total Claims lodged with MVA Fund increased between 2013 and 2014. The results depicted that majority of people involved in road crashes are men. The Fund will continue to come up with interventions that are specific to road user groups and industry specific to reduce road crashes.

In an effort to reduce death and injury on the road, MVA Fund will continue to work closely with other stakeholders to address the problem. It is important that legislation and enforcement be intensified. Road safety education and awareness shall be continued to influence behavior change and infrastructure with more safety features must should be encouraged. Capacity building in road safety research and development must be done to inform evidence based road safety programs.

Annexure

Figure 1: Vehicle Registered By Stations - (2010 - 2014)

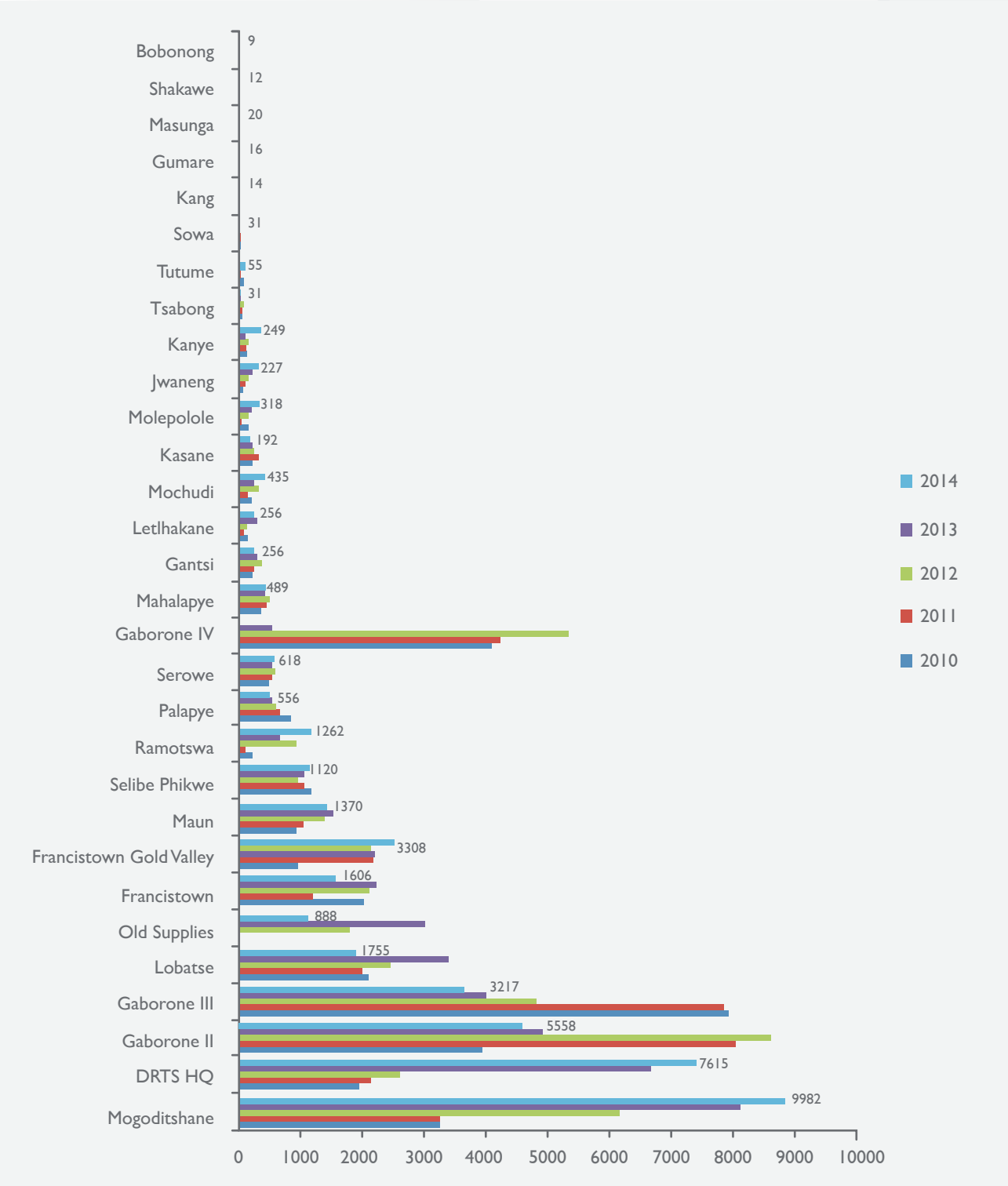


Table 1 : Total Number Of Registered Vehicles By DRTS Offices

Station	1995-2008	2009	2010	2011	2012	2013	2014	Total
DRTS HQ	67347	3522	1962	2144	2628	6666	7615	9188
Kanye	6880	178	148	125	168	112	249	7860
Palapye	6550	924	857	670	617	561	556	10735
Maun	11711	959	938	1058	1393	1544	1370	18973
Lobatse	17201	2765	2111	2001	2489	3404	1755	31726
Mahalapye	8058	506	384	441	513	453	489	10844
Tsabong	1409	63	63	63	74	43	31	1746
Kasane	1921	273	246	317	247	252	192	3448
Molepolole	2015	200	172	46	174	215	318	3140
Selebi Phikwe	16914	1228	1185	1060	977	1071	1120	23555
Letlhakane	19389	156	163	86	132	292	258	20476
Serowe	6949	389	484	541	597	546	618	10124
Ramotswa	3181	774	228	127	928	694	1262	7194
Mochudi	4868	334	218	155	330	252	435	6592
Francistown	37028	2913	2033	1220	2108	2238	1606	49146
Ghanzi	2422	205	248	257	376	307	256	4071
Gaborone II	76962	6613	3958	8052	8606	4922	5558	114671
Tutume	1543	216	85	33	29	29	55	1990
Kang	55	7	9	7	9	20	14	121
Bobonong	632	28	30	6	2	4	9	711
Sowa	77	90	48	31	18	21	31	316
Jwaneng	522	85	88	98	152	212	227	1384
Gumare	43	19	11	11	10	17	16	127
Gaborone III	30812	5128	7930	7838	4815	3987	3217	63727
Mogoditshane	18306	5845	3254	3217	6163	8137	9982	54904
Masunga	-	-	14	9	9	16	20	68
Shakawe	-	-	-	-	2	9	12	27
Gaborone IV	-	-	4119	4243	5351	544	-	14257
Francistown Gold Valley	-	-	963	2188	2218	2137	3308	10814
Old Supplies	-	-	-	-	1803	3035	888	5726
Total	**342795**	**33420**	**31949**	**36044**	**42938**	**41740**	**41467**	**570353**

Source : DRTS

Figure 2 : Claimants By Regions (1987 - 2014)

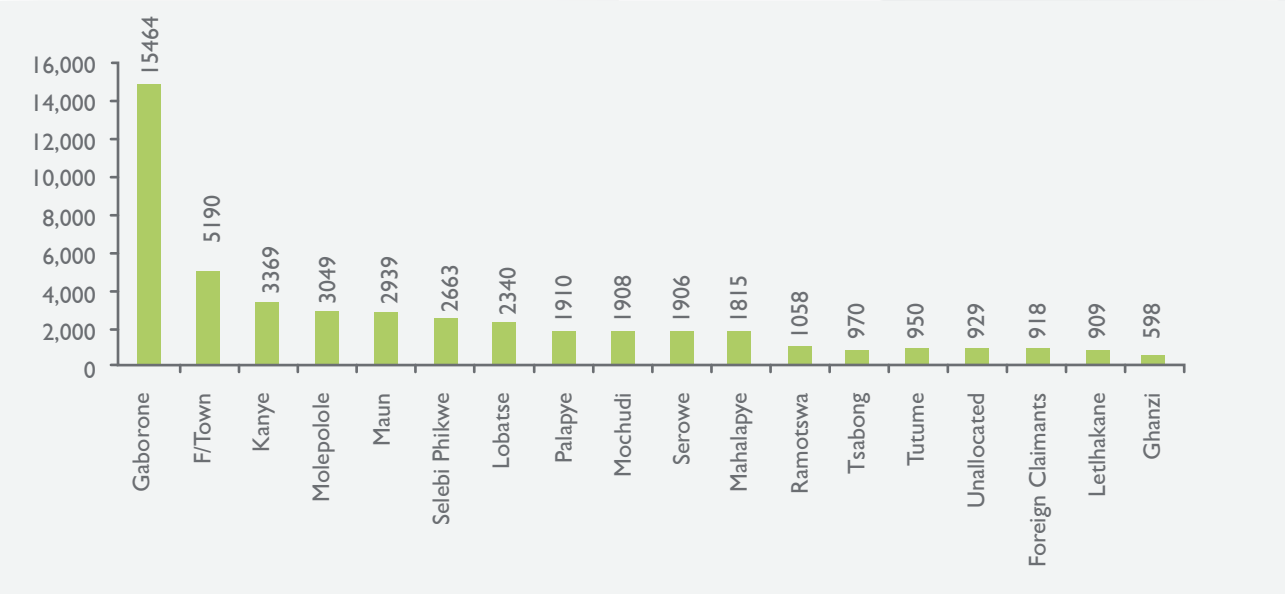
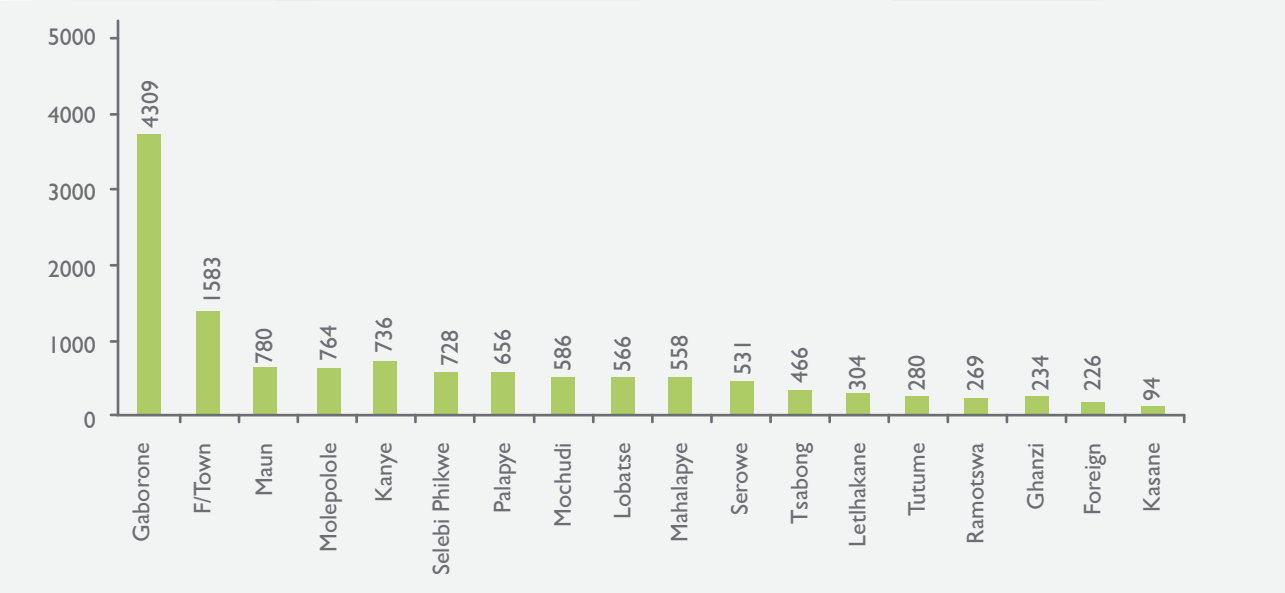


Figure 3 : Claimants By Regions (2009 - 2014)



Claimants by Villages

Figure 4 : Gaborone Region Claimants By Villages (1987 - 2014)

Figure 5 : Francistown Region Claimants By Villages (1987 - 2014)

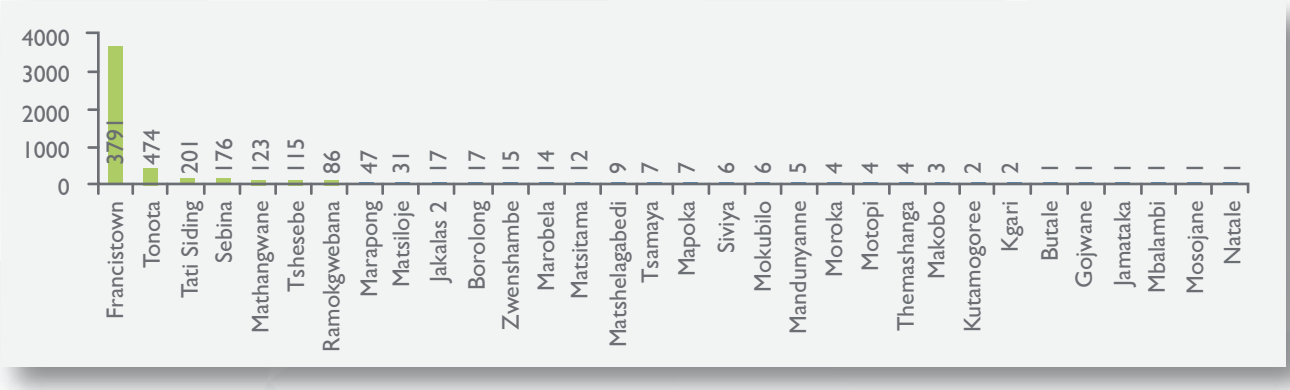


Figure 6 : Molepolole Region Claimants by Villages (1987 - 2014)

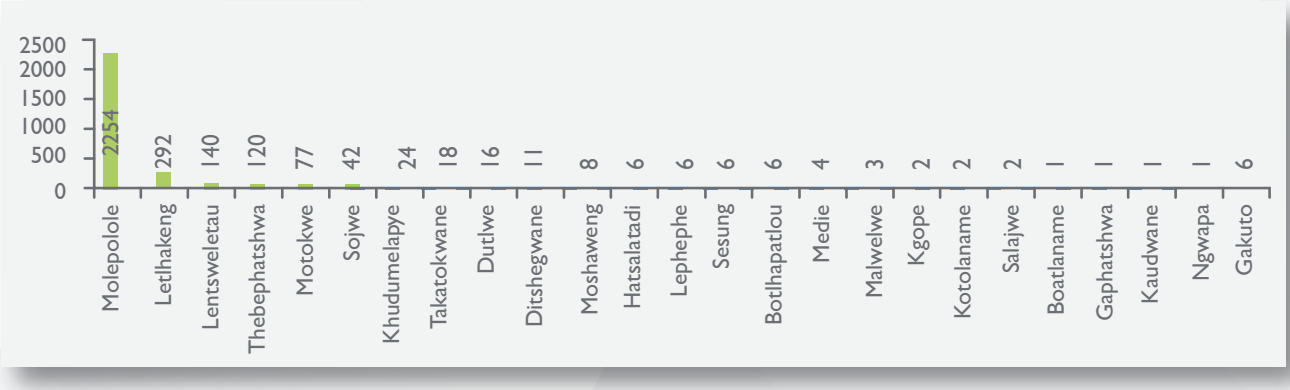


Figure 7 : Kanye Region Claimants By Villages (1987 - 2014)

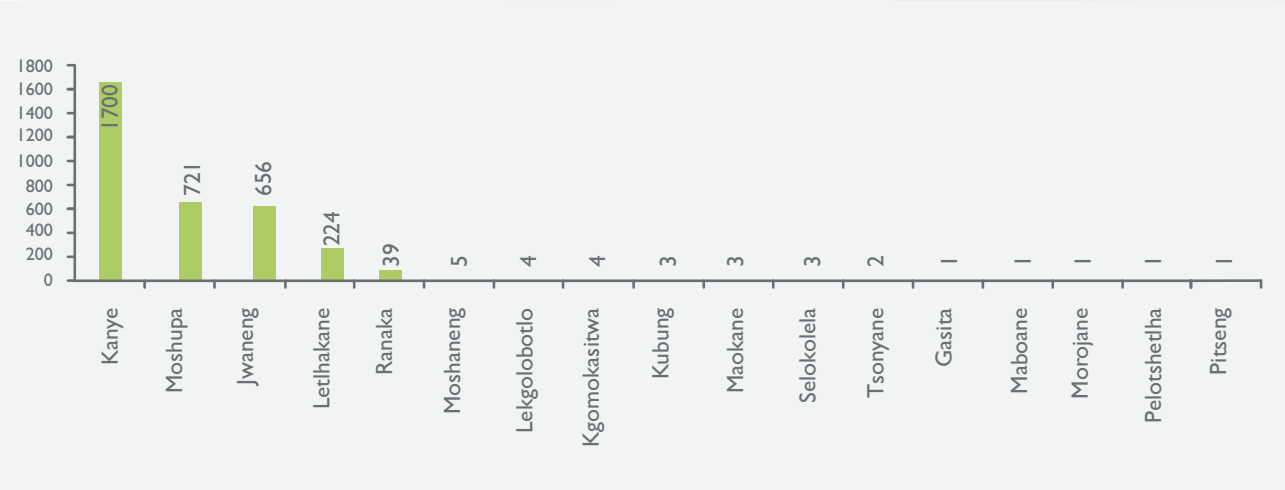


Figure 8 : Maun Region Claimants By Villages (1987 - 2014)

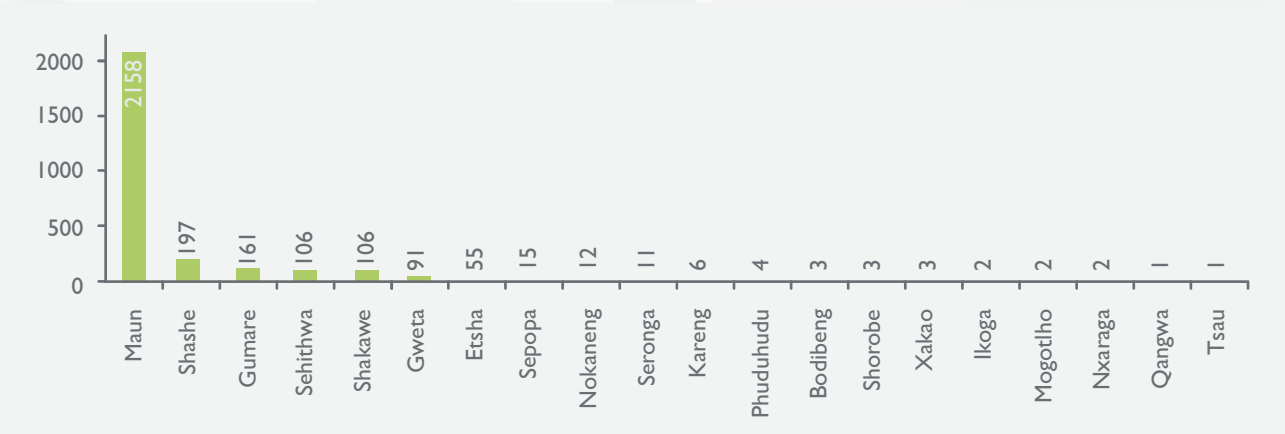


Figure 9 : Selebi Phikwe Region Claimants By Villages (1987 - 2014)

Figure 10 : Lobatse Region Claimants By Villages (1987 - 2014)

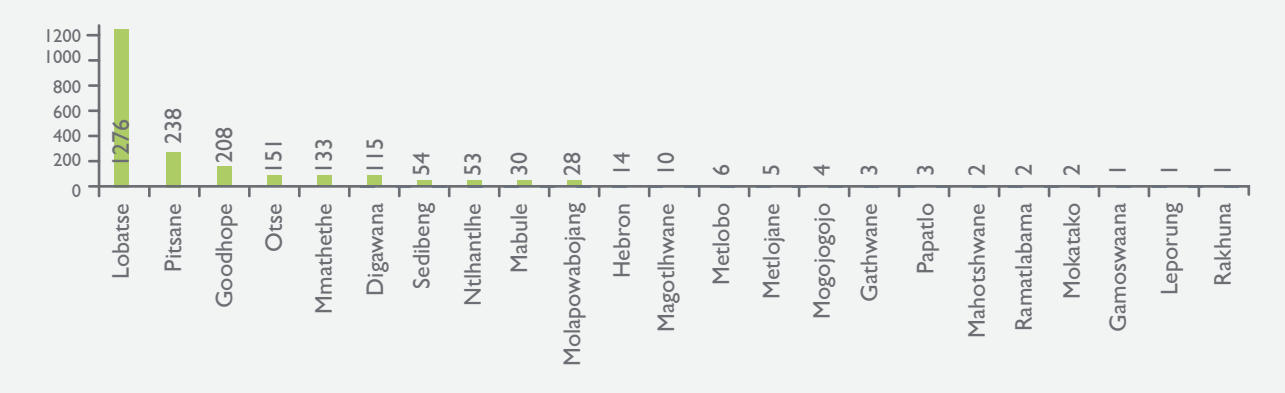


Figure 11 : Mochudi Region Claimants By Villages (1987 - 2014)

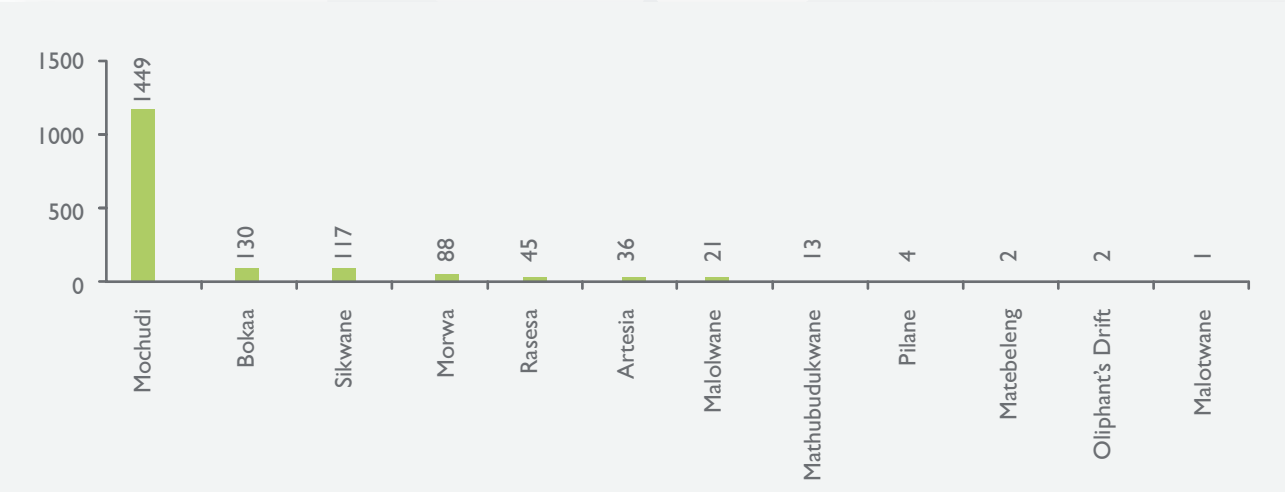


Figure 12 : Serowe Region Claimants By Villages (1987 - 2014)

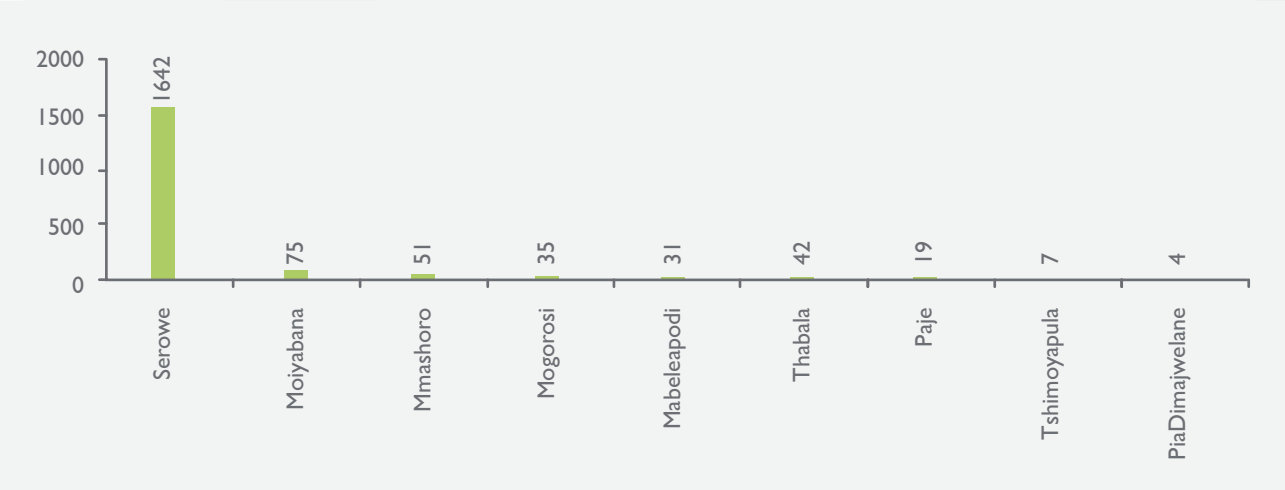


Figure 13 : Palapye Region Claimants by Villages (1987 - 2014)

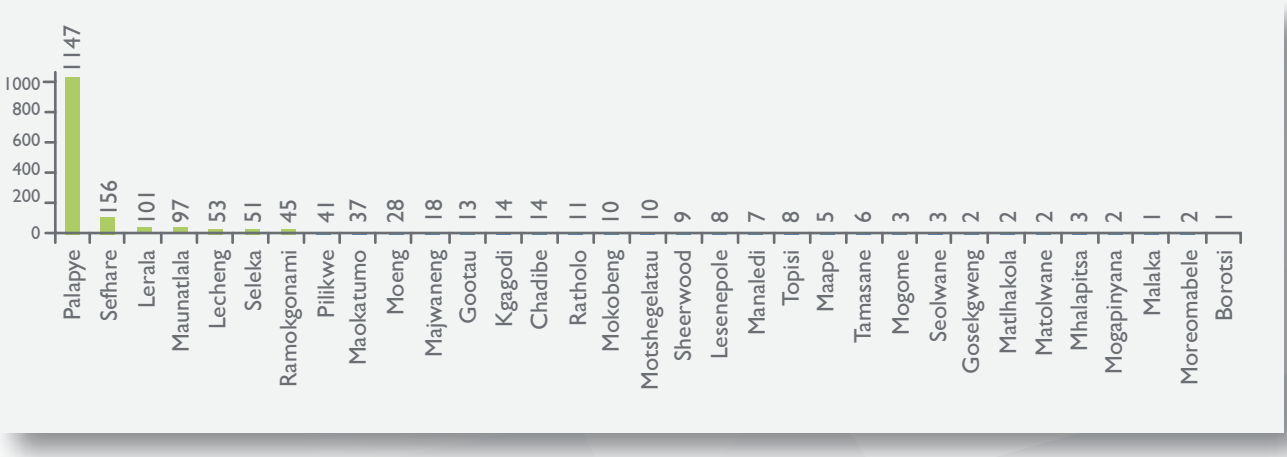


Figure 14 : Mahalapye Region Claimants By Villages (1987 - 2014)

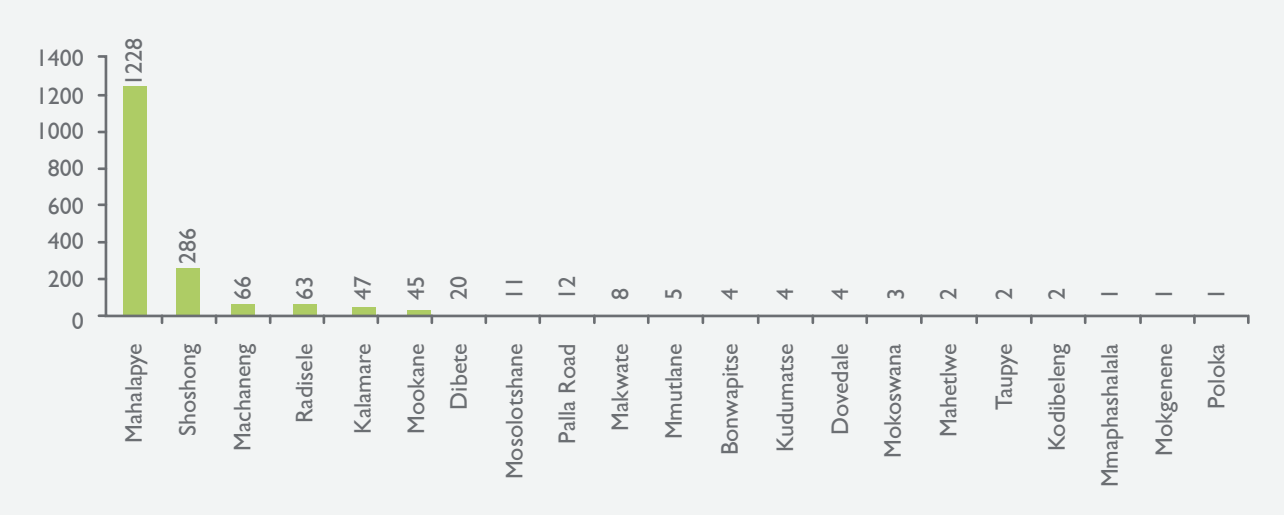


Figure 15 : Tutume Region Claimants by Villages (1987 - 2014)

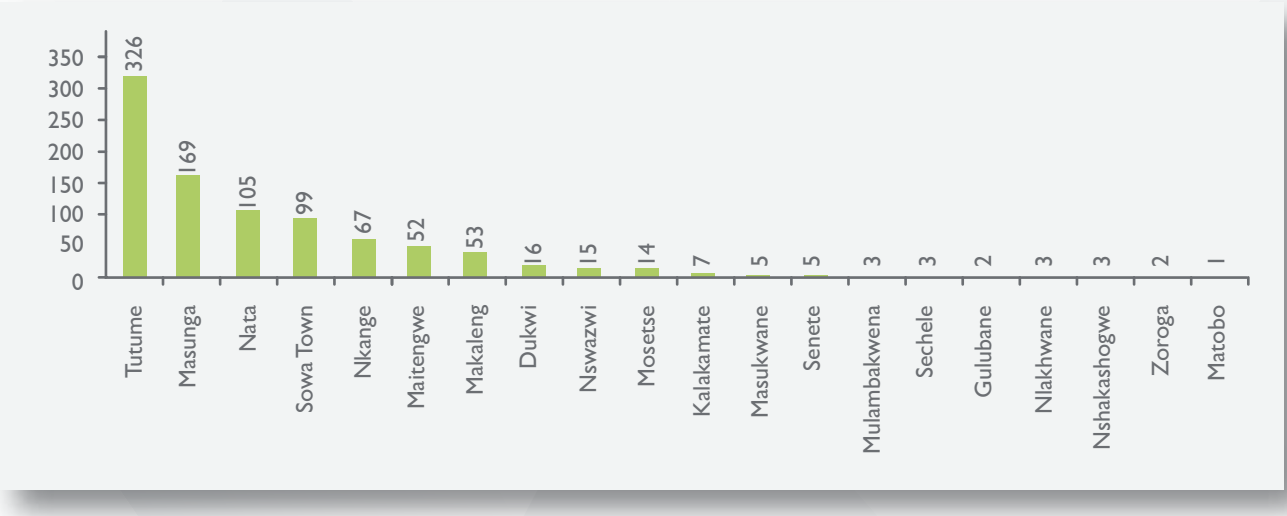


Figure 16 : Ramotswa Region Claimants by Villages (1987 - 2014)

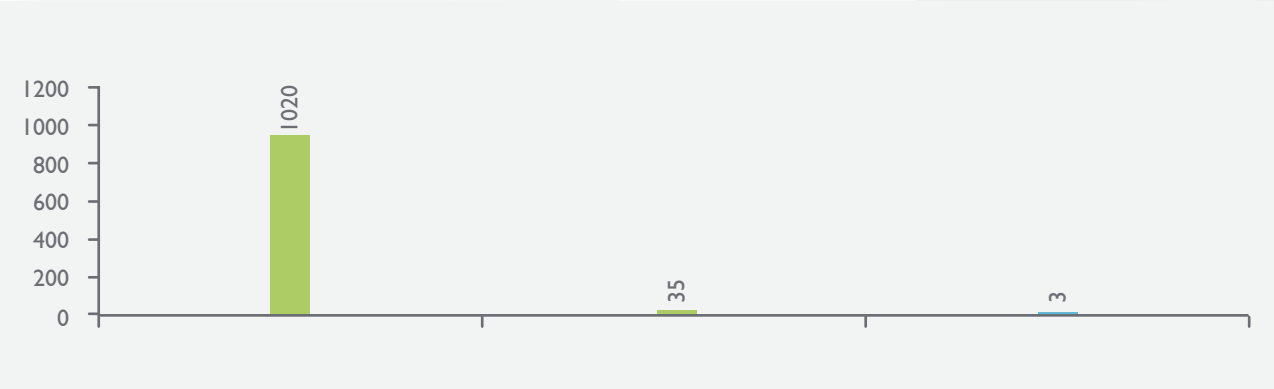


Figure 17 : Tsabong Region Claimants By Villages (1987 - 2014)

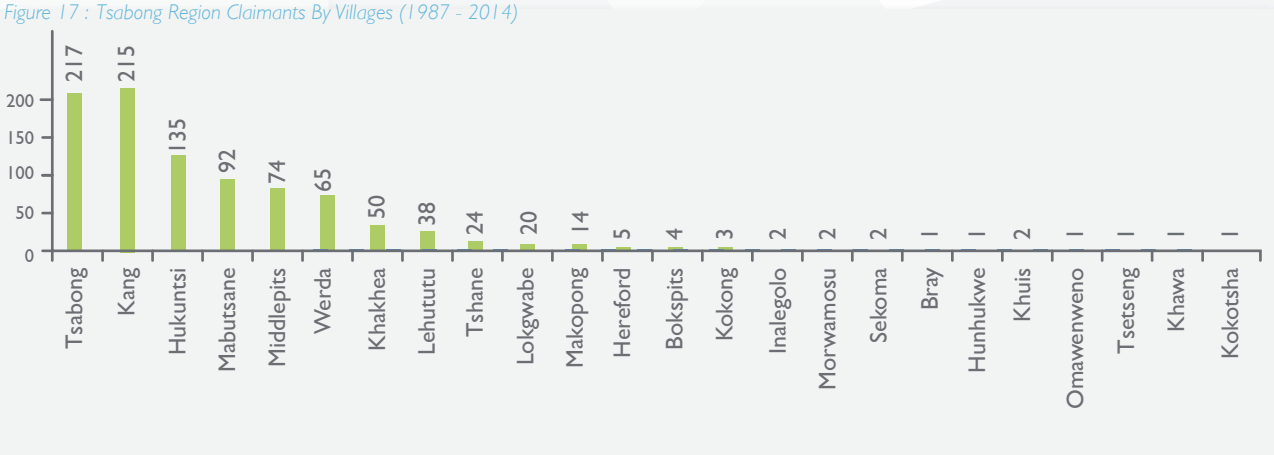


Figure 18 : Letlhakane Region Claimants By Villages (2009 - 2014)

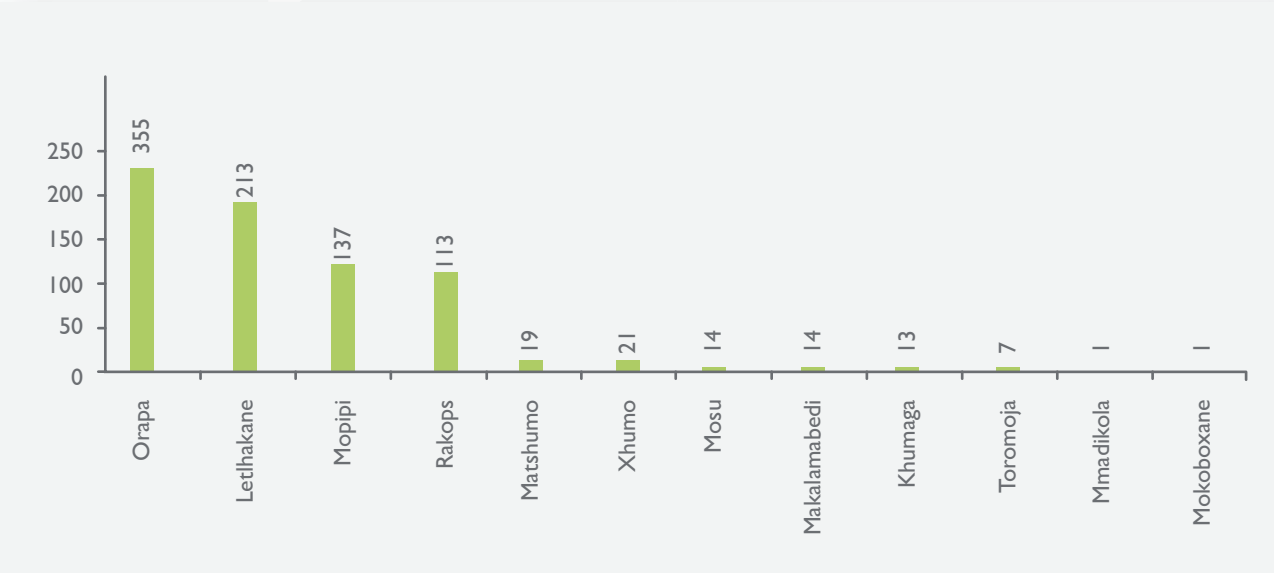


Figure 19 : Ghanzi Region Claimants By Villages (1987 - 2014)

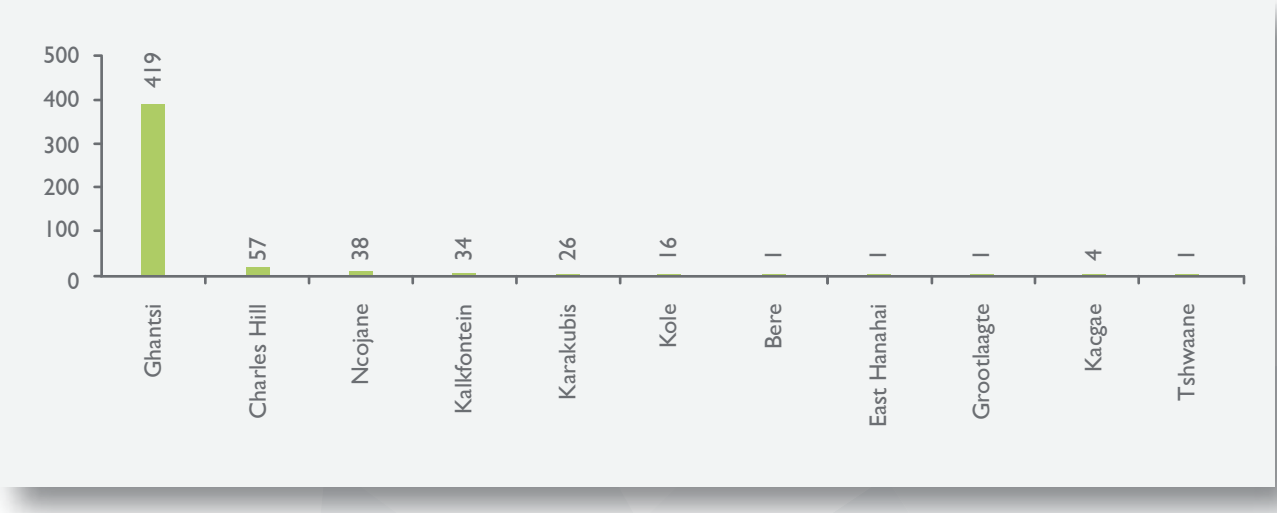


Figure 20 : Kasane Region Claimants By Villages (1987 - 2014)

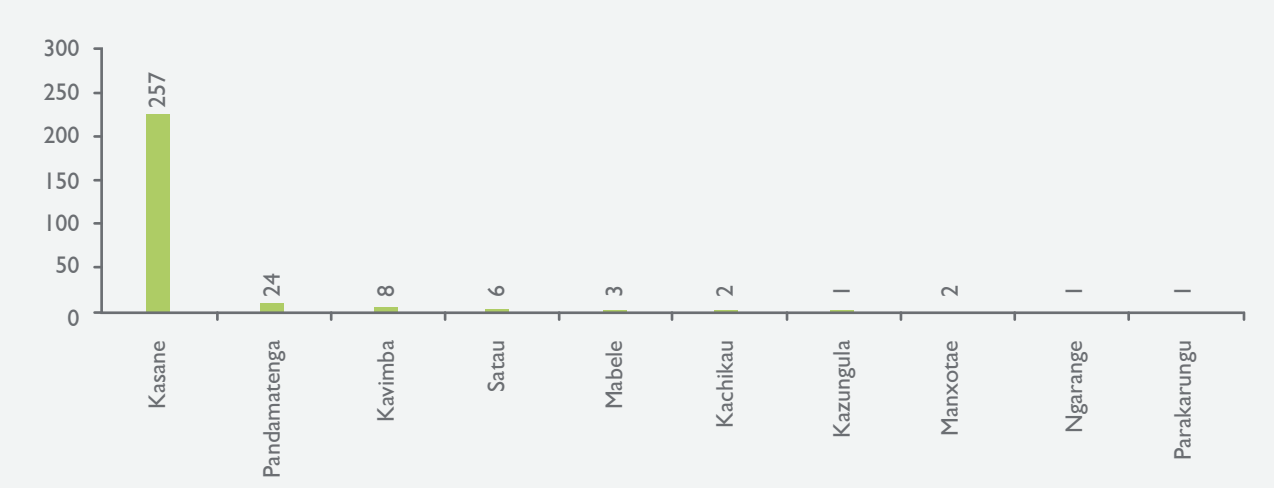


Figure 21 : Mahalapye Region Claimants By Villages (1987 - 2014)

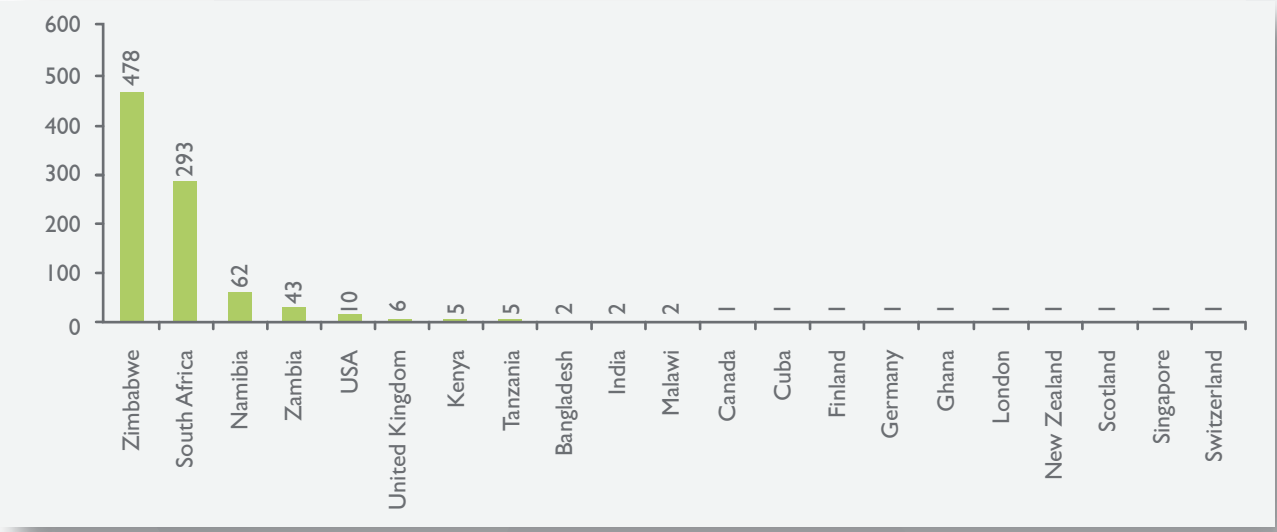
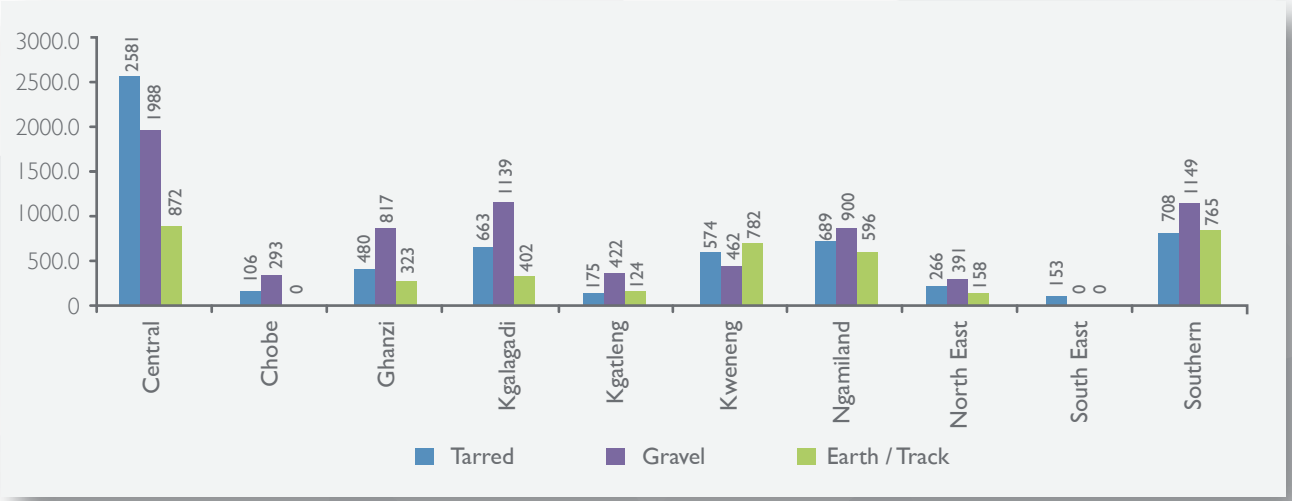


Table 3 : Possible Causes of Road Crashes

Cause of Crash	Causes of Car Crashes	2010	2011	2012	2013	2014
Drivers	Following to close from behind	1862	2281	2532	2591	2533
	Reversing negligently	1563	1363	1373	1398	1341
	Losing Control	1204	1382	1422	1457	1583
	Failing to comply with traffic sign or signal	710	631	703	658	715
	Unlicensed driver	590	569	553	524	550
	Influence of drinks or drugs	492	429	518	643	675
	Overtaking improperly	423	427	401	374	361
	Over speeding	384	269	268	208	99
	Turning without care	297	264	156	197	91
	U - turning	135	116	108	80	82
	Fatigued or asleep	83	59	67	58	54
	Swerving to the left/right carelessly	32	30	27	19	9
	Cyclist error	32	38	32	36	25
	Dazzled by oncoming traffic lights	21	8	13	11	2
	Overloading	19	8	10	13	8
	Physical defective	0	8	13	12	7
	Stopping suddenly	7	6	2	2	0
	Negligence of PSV driver	7	5	9	5	0
	Pulling off the road without care	6	2	2	1	1
	Negligently opening vehicle door	3	1	0	4	2
	Hampered by passenger, animal or luggage in the vehicle	2	2	1	0	2
	Other driver negligence	7056	6569	6053	5558	5690
Pedestrian	Crossing without care	327	291	209	202	188
	Under influence of drinks or drugs	49	53	60	65	70
	Walking or standing on the road	19	18	7	4	6
	Playing on the road	17	16	16	14	10
	Slipping or falling when crossing the road	3	1	1	4	1

	Sudden illness	2	4	0	0	-
	Holding on to a vehicle	1	2	1	0	1
	Sleeping on the road	0	1	1	2	0
	Other pedestrian negligence	104	98	88	5	37
Animals	Cattle on the road	1883	1694	1600	1537	1432
	Dog on the road	167	143	143	165	150
	Animal in the Vehicle	6	1	2	1	0
	Other animal on the road	539	449	442	486	270
Obstructions	Stationary vehicle dangerously placed	3	0	2	9	0
	Collision with vehicle already involved in an accident	4	1	3	0	0
	Other obstructions	167	157	169	160	127
Defects	Tyre burst	222	181	163	136	133
	Defect unattended vehicle running away	11	19	7	0	17
	Physical defective	8	0	2	0	0
	Other defects	249	171	162	174	148
Weather	Road surface type	81	95	60	50	76
	Roads pot holes	58	33	23	27	37
	Heavy rain	13	8	4	1	2
	Strong wind	6	3	4	4	5
	Other weather factors	11	15	11	3	10
	Use of Cell phone while driving	7	3	1	2	1
Total		18978	18001	17527	17062	16641

Figure 22 : Possible Causes Of Road Crashes



Source : Department Of Roads

Police Districts and their Police Stations

Police District	Police Offices
Francistown	Francistown, Tshesebe, Tutume andMasunga
Kutlwano	Kutlwano, Tatitown, Matsiloje and Tonota
Serowe	Palapye, Serowe, Maunatlala and Serule
Gaborone	Broadhurst, Tlokweng, Central and Borakanelo
Mahalapye	Mahalapye, Shoshong, Machaneng, Martins Drift and Dibete
Mochudi	Mochudi, Sikwane, Oliphants
Gaborone West	Mogoditshane, Gaborone West, Ramaotswa, Naledi, Sir Seretse Khama Airport
Letlhakane	Dukwi, Letlhakane, Nata, Orapa, Rakops, Sua Pan and Gweta
Tsabong	Bokspits, Kang, Tsabong, Tshane, Werda, Middlepits
Selebi - Phikwe	Bainesdrift, Bobonong, Botshabelo, Selebi Phikwe, Semolale, Mmadinare
Lobatse	Goodhope, Lobatse, Ramotswa and Woodhall
Molepolole	Letlhakeng, Molepolole, Thamaga, Takatokwane, Sojwe
Maun	Maun, Sehithwa, Seronga, Shakawe, Gumare
Ghantzi	Gantsi, Kalkfontein,Charlsehill, Mamuno, Ncojane
Kasane	Kasane, Kavimba, Kazungula, Pandamatenga and Kasane
Kanye	Kanye,Sejelo, Jwaneng, Moshupa, Phitshane Molopo, Mabutsane

Notes

MVA FUND

Living the promise.

Gaborone
MVA Fund House, Plot 50367, Fairgrounds Office Park
Tel : 318 8533 Fax: 318 8124

Rail Park Mall
Shop No. G74B, Rail Park Mall Service Centre
Tel: 391 1180

Francistown
Nglichi House, Plot 306/7, Meriting Complex
Tel: 241 0670 Fax: 241 0700

Maun
Plot 1196, Shop D2, Engen Centre
Tel: 686 1788 686 2021

Kang
Plot 659, Gamonyemana Ward
Tel/Fax: 651 7124/1

Palapye
House No. PA8MQI/G, BHC Offices
Tel: 492 1022 Fax: 492 1024

Selebi - Phikwe
CBH Building, Plot 2574, Town Centre
Tel: 260 0275 Fax: 260 0239

Toll Free : 0800 600 739 Email: mvafund@mvafund.bw Website: www.mvafund.bw

DECADE OF ACTION FOR ROAD SAFETY 2011-2020

Botswana is a signatory to the United Nations proclamation on the Decade of Action for Road Safety 2011 - 2020

SAFER ROADS AND MOBILITY BY 2020