

**CONFRONTING “DEATH ON WHEELS”: ADDRESSING
ROAD SAFETY CHALLENGES IN KENYA; A CRITICAL
LOOK BEYOND THE EXISTING LEGAL AND
INSTITUTIONAL FRAMEWORKS.**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER
OF LAWS (LLM) OF THE UNIVERSITY OF NAIROBI.**

SUBMITTED BY NGESO COSMAS JAGONGO

G62/76519/09

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NAIROBI NOVEMBER

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DECLARATION

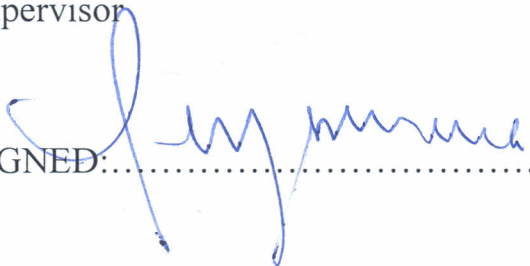
I, **NGESO COSMAS JAGONGO**, do hereby declare that this thesis is my original work and has not been submitted, and is not currently being submitted for a degree in any other University.

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DEDICATION

This thesis is dedicated to my late parents Gilbert Ngeso and Angeline Ngeso who used all means at their disposal to educate me. It is further dedicated to all those who have lost their precious lives through road traffic crashes in Kenya over the years.

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NOVEMBER 2012

ABSRTACT

Road traffic accidents have continued to be one of the greatest challenges not only in Kenya but globally. The World Health Organization accident statistics indicate that globally, an estimated 1.2 million people are killed annually through road traffic accidents and millions more are injured or disabled. Most of these accidents occur in low and middle income economies. Besides creating enormous social and economic losses to individuals, families and communities; road traffic accidents place a heavy burden on health services and economic development.

Kenya loses an average of 3000 lives through road traffic crashes annually. More than ten times this number end up partially or totally disabled. Some of the accidents recorded in Kenya over the years have been very grisly, with some claiming entire families. While efforts are being made at global level to address road traffic accidents, Kenya is yet to come up with elaborate measures that can help address this menace effectively and safeguard lives of people transported along Kenya's roads.

One of the landmark interventions at the global level aimed at addressing road safety challenges was the declaration of the years 2011-2020 as a Decade of Action on Road Safety by the United Nations in March 2010 through the UN General Assembly Resolution 64/255. The main goal of the resolution is to stabilize and then reduce the forecasted level of road traffic injuries around the world by increasing activities conducted at national, regional and global levels. The Resolution calls upon member states to implement road safety activities particularly in areas of road safety management, road infrastructure, vehicle safety, road user behavior, road safety education and post-crash responses. All member states are expected to come up with programmes that will help in realizing the objectives of the declaration.

Kenya's road safety status remains one of the worst not only in Africa, but globally. This is in spite of the fact that Kenya has a very low level of motorization compared to that of developed economies.

It is therefore the objective of this thesis to examine the factors that have over the years contributed to continued loss of lives through road traffic crashes in Kenya and make recommendations that can be implemented to help save lives of people who use Kenya's roads.

The thesis is divided into five Chapters: Chapter one sets the objective and framework of the study. Chapter two looks at road infrastructure, design, development and maintenance; it also examines the extent to which this process currently contributes to continued loss of lives. Chapter three looks at human behavior and its impacts on road safety. The Chapter looks at several aspects of human behavior which include; driver training and testing, drunk driving, vehicle inspection, transport licensing and general behavior of road users. Chapter four looks at traffic law enforcement in Kenya and its impacts on road safety. Chapter five concludes the discussion and makes recommendations.

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LIST OF ABBREVIATIONS

AAK	-Automobile Association of Kenya
ACCs	-Alcohol Evidence Centers
ADRs	-Australian Design Rules
APD	-Association of People with Disabilities
BAC	-Blood Alcohol Content
DUI	-Driving Under the Influence
DWI	-Driving While Impaired
GBCP	-Gravelling, Bridging and Culverting Programme
GDP	-Gross Domestic Product
GEF	-Global Environmental Facility
GNP	-Gross National Product
JSC	-Judicial Service Commission
KeNHA	-Kenya National Highway Authority
KeRRA	-Kenya Rural Roads Authority
KRB	-Kenya Roads Board
KTA	-Kenya Transport Association
KURA	-Kenya Urban Roads Authority
MRP	-Minor Roads Programme
MVIU	- Motor Vehicle Inspection Unit
NMIMT	-Non Motorized and Intermediate Means of Transport

NRSCK	-National Road Safety Council of Kenya
PFP	-Policy Framework Paper
PSVs	-Public Service Vehicles
RARP	-Rural Access Roads Programme
RBT	-Random Breath Testing
RCM	-Road Construction Manuals
RDM	-Road Design Manuals
RICs	-Roads Inventory Conditions
RMV	-Registrar of Motor Vehicles
RTA	-Road Traffic Accidents
SAB	-South African Breweries
SADD	-South Africans against Drunk Driving
SPR	-Special Purpose Roads
TAC	-Victorian Transport Commission
TLB	-Transport Licensing Board
VSS	-Vehicle Safety Standards

LIST OF CASES

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2. Republic v Joseph Mwangi Thiongo. Traffic Case Number 17533 of 2001. Chief Magistrates Court at Nairobi (Unreported)
3. George Mwangi Ngony v Republic. Criminal Appeal Number 96 of 1992. High Court of Nyeri (Unreported)
4. Republic v Shadrack Abongo Okoth. Traffic Case Number 462 of 2008. Principal Magistrates Court at Kikuyu (Unreported)
5. Republic v Johnson Waiganjo Njuguna. Traffic Case Number 17259 of 2003. Chief Magistrates Court at Nairobi (Unreported)
6. Republic v Joseph Maina Nyambura. Traffic Case Number 18981 of 2004. Chief Magistrates Court at Nairobi (Unreported) p 65-75
7. Kenneth Wanjoh iGacheru, Albert Chege and Elam Etemo v R. Civil case of 2006. At the High Court in Nairobi.

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2. Traffic Act, Cap 403, Laws of Kenya.
3. Transport Licensing Act, Cap 404, Laws of Kenya.
4. Kenya Roads Board Act, Cap 408, Laws of Kenya.
5. Local Government Act, Cap 265, Laws of Kenya.
6. Road Maintenance Levy Act, Act Number 9 of 1993. Amended in 1994
7. Public Road Toll Act, Cap 477, Laws of Kenya.
8. Public Roads Access Act, Cap 399, Laws of Kenya.
9. Kenya Roads Act, Act Number 2 of 2007
10. Street Adoption Act, Cap 406, Laws of Kenya.
11. Valuation of Rating Act, Cap 266, Laws of Kenya.
12. The Rating Act, Cap 267, Laws of Kenya.
13. Wildlife Conservation and Management Act, Cap 376, Laws of Kenya.
14. Local Authorities Transfer Fund Act, Act Number 8 of 1988

15. Public Procurement and Disposal Act, Act No. 3 of 2005

16. Agriculture Act, Cap 319, Laws of Kenya.

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1. The Vienna Convention on Road Traffic. Established during the United Nations Economic and Social Council Conference on Road Traffic in 1968.
2. The Convention on Traffic Road Signs and Signals. Established by the United Nations Economic and Social Council conference on Road Traffic in Vienna in October 1968.
3. The Accra Declaration on Road Safety. Report of the African Road Safety Conference in Accra Ghana, February 2007
4. The Moscow Declaration on Road Safety. Report of the Ministerial Conference on Road Safety in Moscow, November 2009
5. The African Road Safety Action Plan 2011-2020. Report of the Second African Road Safety Conference in Addis-Ababa Ethiopia, November 2011

CHAPTER ONE

1.0 BACKGROUND INFORMATION

1.1 INTRODUCTION

Road traffic accidents (RTA) rank high among the greatest development challenges currently facing many countries, particularly the developing countries¹. The frequency, magnitude and impact of road carnage is generally very worrying². Globally, an estimated 1.2 million people are killed through road crashes annually;³ and millions more are injured or disabled as a result of road crashes mostly in low and middle income countries.⁴ Besides creating enormous social costs to individuals, families and communities, road traffic injuries also place a heavy burden on health services and economic development. The cost to countries possibly already struggling with other development concerns may well be between 1% and 3% of their gross national product.⁵ As motorization increases, exposure of populations to traffic accidents also increases.

¹ See WHO, World Report on Road Traffic Injuries Prevention, Glossary of Terms, 2004, p 201 cited in Price Sally J, Which Intervention Strategies to Reduce Mobility and Motility from Road Traffic Accidents would be most effective in low income countries, International B.Sc. project 2006. Road traffic accidents have been defined in the document as "a collision involving at least one vehicle in motion on a public or private road that results in at least one person being injured or killed. This therefore includes collisions between vehicles and pedestrians, and between vehicles and animals or fixed obstacles".

² OCED Health Data 2005, Injuries in Road Traffic Accidents. available at <http://www.irdes.fr/ecosante/OCDE/128010.html>. Accessed on 28/8/2011

³ Herman's T. Britts; Developing a Theoretical framework for the Road Safety Performance Indicators and a Methodology for creating a performance index. available at info@stuentmonverkeersveiligheid.be last accessed on 10th July 2011

⁴ World Health Organization. Global Status Report on Road Safety: A Time for Action. Geneva, Switzerland: World Health Organization; 2009. Edited by Margie Peden ... [et al.]. p 36 available at <http://whqlibdoc.who.int/publications/2004/9241562609.pdf> last accessed on 10th July 2011

⁵ Wilson Otero. Drinking and Driving: A Road Safety Manual for Decision Makers and Partners (WHO, FIA Foundation, Global Road Safety partnership, World Bank) 2007 p vii(Preface)

Africa takes the highest share of road traffic accident burden relative to its low level of road network and motorization.⁶ The fatality rate in the continent is estimated at 28 per 100,000 of the population,⁷ which is the highest in the world.

The economic cost of road traffic crashes and injuries to African countries has been estimated in the range of 1-5 % of the GNP per annum (about \$ 10 Billion per year) with a high foreign currency component for importing medicines, hospital equipment and vehicle spare parts among others. In Kenya, an average of 3000 lives are lost through road traffic crashes annually.⁸ Over ten times this number ends up partially or permanently crippled as a result of being victims of road traffic crashes. Kenya has experienced increase in road crashes over the years. For example, between 1981 and 1990, road crashes in Kenya increased at an average of 4% per year from 7,250 to 10,308 while road crash fatalities increased at an average of 0.9% per year from 1,720 to 1,856 people.⁹ In 1990 alone, Kenya had a casualty per road crash of 1.84. In the same year, there were 29 road crashes per 1000 motor vehicles operating in the country.¹⁰

In the year 2002 for example, 13,418 crashes occurred involving 28, 774 people of which 2,782 or an equivalent of 10% lost their lives and 10,912 or 38% sustained serious injuries. In the year 2010, a total of 9,771 crashes occurred; out of which, a total of 3,055 lives were lost and 19,066 injured.¹¹

⁶The Second African Road Safety Conference. November 09/11/2011 in Addis Ababa Ethiopia. Organized by the UN Economic Commission for Africa in corporation with African Union Commission(AUC), African Development Bank(ADB), Sub-Saharan Africa Transport Programme(SATP), Global Road Safety Facility (GRSF)and the World Bank(WB) p 1. Available at <http://siteresources.worldbank.org/EXTAFRSUBSAHTRA/Resources/1513929-1220884726175/Road-Safety-Conference-Announcement-Nov11.pdf> accessed on 10th July 2011

⁷G D Jacobs and Amy Aeron-Thomas; Africa Road Safety Review.2000 Project Report PR/INT/659/00; Transport Research Laboratory. Available at http://www.transport-links.org/transport_links/filearea/publications/1_771_Pa3568.pdflast accessed 28/8/2011

⁸Kenya Police Traffic Department available at http://www.kenyapolice.go.ke/Traffic_dept.asp accessed on 28/8/2011.

⁹Patrick Asingo and Winnie Mitula. Implementing Road Transport Safety Measures in Kenya..Policy Issues and Challenges. Institute of Development Studies. University of Nairobi. Working Paper No. 545. Nairobi 2007. P 3-4

¹⁰ Ibid.

¹¹ Ibid.

The following table shows trends of road traffic accidents in Kenya from the year 2000 to 2010

Table 1 showing accident statistics in Kenya between 2000 and 2010

Accidents	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fatal accidents	2184	2081	2281	2357	1812	2154	2203	2283	2527	3237	2648
Seriously injured	4227	4462	4671	4240	3462	4234	4280	4168	4212	4527	4482
Slightly injured	7527	6864	6466	6781	5443	6011	5718	6019	4464	4605	2641

Source Kenya Police- Traffic Department

Over the years, the annual cost of road crashes to the Kenyan economy has increased significantly. While it was estimated that road crashes caused the Kenyan economy Kshs 100 million or 1.7% of the GNP in 1981, by 1997 it was estimated that, 26% to 52% of the road transport sector earnings were lost due to road crashes.¹² Today, the annual average cost of road crashes to Kenya's economy is Kshs 14 billion or 5% of the GDP.¹³ This far exceeds the annual cost of road crashes to the economies of the third world countries, which oscillates between 1% to 2% of their GDP.¹⁴ Road transport is currently the most widely used transport mode in Kenya handling close to 80% of both passenger and cargo transportation.¹⁵ Road transport eases mobility of the factors of production, creates direct and indirect employment, provides income to the government and facilitates linkages within the economy. During the period between 1998 and 2002 for example, the average contribution of the transport sector to Kenya's economy stood at 8.5% of the GDP, of which the road transport sub sector had the lion share of 2.9 % of the GDP.

¹² Supra fn 9

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Ibid.

It is therefore evident that the road transport sector is a very important facilitator of economic development that should be managed in a manner that does not lead to loss of lives as is the case currently.¹⁶

The following table shows the number of people who lost their lives through road traffic crashes that occurred in Kenya between 2000 and 2010.

Table 2 showing the number of victims of road traffic crashes that occurred in Kenya between 2000 and 2010.

Victims	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Persons killed	2819	2790	2782	3004	2251	2531	2714	2893	3158	4072	3055
Seriously injured	9659	10504	10912	10035	6745	7899	8722	9012	9206	10644	9327
Slightly injured	16539	16114	15080	15936	11877	12341	11828	13682	12162	9740	9739
Total victims	29017	29408	28774	28975	20873	22771	23264	25588	24526	24456	22121

Source Kenya Police -Traffic Department

These crashes continue to occur despite the existence of several institutional and legal frameworks established to among other things, provide for the safety of people travelling on Kenyan roads. Currently, several institutions exist that deal with matters touching on road safety. These institutions include the; Traffic Police, the Ministry of Transport, the Transport Licensing Board, the Ministry of Local Authorities, the Registrar of Motor Vehicles (RMV), the Insurance industry, the Kenya Roads Board, the Ministry of Roads, the Motor Vehicle Inspection Unit (MVIU) and the recently reconstituted National Road Safety Council (NRSC) among others.

¹⁶ Supra fn 9

The following table shows current institutional framework for road safety in Kenya.

Table 3 showing institutional arrangement for road safety in Kenya.

Institution	Functions
Kenya police	Traffic law enforcement, prosecution, emergency services , public education, driver training and testing, national crash data systems
Ministry of Finance	Policy approval, policy formulation and funding
Attorney General	Policy formulation, prosecution
Ministry of Transport	Policy formulation , policy approval
Transport Licensing Board	Transport licensing and regulation
National Road Safety Council	Road safety education, road safety audit, road safety research and road safety data
Motor Vehicle inspection Unit	Road worthiness inspection, national crash data systems and traffic law enforcement
Ministry of Roads and Public Works	Policy formulation, policy approval, road construction, road maintenance and road safety research
The Insurance Industry	Issuing of Insurance cover
Kenya Roads Board	Road construction and maintenance funding
Kenya National Highway Authority	Road construction and maintenance
Kenya Rural Roads Authority	Road construction and maintenance
Kenya Urban Roads Authority	Road construction and maintenance
Registrar of Motor Vehicles	Vehicle licensing and registration
Ministry of Local Government	Policy formulation, policy approval, road construction and maintenance and management of traffic within the local authorities.

Source; Ministry of Transport

Similarly, there exist several legal instruments that deal with road safety matters. These include the Traffic Act Cap 403, the Transport Licensing Act Cap 404, the Kenya Road Board Act Cap 408 and the Local Government Act Cap 265 among others. There also exists a myriad of legal notices introduced to address the challenges of road accidents.¹⁷The New Constitution provides in the preamble a commitment to nurturing and protecting wellbeing of individuals, their family, communities and nations.¹⁸Article 85 of the Constitution (Bill of Rights) recognizes the right to life as one of the rights that Kenyans are entitled to.¹⁹

¹⁷ Examples include Legal Notice No. 161 of 3rd October 2003, Legal Notice No. 173 of 2nd December 2009, Legal Notice No.209 of 31st December 2010, Legal Notice No. 139 of September 2011, Legal Notice No. 138 of 5th October 2011 and Legal Notice No.78 of 3rd August 2012. Legal Notice No.161 of 2003 provides for the fitting of speed governors and safety belts to all public service vehicles, reduction of carrying capacity of vans used for public transport from eighteen to fourteen passengers and outlaws transportation of standing passengers. The Legal notice also provides for wearing of uniforms by PSV drivers and conductors. Legal Notice No. 173 of 2009 provides for operation of motor cycles used for conducting public transport. The Legal notice provides for among other things; wearing of jackets and helmets by motorcycle riders. Legal Notice No. 139 of 2011 provides for use of speed cameras by traffic officers in enforcing traffic laws. Legal Notice No. 138 of 2011 provides for use of alcometres as a means of controlling drunk driving. Legal Notice No.78 of 2012 empowers the registrar of Motor Vehicles to issue personalized number plates.

¹⁸ The Constitution of Kenya (27th August 2010) Government Printers .Nairobi

¹⁹ Ibid.

It is also worth noting that there exist several international and regional instruments dealing with road safety matters, some of which Kenya is a signatory to. These include the *Vienna Convention on Road Traffic*,²⁰ the *1968 Convention on Traffic Road Signs and Signal*,²¹ the *Accra Declaration*,²² the *Moscow Declaration*,²³ the *African Road Safety Action Plan*.²⁴ The United Nations has also declared the years 2011 to 2020 a *Decade of Action for Road Safety*.²⁵

Under the Moscow Declaration for example, state parties committed themselves to:

- i. encourage the implementation of the recommendations of the World Report on Traffic Injury Prevention,
- ii. reinforce governmental leadership and guidance in road safety, including by designating or strengthening lead agencies and related coordination mechanisms at national or sub-national level,
- iii. set ambitious yet feasible national road traffic casualty reduction targets that are clearly linked to planned investments and policy initiatives and mobilize the necessary resources to enable effective and sustainable implementation to achieve targets in the framework of a safe systems approach;

²⁰ Legal instruments in the field of transport. United Nations Economic Commission for Europe. Available at <http://webcache.googleusercontent.com/search?q=cache:vbNjRkMLsTMJ:www.un.org>. Accessed on 28/8/2011

²¹ Available at <http://docs.google.com/viewer?a=v&q=cache:vbNjRkMLsTMJ:www.un.org/special-rep/ohrlls/lldc/Field%2520of%2520Transport%2520-%2520Powerpoint%2520presentation%2520>. Accessed on 28/02/2012

²² Ministerial Round Table African Road Safety Conference Accra, Ghana 8 February 2007. Available at <http://webcache.googleusercontent.com>. Accessed on 28/8/2011

²³ First Global Ministerial Conference on Road Safety: Time for Action. Moscow, 19-20 November 2009, available at http://webcache.googleusercontent.com/search?q=cache:u3iOnhumAXoJ:www.who.int/roadsafety/ministerial_conference/declaration_en.pdf. Accessed on 28/8/2011

²⁴ UN Economic Commission for Africa; African Road Safety Action Plan (Draft) Nov 2009

²⁵ Global Plan. The Decade of Action for Road Safety 2011-2020: Decade of Action available at <http://www.roadafetyfund.org/UNDECADEOFACTION/Pages/default.aspx> accessed on 06/03/2011

- iv. make particular efforts to develop and implement policies and infrastructure solutions to protect all road users, in particular those who are most vulnerable such as pedestrians, cyclists, motorcyclists and users of unsafe public transport, as well as children, the elderly and people living with disabilities;
- v. begin to implement safer and more sustainable transportation, including through land-use planning initiatives and by encouraging alternative forms of transportation;
- vi. promote harmonization of road safety and vehicle safety regulations and good practices through the implementation of relevant United Nations resolutions and instruments and the series of manuals issued by the United Nations Road Safety Collaboration;
- vii. strengthen or maintain enforcement and awareness of existing legislation and where needed improve legislation and vehicle and driver registration systems using appropriate international standards;
- viii. encourage organizations to contribute actively to improving work-related road safety through adopting the use of best practices in fleet management;
- ix. encourage collaborative action by fostering cooperation between relevant entities of public administrations, organizations of the United Nations system, private and public sectors, and with civil society;
- x. improve national data collection and comparability at the international level, including by adopting the standard definition of a road traffic crash death as any person killed immediately or dying within 30 days as a result of a road traffic crash, and standard definitions of injury; and facilitating international cooperation to develop reliable and harmonized data systems;
- xi. strengthen the provision of pre hospital and hospital trauma care, rehabilitation services and social reintegration through the implementation of appropriate legislation, development of human capacity and improvement of access to health care so as to ensure the timely and effective delivery to those in need.

It is also worth to note that the UN General Assembly passed a resolution on 14th of April 2004, urging greater attention and resources to be directed towards the global road safety crisis. Resolution 58/289 ‘improving global road safety’ stresses the importance of international collaboration in the field of road safety.²⁶ A further Resolution A58/L.60, passed on October 2005, reaffirmed the commitment of the UN to this issue, encouraging member states to implement the recommendations of the *World Report on Road Traffic Injury Prevention*, and commending collaborative road safety initiatives so far undertaken towards implementation of resolution 58/289. In particular, it encouraged member states to focus on addressing key risk factors and to establish lead agencies for road safety.²⁷

The *World Report on Road Traffic Injury Prevention* launched jointly in 2004 by the WHO and the World Bank identified improvement in road safety management as a major policy direction that should be taken by both developed and developing economies. The report showed that use of safety belts, helmets and child restraints has been able to help in saving thousands of lives.

The report further appreciates the importance of the introduction of speed limits, creation of safer infrastructure, the enforcement of blood alcohol concentration limits and improvement in vehicle safety as interventions that states should take in addressing road safety challenges.²⁸

The United Nations Decade of Action for Road Safety (2011-2020) was proclaimed by the UN General Assembly in March 2010 through resolution number A/ 64/255.²⁹ The main objects of the resolution is to stabilize and reduce the forecasted level of road traffic fatalities around the world by increasing activities conducted at national, regional and global levels. The Resolution calls upon the member states to implement road safety activities, particularly in the areas of road safety management, road infrastructure, vehicle safety, road user behavior, road safety education and the post-crash responses.

²⁶The global road safety crisis: progress on the implementation of General Assembly resolution 58/289 Para 6. Available at <http://www.unece.org/fileadmin/DAM/trans/roadsafe/docs/A-60-181e.pdf> last accessed on 8th May 2012

²⁷Ibid.

²⁸Supra. fn 4

²⁹ Supra fn 25

Article 3 of the Universal Declaration of Human Rights³⁰ and Article 6 of the United Nations International Convention on Civil and Political Rights³¹ provides for the need to safeguard human lives.

It is evident from the foregoing that Kenya has continued to lose lives of its citizens through road traffic accidents in spite of the existence of legal and institutional framework created to address among others, road safety challenges. This study therefore seeks to examine the factors that contribute to continued loss of lives through road traffic accidents in Kenya. The study appreciates the fact that few significant legal studies or research have been done on road safety in Kenya and particularly, factors contributing to road traffic crashes and interventions that should be put in place to address them. The study looks at the weaknesses inherent in the current legal and institutional framework for road safety in Kenya. The study also looks at other factors outside the legal and institutional framework which also contribute to road traffic crashes in Kenya.

1.2 STATEMENT OF THE PROBLEM

Kenya loses an average of 3000 lives through road traffic accidents annually. Many crash victims end up partially or permanently disabled. Road traffic accidents exert a high burden to the economy and health care sector. The majority of people who lose their lives through road crashes are productive people.

The consequences of road traffic crashes to families are enormous. Many families are left destitute. Those close to the victims often live with lost or reduced income and increased expenses from funerals to care for the injured.

It is therefore the objective of this thesis to identify the causes of continued loss of lives through road crashes in Kenya. The thesis seeks to analyze the weaknesses inherent in the legal and institutional framework that contribute to road traffic crashes in Kenya that deal with road safety.

The research also seeks to identify other factors outside the legal and institutional framework that contribute to road traffic crashes in Kenya and the need to be addressed

³⁰ Available at <http://www.un.org/en/documents/udhr> last accessed on 30th June 2011

³¹ Available at <http://www.hrweb.org/legal/apr.html> last accessed on 30th June 2011

The overriding challenge that informed this investigation is that although the Kenyan government has over the years established various institutions and developed laws intended to address road safety challenges, these efforts have not translated to reduction of the loss of lives along Kenyan roads.³² Kenya has continued to be one of the countries with leading road traffic accidents in Africa.³³

1.3 KEY ISSUES

This research is prompted by the by the following issues.

Kenya currently ranks as one of the countries with the highest road traffic accidents in Africa in spite of low level of motorization compared to that of developed economies.³⁴ The loss of lives has continued in spite of attempts made over the years, particularly through legal and institutional changes.

Kenya currently has several legal and institutional frameworks established to address road safety. The frameworks have not helped in reducing road traffic crashes due to several factors which include the fact that they are disjointed and not well coordinated.

Most of the institutions do not have road safety as their core business and therefore have not been able to deal with road safety challenges effectively. The Kenya Government has not been able to effectively address other factors outside legal and institutional framework that contribute to road traffic accidents. These include challenges related to road infrastructure design, development and maintenance, driver training, testing and licensing, vehicle inspection and certification, drunk driving, corruption and laxity in traffic law enforcement among others. These factors have over the years contributed to road traffic accidents in Kenya.

³²Moraa Gladys M, Road Safety in Kenya: A Study of Knowledge, Attitudes and Practices of Drivers of Passenger Service Vehicles(A Thesis for Master of Sociology- University of Nairobi) 2005 p 2-3

³³See Greg Chen. Road Traffic Safety in African Countries.Status, Trends and Challenges.University Transportation Research Centre. University of New York 2009, p 4-6

³⁴Aligula E. M and Zachery Abiero.Kenya's Comparative Road Safety Status. Policy Issues and Challenges.Kenya Institute for Public Policy, Research and Analysis (KIPRA) Infrastructure and Economic Services Division 2005. P 28 Available at <http://www.kipra.org>.accessed on 13th June 2011

For example, poor road design, construction and maintenance has led to many roads being built without incorporating important road safety features like road signs, pedestrian pathways and infrastructure for bicycles and motorcycles; motorcycles and bicycles are currently some of the leading contributors to road accidents. Laxity in enforcement of traffic laws coupled with corruption has led to continued breaking of traffic laws with impunity. Compromise in driver training and testing, vehicles inspection and transport licensing has led to Kenya having unqualified drivers and unroadworthy vehicles, a perfect recipe for road traffic crashes. Drunk driving as an aspect of human behavior has continued to be one of the leading causes of road traffic crashes in Kenya.³⁵

Finally, it's worth noting that the Kenya Government has not prioritized on financing of road safety programmes in the same measure it has done to other challenges. This has made it difficult to effectively develop and implement programmes that will help in enhancing road safety.³⁶

It is therefore the intention of this study to examine all these issues in detail and make recommendations that can be implemented to help address them.

1.4 JUSTIFICATION OF THE STUDY

The justification of this study was premised on the negative effects of road traffic accidents and the need to identify and develop mechanisms that will help reduce accidents and guarantee safety to lives of people travelling along Kenya's roads. Further, the study is intended to add knowledge, from a legal perspective, on road safety matters.

The study is informed by the consequences of road traffic accidents to Kenya's social and economic development. The high level of road traffic accidents in Kenya impacts negatively on the economy which is already frail.

³⁵ Supra fn 5

³⁶ Source: National Road Safety Council Secretariat. Ministry of Transport. During an interview held with officers of the council on 20th April 2011, It was revealed that in the year 2011 ,while the government allocated about 30 billion for road construction and maintenance , only 40 million was allocated for road safety programmes.

The average cost of road traffic crashes to the economy is estimated at Kshs 14 billion or 5% of the GDP.³⁷ A reduction of road traffic crashes will enable the government to use part of the funds currently used in addressing road accidents challenges on other priority programmes.

The crashes also rob the country of active and working part of the population who are likely heads of households and responsible for several family members. The study is intended to make recommendations which if implemented will help reduce road traffic crashes and save lives of people.

The study also appreciates the fact that while Kenya has continued to lose lives through road traffic crashes, many states particularly those in developed economies have managed to tame the carnage.³⁸ The study therefore intends to identify strategies used by these states and pick the ones applicable to Kenya. Implementation of the proposed strategies will help in reducing road accidents and saving lives of Kenyans.

The study appreciates the fact that limited legal research has been done on the subject of road traffic accidents in Kenya. This is in spite of the fact that safeguarding of human lives, including lives of those transported on roads is a critical governance issue.

Most of available research on this subject in Kenya has been done by medical researchers,³⁹ sociologists,⁴⁰ political scientists⁴¹ and geographers.⁴² This research therefore intends to fill this knowledge gap, by providing information made from a legal perspective.

Finally, it is hoped that this study will help in making policy and legal reforms in the transport sector with a view to developing policies, laws and institutions with capacity to reduce road traffic crashes and safeguard lives of people who use Kenyan roads.

³⁷ National Road Safety Council of Kenya, 1992 Accidents Statistics, 1983-1990, Nairobi: Ministry of Public Works. Cited in Moraa Gladys M, Road Safety in Kenya: A Study of Knowledge, Attitudes and Practices of Drivers of Passenger Service Vehicles (A Thesis for Master of Sociology- University of Nairobi) 2005 p 6

³⁸ Supra fn 34 at p 28

³⁹Wilson Odero (Dept of Public Health MoiUnv) M Khayesi and P.M Heda (Nairobi Hspt and Parkland Ambulatory Centre)

⁴⁰Preston O. Chitere (Dept of Sociology, UoN)

⁴¹Winnie Mitula (Institute of Dev Studies, U oN)

⁴²M Khayesi (Kenyatta University- Department of Geography)

1.5 THEORETICAL FRAMEWORK

This research is premised on various theoretical frameworks. Various theories have been developed to help in explaining why accidents happen. The theories discussed here are those that have relevance to explaining the causes of road traffic accidents.

1.5.1 Heinrich's Domino Theory of Accident Causation.⁴³

This theory argues that an accident is a factor in a sequence of several activities, having the potential of leading to injury. The factors can be visualized as a series of dominos standing on the edge; when one falls, the linkage required for a chain reaction is completed.

Each factor is dependent on the preceding factor. In the sequence, personal injuries or death (the final domino) occurs as a result of an accident. An accident occurs as a result of personal or mechanical hazard. Personal and mechanical hazard exist through the fault of careless persons or poorly designed or improperly maintained equipment. Faults of persons are inherited or acquired as a result of their social environment. The environment is where and how a person was raised and educated. Heinrich finally argues that in order to address challenges posed by road accidents, focus should be placed in improving engineering, education and enforcement.

I find this theory relevant to this study as it appreciates the fact that road traffic crashes are not as a result of a single act, but the result of a sequence of several acts. An appreciation of this theory therefore enables us to develop multifaceted approaches in addressing road safety challenges. It moves us away from laying emphasis on institutional and legal interventions, to casting our nets wider to cover other factors like human behaviors among others.

Like dominos, road crash causes are interrelated. For example, poor infrastructure may lead to an attempt to avoid a pothole by an over speeding vehicle driven by a drunk driver causing an accident and killing all passengers in the vehicle, including the driver.

⁴³Accident Theories by Cleveland State University Work Zone Safety and Efficiency Transportation Center. Available at <http://webcache.googleusercontent.com/search>. Accessed on 28/8/2011

1.5.2 Farrell's Human Factors Theory.

The human factor theory attributes accidents to a chain of events ultimately caused by human error.⁴⁴ Farrell identifies three broad factors that lead to human error namely; overload, inappropriate response and inappropriate attitudes.

The load that a person is carrying consists of tasks for which he or she is responsible and added burdens resulting from environmental factors (noise, distraction), internal factors (personal problems, emotional stress and worry), and situational factors (level of risk, unclear instructions and so on).

Inappropriate response explains how a person responds in a given situation. A person's response can cause or prevent an accident. If a person, for example, detects a defect in a vehicle but does nothing to correct it, this can lead to an accident. He will have responded inappropriately.

An inappropriate attitude also leads to human error. An example is a person who undertakes a task that he is not qualified to do. A conductor who is not qualified to drive drives and crashes a vehicle leading to loss of lives is treated as having been involved in an inappropriate activity.

I find the human factors theory relevant to this study. This is due to the fact that the theory appreciates the role of human conduct in road traffic accidents. Studies indicate that about 85% of road traffic accidents are caused by human error.⁴⁵ Human errors which include dangerous driving, disregard for existing laws, corruption, laxity in enforcement of laws among others, has relevance to human behavior. Any successful road safety intervention must have elaborate programmes that address human behavior.

⁴⁴Dr Paul Salmon et al. Accidents Causation and Analysis. Human Factors Theory and Methods. Monash University. Accident Research Centre. Available at www.monash.edu.au/mvarc Accessed on 10/09/2012

1.5.3 Systems Theory

This theory views a system as a group of regularly interrelated components that together form a united whole. According to this theory, accidents occur as a system comprised of a person (host), machine (agency) and environment.⁴⁶ Accidents occur due to interaction among these three. Under normal circumstances, chances of an accident occurring are very low.

Changes in interaction between a person, a machine and the environment increases or reduces the probability of an accident. The theory sees road accidents as a failure of the whole of traffic system (interaction between the three elements) rather than a failure of just one element.

I find this theory relevant to this study because it appreciates the interrelationship between the three important contributors to increase or decrease in road traffic crashes which are, vehicle standards, competence of drivers and road infrastructure. This study addresses the status of driver training, testing and licensing, inspection and certification of vehicles, road infrastructure design, development and maintenance. The theory provides a perfect relationship between the three.

1.5.4 Peterson's Accident/ Incident Theory

This theory is largely an expansion of Farrell's human factor theory. It was developed by *Dan Peterson*.⁴⁷ He introduces new elements as *ergonomic traps*, the *decisions to err* and *system failures* while retaining much of human factor theory.

According to this theory, overload, ergonomic traps or decisions to err lead to human error. I find this theory relevant to this study as it attempts to expand the human factor theory. As has been indicated, human factor is a major contributor to traffic accidents.

⁴⁶Guieterez Jennifer. Theories of Accident Causation. Occupational Safety and Health 5th ed. Available at www.slidehare.net/yorki/arb/theories-of-accident-causation Accessed on 10/9/2012

⁴⁷Peterson's Accident-Incident Causation Theory. Available at http://search.softonic.com/MON1207T35/tb_v1?q=+petersons+accident-incident+Causation+theory&SearchSource=99&clientType=0 accessed on 10/9/2012

1.5.5 Epidemiology Theory

Epidemiology is the study of causal relationship between environmental factors and disease.⁴⁸The Epidemiology theory holds that some models used for determining the relationship between environmental causal factors and disease can also be used to study the relationship of environmental factors and accidents.

The key components of this theory are tendencies that predispose a worker to certain actions and situational characteristics referred to as predisposition characteristic which include peer pressure, poor attitude, risk taking. Together, these characteristics can cause or prevent accidents that a person predisposed to a given situation may succumb to.⁴⁹For example, if a driver who is particularly susceptible to peer pressure (predisposition characteristics) is pressured by his passengers (situational characteristics) to increase speed of the vehicle he is driving, the result will be an increased probability of an accident.

This theory is relevant to the study because it helps to explain the relationship between conduct of an employee and his environment. One of the focuses of this study is to look at the impact of training, testing, licensing and behavior of drivers on road safety. Poor attitudes and attempts to take risks (break traffic laws) are some of the behaviors of drivers that currently cause road traffic crashes in Kenya.

1.5.6 Energy Release Theory

This theory was developed by *Dr William Hadden* of the Insurance Institute for Highway Safety.⁵⁰ The theory states that accidents occur as a result of transfer of energy with such force that bodily injury and property damage result. Strategies can be introduced to interrupt or suppress the chain of accident causing event.

⁴⁸Odero W, Road traffic accidents in Kenya: an epidemiological appraisal, available

at <http://www.ncbi.nlm.nih.gov/pubmed/7555886> accessed on 28/8/2011

⁴⁹Whitney D. Why Accidents happen. The Theories of Accident Causation.P 5-6 Available at http://dfwebpresence.com/files/FlashDrives/New%20Drive/Classes/occupational%20safety%20and%20health/To%20Upload/OSH_CH3.pdf Accessed on 10/09/2012.

⁵⁰Supra fn 43

He helped impose the following regulations in new cars as a means of interrupting or suppressing accidents; seat belts for all cars, energy absorbing steering column, penetration -resistant windscreen, dual breaking system and padded instruments. The theory is relevant to this study. It focuses on a vehicle as a contributor to traffic crashes. Some of the items that Hadden recommended to be used are still important in enhancing safety of passengers in the event of accidents to date.

1.5.7 Behavioral Theory

This theory was developed by *E. Scott Geller*. It is alternatively referred to as Behavior Based Safety (BBS).⁵¹ According to Geller, there are seven basic principles of BBS namely intervention, identification of internal factors, motivation to behave in the desired manner, focus on the positive consequence of appropriate behavior, application of the scientific method, integration of information, and planned intervention. I find this theory relevant to the study because it addresses the relationship between human behavior and occurrence of accidents. For example it identifies the importance of motivation of staff in reduction of accidents. As will be revealed in this study, one of the causes of road traffic accidents in Kenya is poor remuneration and working conditions.

⁵¹Goetsch L. David. Theories of Accident Causation. Occupational Health for technologists, engineers and managers.2011 Available at <http://www.worldcat.org/title/occupational-safety-and-health-for-technologists-engineers-and-managers/oclc/454382134> accessed on 10/9/2012

1.6 OBJECTIVE OF THE RESEARCH

The following are the objectives of this research.

- To evaluate the extent to which the current existing legal and institutional framework for road safety in Kenya contributes to continued increase in road traffic accidents.
- To evaluate other factors that contributes to persistent road accidents.
- To make necessary recommendations.

1.7 RESEARCH QUESTIONS

This research intends to address the following questions:-

- How effective are the existing legal and institutional frameworks in addressing road traffic crashes in Kenya?
- What legal and institutional changes can be introduced to address weaknesses identified in the existing legal and institutional frameworks
- In view of the fact that Kenya has continued to lose lives of its citizens through road traffic crashes in spite of the existence of laws and institutions, are there other factors that contribute to continued existence of road accidents in Kenya?

1.8 LITERATURE REVIEW

There is shortage of literature particularly legal literature on the subject of road safety in Kenya. However the following literature most of which have been written by Kenyan scholars from other disciplines have been reviewed in this work.

Patrick O. Asingo has conducted a study on “*The Institutional and Organizational Structure of Public Transport in Kenya.*”⁵² In the study, he examined the structures, capacity and performance of institutions responsible for public transport in Kenya, particularly with regard to the *Matatu* (mini-public vehicles) mode of transport. He bases his study on the structure functional mode guided by the assumption that institutional arrangement for public transport in Kenya is weak and largely responsible for the mess in the sector. Asingo’s study established that lack of a coherent road transport policy has resulted into weak institutions incapable of facilitating efficient road transportation. The study argues that there are weak institutional frameworks and inadequate public sector participation in road transport development and funding in Kenya.

It further argues that institutional support for public road transport is weak and this has led to poor regulation and coordination of public transportation, inappropriate road transport utilization, lack of road safety mechanisms and lack of motorized modal linkages in road transport.

This study recommends establishment of a reliable transport database for effective sector planning by setting up a transport data center. The study further recommends that road funding should be structured and road infrastructure improved, the regulation and coordination of public transport should be strengthened by reforming the key institutions responsible, the government should ensure optimum road space utilization by decongesting road traffic and incorporating road safety measures in road transport.

The study finally recommends the formation of *Matatu* Civil Organization for the sectors’ self-regulation and strengthening their link with the state institutions involved in public transport. This study, though important in analyzing public transport challenges in Kenya, has weaknesses.

The main weakness is that it has concentrated in institutional reform as the main means of addressing road transport challenges in Kenya. It is limited because it has not covered other factors including human behavior and legislative framework.

⁵²Institute of Public Policy Analysis and Research, Discussion Paper No. 050/2004

Wilson Odera, M Khayesi and PM Heda, have conducted a research on “*Road Traffic Injuries in Kenya; Magnitude, Causes and Status of Intervention*”.⁵³ This study is conducted from a medical perspective. The study argues that current road safety interventions in Kenya are sporadic, uncoordinated and ineffective. It further argues that road safety measures in Kenya have not made measurable impact in reducing the numbers, rates and consequences of road traffic crashes. It argues that, despite the marked increase in road crashes in Kenya, little effort has been made to develop and implement interventions. The study identifies impediments to road traffic injury prevention to include; ineffective coordination, inadequate resources and personnel and limited capacity to implement and monitor interventions.

The study therefore recommends the need to improve the collection and availability of accurate data to help in recognizing traffic injuries as a priority public health problem, raising awareness of policy makers on existing counter measures and mobilizing resources for implementation.

The study further recommends the need to establish an effective lead agency and development of stakeholders’ coalitions to address road safety challenges. This study has weaknesses which include the fact that it is focused on institutional weaknesses and lack of adequate data on road crash fatalities. The road safety challenges in Kenya calls for a consideration of all contributing factors and not just looking at issues of data shortage and institutional weaknesses.

Preston Chitere has conducted a study on “*Public Service Vehicle Drivers in Kenya; Their Characteristics and Compliance with Traffic Regulations and Prospects for the Future.*”⁵⁴ This study looks at the characteristics of public service vehicle drivers and concludes that there is high rate of non compliance of drivers with road safety regulations despite enforcement of laws by the police.

In order to improve compliance, the study recommends gradual transformation of the ownership and management of PSV’s from individual investors and associations to company ownership and management, improved basic refresher training and road safety awareness efforts targeting various stakeholders. This study has the limitation of being confined to driver behavior.

⁵³Injury Control and Safety Promotion;2003 Vol 10,1-2 p 53-61

⁵⁴Institute of Policy Analysis and Research, Discussion paper No. 081/2006

Preston Chitere and T Kibua have further conducted a study on “*Efforts to improve Road Safety in Kenya; Achievements and Reforms in the Matatu Industry.*”⁵⁵ This study was intended to provide insights into the Matatu industry and serve as a basis for its improvement. The study revolves around three issues; the institutional and organizational structure of public transport in Kenya, the economic costs and benefits of the Matatu industry and the internal capacity of the industry. The study concluded that the institutional fragmentation of the transport sector is a key obstacle to transport planning in Kenya.

The study therefore recommends that there is need to reduce the number of institutions that deal with Matatu transport regulation, need for comprehensive enforcement of the law and need for involvement of Matatu owners in government policy making. The main limitation of this study is its restriction to the Matatu industry and failure to appreciate other modes of transport that also contribute to road accidents.

James Habyarimana and William Jack’s work “*Results of Randomized Road Safety Interventions in Kenya*”⁵⁶ has also been noted. This study focuses on empowering passengers to use their powers to stop drivers from breaking traffic laws. The study is important because it appreciates human behavior as a factor in addressing road safety challenges. It is however narrow because it does not appreciate other factors that contribute to road crashes.

Jacquineau Azetsoop has conducted a study on “*Social Justice Approach to Road Safety in Kenya; Addressing the Uneven Distribution of Road Traffic Injuries and Deaths across Populations.*”⁵⁷ The main argument of this study is that the bulk of road accidents in Kenya are concentrated among the poor and less empowered members of the society. This argument is unrealistic and does not reflect the reality on the ground. This is because road traffic accidents do not discriminate between the rich and the poor. They affect any carder of society who travels.

⁵⁵Institute of Policy Analysis and Research;IPAR discussion paper series, Discussion Paper No. 053/2004

⁵⁶Centre for Global Development, Working Paper No. 169, April 2009, available at www.cgdev.org accessed on 28/8/2011

⁵⁷ 2010, Published by Oxford University press. Available at Public Health Ethics (2010)3(2):115-127<http://phe.oxfordjournals.org/content/3/2/115.full.pdf> accessed on 28/8/2011

At the regional level, Cuthbert W Chiduo and P Minjo have conducted a study on “*Road Safety in Tanzania; What are the Causes.*”⁵⁸ This study discusses the key challenges to realization of road safety in Tanzania and makes recommendations on how they can be addressed. The challenges identified are similar to those obtaining in Kenya.

Finally, Peter Elsenaar *et al* have conducted a study on “*Road Safety Best Practices; Examples and Recommendations.*”⁵⁹ This study uses Australia among others as a place with the best practices on road safety matters. The study provides best practices that should be used in; road safety campaigns, road safety awareness and partnerships, crash data base, black spot treatment, road design and speed management and health and road safety- pre hospital care. This is a very valuable piece of work.

1.9 HYPOTHESIS

The following hypotheses will guide this study.

- Kenya has continued to lose an average of 3000 lives annually through road traffic crashes. This is in spite of the existence of several statutes and institutions established to among other things, deal with road safety matters. The existing legal and institutional frameworks have weaknesses that make it difficult for them to help in reducing road accidents.
- Kenya currently has disjointed legal and institutional frameworks that are not able to effectively address road safety challenges. There is need to identify these weaknesses.
- Kenya has not been able to fully appreciate the fact that solution to road crash challenges is not restricted to laws and institutions. There exist other contributing factors.

⁵⁸ Available at

http://docs.google.com/viewer?a=v&q=cache:yN6Nyv66nEJ:ntl.bts.gov/lib/12000/12100/12140/pdf/CHIDUO_PHILEMON.PDF+road+safety+in+tanzania+what+are+the+problems accessed on 28/8/2011

⁵⁹Global Road Safety Partnership. November 2005

1.10 RESEARCH METHODOLOGY

This study will be conducted through desk research and will heavily rely on secondary information which will be obtained through examination of existing laws, policy documents and accounts of previous studies on the transport sector in Kenya. The study will also rely on articles available in the internet. Efforts will also be made to look at other international instruments and best practices in other parts of the world.

1.11 CHAPTER BREAKDOWN

This work is divided into Five Chapters.

Chapter one gives **background information** to the study. This chapter gives road safety status in Kenya and covers various efforts that have been made by the Kenya Government to address road safety challenges. It also discusses the magnitude of the impact of road crashes.

Chapter two discusses **road infrastructure design, construction and maintenance**. The chapter seeks to examine the extent to which road design, construction and maintenance in Kenya incorporates safety features. It seeks to bring out safety challenges currently inherent in road construction design and development in Kenya and makes recommendations on how to address the identified weakness.

Chapter three looks at **behavior of road users**. The chapter appreciates the fact that human behavior has been identified as accounting for the largest percentage of causes of road accidents. The chapter covers training and licensing of drivers, vehicle inspection, vehicle licensing and behavior of road users.

Chapter four discusses **enforcement of traffic laws**. This chapter discusses the current traffic law enforcement regime in Kenya. It looks at weaknesses inherent in law enforcement and how they have contributed to road traffic accidents.

Chapter five concludes the discussion and makes recommendations.

CHAPTER TWO

ROAD DESIGNING, CONSTRUCTION AND MAINTENANCE.

2.1 Introduction

This chapter looks at the impact of road designing, construction and maintenance on road safety. The chapter intends to examine the extent to which the state of roads in Kenya contributes to road traffic crashes. It also seeks to examine whether when designing, constructing or maintaining roads in Kenya, the people concerned incorporate road safety components into the process. It begins by describing what an ideal safe road should have, and then makes a general overview of road construction in Kenya .It proceeds to identify weaknesses currently inherent in road design, construction and maintenance in Kenya and concludes by proposing measures that should be put in place to address the identified weaknesses.

The manner in which a road is designed, constructed and maintained has great relevance to safety of people transported. A safe road is one designed to reduce the likelihood of crashes occurring and be forgiving to those that occur⁶⁰. A road designed to reduce crash likelihood should show all road users where they should be and how to use the road safely.⁶¹ A road developed without incorporating safety features has high chances of leading to road traffic crashes. It is therefore necessary that road safety components are incorporated into design, construction and maintenance of a road infrastructure.

⁶⁰International Road Assessment Programme (IRAP) IRAP conducted an assessment of road conditions in Kenya in 2009. The project which was co-sponsored by FIA Foundation, World Bank and Global Road Safety Facility inspected 2559 km of roads.

⁶¹Some of the features associated with infrastructure development that have been associated with increase in road traffic accidents include lack of a holistic approach to network planning , the inadequate and inconsistent provision of non-motorized infrastructure, poor integration of transportation and land use planning, and the inadequacy of public transport planning to reduce risk and exposure. For detailed understanding of this see Robbens H, Everitt P and Mongezi N, The Impact of an inadequate Road Environment on the Road Safety of Non-Motorised Road Users; Crime , Violence and Injury Prevention in South Africa.

The road must be designed and constructed in a way that informs the road users and minimizes the outcome of human error.⁶² A well designed road should allow road users to accurately perceive the demands of the road environment and perform the required road user's task and prevent crashes from occurring.⁶³ A safe road should be a road that warn road users of any possible hazards, informs road users of the type of unexpected conditions that are likely to be encountered, guides road users through sections of a road with sometimes unexpected conditions, controls road users through conflict points or areas of conflict and forgives errant vehicles and behavior of road users involved.⁶⁴

In order to guarantee safety of pedestrians, a safe road should be designed to have, (i) physically separated facilities that eliminate the conflict between vehicles and pedestrians for example, pedestrian bridges, pedestrian pathways and pedestrian underpasses, (ii) integrated facilities where pedestrians and vehicles share the existing road space for example shared zones, school zones, lighting. In order to enhance the safety of pedestrians, the pedestrian facilities must warn road users and pedestrians of each other at potential points of conflict.⁶⁵ The facilities must be unambiguous. Both drivers and pedestrians must understand their obligation to each other. The facilities must also inform drivers of areas where pedestrian safety may be compromised, control the drivers and pedestrian involvement by use of special facilities to provide no surprises to drivers and, define clear travel paths for road users.⁶⁶

A safe road infrastructure should be one that guarantees safety of cyclists. In order to guarantee safety of cyclists and other users of intermediate means of transport, roads should be designed to have facilities that warn and inform other road users of each other's presence at points of potential conflict, and provide separate lanes for the cyclists.⁶⁷

⁶² Supra fn 61

⁶³ Road Environment Safety, A Practitioners Reference Guide to Safer Roads available at http://www.rta.nsw.gov.au/roadsafety/downloads/road_environment_safety_practitionersguide.pdf accessed on 28/2/2011

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Ibid.

A safe road infrastructure should be one that provides for rest places. In order to address the problem of fatigue experienced by long distance drivers, roads should be designed to have road side facilities that allow drivers to pull off the road safely, stop and rest. These facilities should be installed at regular intervals and provide appropriate amenities to encourage long distance drivers to stop without interfering with the flow of other traffic on the road.⁶⁸

In general, roads should be constructed in a way that takes care of all road users (drivers, pedestrians, cyclists, motor cyclists, riders and handcart pullers). It must also have adequate signage to guide road users and minimize conflicts. It is against these guidelines that this chapter intends to discuss road design and construction in Kenya. The objective is to examine the extent to which the safety features discussed in this introduction are incorporated into road infrastructure design and construction in Kenya and the extent to which failure to incorporate these facilities contribute to increase of road traffic crashes.

2.2 General overview of road design and construction in Kenya.

Development and maintenance of road infrastructure play an important role in economic development and poverty reduction in a country. Production costs, employment creation, access to market and investment depends on the quality of road infrastructure.⁶⁹ The importance of road infrastructure for achieving economic development objectives in middle and low income countries is widely recognized. Reports from the UK's Commission for Africa and the UN Economic Commission for Africa have all recommended renewed attention to road transport infrastructure.⁷⁰ Effective road design, construction and maintenance can greatly reduce the frequency and severity of road traffic crashes.

⁶⁸ Supra fn 63

⁶⁹ Wasika W.S K Road Infrastructure Policies in Kenya : Historical trends and current challenges (Kenya Institute of Public Policy Research and Analysis- Infrastructure and Economic Services Division), KIPPRA Working Paper No. 1, 2001

⁷⁰ Dahdah Said, Modeling an Infrastructure Safety Rating for Vulnerable Road Users in Developing Countries (A Dissertation Submitted to School of Engineering and Applied Science of George Washington University, May 2008

Kenya recognizes road infrastructure development and maintenance as one of the key pillars to economic development. Infrastructure development has been listed in the Kenya Vision 2030 as one of the key pillars to development.⁷¹ The vision's objective with regard to infrastructure is to provide cost effective, world class infrastructure facilities and services in support of vision 2030.⁷² Development and maintenance of road infrastructure in Kenya has been guided by policies developed at different stages of the country's development both before and after independence.⁷³ Road development during the first decade after independence was guided by among other policy documents, the first National Development Plan (1964-1970) and the Sessional Paper Number 10 of 1965⁷⁴ on "African Socialism and its Application to planning in Kenya." During this period, there was considerable development of road infrastructure. Infrastructure development during the second decade after independence was guided by various policy documents including the second (1970-1974), third (1974-1978), fourth (1979-1983), fifth (1984-1988) and sixth (1989-1993) development plans, the 1984 National Transport Plan and the 1986 Sessional Paper N0.1 on "Economic management for renewed growth".⁷⁵ Infrastructure development in subsequent years have been guided by several policy documents including Sessional Paper Number 1 of 1986 on "Economic Management for renewed growth," the seventh and eighth development plans (1994-1996) and (1997-2001), the Policy Framework Paper (PFP) on "Economic Reforms" for 1996-1998, the Sessional Paper number 2 of 1996 on "Industrial Transformation by the year 2000, the 1997 National Roads Strategic Plan, and the Roads 2000 strategy among others.

Historically, the road network in Kenya was developed as a subsidiary of the railway system up to the time of Kenya's independence.⁷⁶ Railways were developed for the transportation of bulky commodities and passengers over long distances.

⁷¹Kenya Vision 2030; A Globally Competitive and Prosperous Kenya. Government of the Republic of Kenya. Ministry of Planning and National Economic and Social Council (NESC), office of the President, 2007

⁷² Some of the goals set to realize the objectives of the vision by the year 2030 are; accelerating ongoing infrastructure development focusing on quality, aesthetics and functionality of the infrastructure services development process at all levels of planning, contracting and construction.

⁷³ Supra fn 9

⁷⁴ The main thrust of Sessional Paper no. 10 of 1965 with respect to infrastructure and economic services was public provision, that is, that the Government should play a key role in infrastructure development. It however also recognized the need for private sector participation in certain aspects of infrastructure development.

⁷⁵ Ibid.

⁷⁶Sessional Paper number 2 of 2012 on Integrated National Transport Policy. Ministry of Transport .

Roads were used as a link between the Railways and the European owned large scale farming areas. Little or no interest was accorded to rural areas where subsistence farming was practiced by Africans.

Since independence, measures taken by the government to develop and maintain roads include; (i) selective bitumization of heavily trafficked trunk and primary roads and upgrading of priority earth roads to gravel standards in the 1960's and early 1970's, (ii) development of special purpose roads (SPR) to serve specific areas of economic activities, for example roads serving areas where main cash crops such as tea, coffee, or sugar were grown or roads serving tourist industry, (iii) construction of farm to market rural roads under the Rural Access Roads Programme (RARP) from 1974-1986. The purpose of the RARP was to provide access to social and administrative facilities, promote agricultural development and create employment opportunities, (iv) improvement of low trafficked secondary and minor roads under the Minor Roads Programme (MRP) from 1986 to link rural access roads of higher classes, (v) improvement of heavily trafficked secondary and minor roads under the Graveling, Bridging and Culverting Programme (GBCP) in the 1970's and 1980's. (vi) introduction of Public Road Toll (PRT) in the 1984/85, (vii) introduction of Axle Load Control in 1986 and (viii) introduction of Fuel Levy and transit tolls for road maintenance in 1994 and spot improvement of non-maintainable road sections using a combination of labor and equipment under the Roads 2000 Strategy. This was adopted on the realization that available financial resources were inadequate to provide a full link improvement in the network.⁷⁷

In the year 2001, the Ministry of Roads, with financing from the World Bank engaged a consultant to undertake road inventory and condition (RIC) survey for the classified roads.⁷⁸ The RIC's study lead to the establishment of a data base for classified roads using geographical positioning system. The data base provide a comprehensive road inventory and conditions data.

⁷⁷ Supra fn 76

⁷⁸ Source; Kenya Roads Board Website available at www.krb.go.ke accessed on 28/8/2011

According to the data, Kenya currently has a road network of 160,086 Km⁷⁹ long comprised of 11,189 Kms of paved roads and 149,689 Km of unpaved roads. There has been some improvement in road network condition for classified roads which is currently estimated at 17% good, 51% fair and 3% in poor conditions. However, a majority of unclassified roads are in unmaintainable conditions with 5% good, 22% fair and 72% in poor conditions. Hence a large portion of the network is either failed or in poor condition. The following tables show the road inventory and conditions in Kenya.⁸⁰

Table 4 showing summary of road inventory in Kenya.

Road Class	Paved	Unpaved	Total
A	2772	816	3588
B	1489	1156	2645
C	2693	5164	7857
D	1238	9483	10721
E	577	26071	26649
SPR	100	10376	10476
U	2318	96 623	98941
TOTAL	11 189	149 689	160 886

Source: Kenya Roads Board Website.

⁷⁹ At independence, the total road Infrastructure in Kenya was 45 000 kms. A big fraction of it was not paved. Source Chief Engineer Roads. Ministry of Roads Nairobi

⁸⁰ Kenya Roads Board; Road Inventory and Conditions, available at http://krb.go.ke/index.php/road_conditions accessed on 27/2/2012

Table 5 showing summary of road conditions in Kenya.

	Good	Fair	Poor	Grand Total
Classified	10651	31847	19438	61936
Unclassified	5440	22165	71345	98950
Grand Total	16090	54012	90784	160886
Condition Classified	17%	51%	31%	100%
Condition Unclassified	5%	22%	72%	100%
Condition -All	10%	34%	54%	100%

Source: Kenya Roads Board website.

Currently, road design, construction and maintenance in Kenya are shared among various institutions. These includes the three Authorities formed under the Ministry of Roads; Kenya National Highway Authority 'KeNHA', Kenya Rural Roads Authority 'KeRRA' and Kenya Urban Roads Authority 'KURA', Kenya Roads Board 'KRB', Local Authorities, Kenya Wildlife Services, Kenya Forrest Services, National Youth Services, Members of Parliament through Constituency Development Funds 'CDF' and the private sector.

Generally, the main functions of the three authorities formed under the Ministry of Roads is to maintain, rehabilitate and develop such categories of roads as specified in the Kenya Roads Act⁸¹ 2007. The specific roles of the KeNHA⁸² are; (a) constructing, upgrading, rehabilitating and maintaining roads under its control, (b) controlling national roads and road reserves and access to roadside development, (c) implementing road policies in relation to national roads, (d) ensuring that the quality of the road works is in accordance with such standards as may be prescribed by the

⁸¹ Kenya Gazette Supplement No. 86 of 2007. Government Printer.

⁸² Ministry of Roads and Public Works; Completion Report on Transition Arrangements for Kenya National Highways Authority, Kenya Rural Roads Authority and Kenya Urban Roads Authority; Prepared by Interim Management Committee 2008.

Minister, (e) in collaboration with the Ministry responsible for transport and police department , overseeing the management of traffic and road safety on National roads,(f) collecting and computing all such data related to the use of National roads as may be necessary for efficient forward planning, (g) monitoring and evaluating the use of National roads, (h) advising the Minister on all issues related to national roads, (i) preparing the road networks programmes for all national roads, and (j) liaising and coordinating with the other road authorities in planning and operations in respect of roads.

Kenya Urban Roads Authority and Kenya Rural Roads Authority perform similar functions but in respect to rural areas and urban areas respectively. In execution of their functions, the road Authorities are expected to ensure that; (a) development, rehabilitation and maintenance of the road network is consistent with the economy and set standards, (b) their operations are conducted in accordance with the provisions of the Roads Act, and (c) that financial administration is conducted in accordance with the provisions of the Act.⁸³

Local authorities oversee development and maintenance of roads within their areas of jurisdiction.⁸⁴ Kenya Wildlife Services and Kenya Forest Services are responsible for development and maintenance of roads within the game parks and forests.⁸⁵

Kenya Roads Board is the body responsible for disbursement of funds used for road maintenance and, rehabilitation. Allocation of funds by Kenya Roads Board is pegged on specific categories of roads and; not less than 22% is allocated equally to all constituencies in the country to be administered by the Rural Roads Authority, 10% is allocated equally to all Districts in the country to be administered by the Rural Roads Authority, 40% is allocated in respect of the National Roads to be administered by the Kenya National Highways Authority, 15% is allocated in respect of roads in respect of roads in urban areas and are administered by Kenya Urban Roads Authority, 1% is allocated in respect of roads in National Parks and Reserves to be administered by the Kenya

⁸³ Kenya Roads Board; Road Agencies available at http://krb.go.ke/index.php/road_conditions accessed on 27/2/2012

⁸⁴ Part XII of the Local Government Act provides local authorities with powers and duties relating to roads.

⁸⁵ Kenya Wildlife Service. Strategic Plan 2008-2012 p 1 available at http://www.kws.org/export/sites/kws/info/publications/strategic_plans/strategic_plans.pdf accessed on 27/2/2012

Wildlife Service, a maximum of 2% is allocated in respect of recurrent expenditure of the Board and the balance is allocated annually by the Kenya Roads Board with the approval of the Minister to the road investment programmes derived from the five year road investment programme.⁸⁶

There exist various statutes and instruments that govern the construction and maintenance of roads in Kenya. They include the Kenya Roads Board Act,⁸⁷ the Roads Maintenance Levy No. 9 of 1998⁸⁸, the Public Roads toll Act,⁸⁹ the Public Roads Access Act,⁹⁰ the Kenya Roads Act No. 2 of 2007⁹¹, the Streets Adoption Act,⁹² the Valuation of Rating Act,⁹³ the Rating Act,⁹⁴ the Wildlife Conservation and Management Act,⁹⁵ the Local Government Act,⁹⁶ the Local Authorities Transfer Fund Act,⁹⁷ The Public Procurement and Disposal Act⁹⁸ and to some extent the Agricultural Act.⁹⁹ Road construction is also governed by Road Construction Manuals (RCM).¹⁰⁰

2.3 Safety Concerns with regard to road design and construction in Kenya.

The foregoing discussion paints an ideal picture that should guarantee safety with regard to roads constructed in Kenya. It is evident that Kenya has institutional framework that governs road design, construction and maintenance.¹⁰¹

⁸⁶Source ; Kenya Roads Board.<http://www.krb.go.ke/> accessed on 27/2/2012

⁸⁷Cap 408

⁸⁸ Act No. 9 of 1993 amended in 1994

⁸⁹ Cap 477

⁹⁰ Cap 399

⁹¹ Act No. 2 of 2007

⁹² Cap 406

⁹³ Cap 266

⁹⁴ Cap 267

⁹⁵ Cap 376

⁹⁶ Cap 265

⁹⁷ Act No. 8 Of 1988

⁹⁹ Cap 319

¹⁰⁰Ministry of Transport and Communications (MOTC) of the Republic of Kenya (1981).Kenya Road Design Manual Part III- Government printer

¹⁰¹ The Ministry of Roads alone has three institutions. Infact the institutions are so many that there is likelihood of duplication of duties. For example Kenya Urban Roads Authority and Local Authorities may end up performing similar duties.

However the reality is that most of the roads built in Kenya are constructed without incorporation of safety components. This is in spite of the fact that road constructors are expected to incorporate road safety features during their work. The Road Design Manual prepared by the Ministry of Roads for example, lists road safety as one of the controls and criteria that contractors are expected to consider when designing roads¹⁰². Other considerations include topography, land use and physical features, environmental considerations, road function and control of access, traffic volume and capacity, design speed and other speed controls, vehicle design characteristics and economic and financial considerations.

In terms of road safety considerations, the design manual indicates that safety features applicable to a given type of road should be built into the road during its initial construction. Safety considerations in road design have two main objectives;¹⁰³ (i) to provide design features aimed at preventing accidents and, (ii) to provide design features aimed at reducing the seriousness of accidents when they occur. The manual identifies the following points as key to the prevention of road accidents;¹⁰⁴ (i) provision of physical separation between motor vehicles and non-motorized traffic (pedestrian's , cyclists and animals) and separate facilities for the road users, (ii) provision of a balanced design for example compatibility between the various design elements. (iii) avoidance of surprise elements for the drivers for example no abrupt changes in standards, adequate visibility conditions and proper phasing of horizontal and vertical alignment, (iv) avoidance of situations where drivers must make more than one decisions at a time, (v) provision of design features that reduce speed differential between vehicles for example flat grades and speed change lanes,(vi) proper location and design of junctions with particular emphasis on sufficient sight distance, a minimum of conflict points and clearly defined and controlled traffic movements, (vii) proper design , application and location of traffic signs, roads markings and other traffic control devices, (viii) provision of design elements compatible with traffic volumes, and type of traffic and (ix) provision of proper design for road surface.

¹⁰² Road Design Manual; Geometric design for rural roads, Design Manual for roads and bridges; Part 3 new gravel bituminous and concrete roads, (Ministry of Roads- Chief Engineer roads) 2000

¹⁰³ Ibid.

¹⁰⁴ Ibid.

The manual also outlines safety features that should be incorporated into construction of junctions and roundabouts. In order to guarantee safety at the junctions, the manual provides that;¹⁰⁵(i) a junction should be cited so that the major road approaches are readily available (ii) there should be road signs providing early warnings to junction approaches, (iii) there should be use of traffic islands in the minor roads to emphasize a 'yield' or 'stop' requirement, (iv) there should be use of early and eye catching traffic signs, (v) there should be use of single lane approaches on the minor road in order to avoid mutual sign obstruction from two vehicles waiting next to each other to turn or cross the major road.

The manual expects all design engineers to consider all design controls and criteria in order to arrive at a final design which is in balance with the physical and social environment, which meets future traffic requirements and encourages consistency and uniformity of operation.

In this way, it is possible to eliminate at the design stage any environmental and operations problems which would otherwise increase accidents potential and other detrimental effects and incur costs for remedial measures in future.¹⁰⁶

In terms of maintenance, there exists a road maintenance manual which gives guidelines on how maintenance of roads should be carried out. The document provides for three stages of road maintenance which are; inspection, evaluation and execution.¹⁰⁷This discussion indicates that in terms of procedures for road design, construction and maintenance in Kenya, the Government has been able to develop guidelines that if properly followed should guarantee development of roads with all safety features. Unfortunately, most Kenya's roads have over the years been designed without necessary safety features.¹⁰⁸ The result has been that contractors procured to construct roads in Kenya fail to incorporate safety features as the features are not incorporated at design levels.

¹⁰⁵ Supra fn 102

¹⁰⁶ Ibid.

¹⁰⁷ Roads Maintenance Manual. Ministry of Roads, Chief Engineer- Material Testing and Research. May 2010

¹⁰⁸ Citizens Report Card on Rural Roads: Getting Value for Money on Investment in rural roads infrastructure. Report by National Taxpayers Association. December 2009 p1-3. Available at [http://docs.google.com/viewer=9=qcachekDThRuFE:www.nta.or.ke\(report.special/Kenya-pdf](http://docs.google.com/viewer=9=qcachekDThRuFE:www.nta.or.ke(report.special/Kenya-pdf) accessed on 19/9/2011

One weakness that contributes to this is that the guidelines though elaborate are not anchored in any law. They still exist in a manual, which is not a legal document and whose breach attracts no specified penalties.

Currently, most of Kenya's roads don't have important infrastructure that caters for pedestrians, non-motorized mode of transport (*boda bodas*) and intermediate mode of transport.¹⁰⁹ Pedestrians not only lack pathways but also facilities like foot bridges and zebra crossing signs. Where foot bridges have been erected, they have been sealed with advertisements in all sides making them hiding grounds for criminals and therefore unsafe.¹¹⁰ This has resulted in pedestrians being the leading victims of road traffic crashes in Kenya constituting over 40% of the total number of road traffic victims.¹¹¹ The following table shows classes of person killed or injured through traffic crashes in Kenya between 2005 and 2010.

Table 6 showing classes of persons killed or injured through road crashes in Kenya between 2005 and 2010.

	2005	2006	2007	2008	2009	2009	Total
Drivers							
Killed	251	291	273	326	435	307	1883
Seriously injured	749	815	845	815	1008	867	5099

¹⁰⁹ Intermediate mode of transport have alternatively been referred to as paratransit modes of transport, the unconventional forms of public transport, or the unincorporated modes of transport. See P R, Fanparce and DHA Namder. *A Review of Intermediate Public Transport in Third World Cities*. Transport Research Laboratory. Crowthorne, Berkshire RG45 6AL United Kingdom. 1979

¹¹⁰ During an interview held with the chairman of the National Road Safety Council- Infrastructure Committee in April 2011, it was revealed that the Foot Bridges erected in parts of Nairobi including Mbagathi Way near Kenyatta Market, Langata Road near Wilson Airport junction, and Jogoo Road among others are currently not used by pedestrians because they have turned out to be hideouts for criminals. Source: National Road Safety Council, Infrastructure Committee, Compliance Surveys.

¹¹¹ In Nairobi for example the portion of Mombasa road between Capital Centre and City Cabanas is a black spot that claims lives almost weekly. Source: National Road Safety Council, Infrastructure Committee, Compliance Surveys.(Obtained from the National Road Safety Council Secretariat)

Slightly injured	982	1022	1123	972	1000	7154	12253
Motorcyclist							
Killed	44	34	35	111	263	210	697
Seriously injured	171	155	219	396	842	648	2431
Slightly injured	236	229	227	305	602	295	1894
Pedal cyclists							
Killed	310	310	279	352	362	240	1853
Seriously injured	958	902	754	846	812	641	4913
Slightly injured	1156	1120	882	833	797	495	5283
Passengers							
Killed	714	826	936	799	1257	864	5396
Seriously injured	3884	4629	4912	4504	5422	4992	28343
Slightly injured	7092	6965	8450	7481	5203	6665	41856
Pedestrians							
Killed	1212	1253	1370	1636	1755	1434	8660
Seriously injured	2187	2221	2283	2645	2554	2177	14067
Slightly injured	2875	2492	3100	2571	2223	1569	14830

Source: Traffic Police Department

Lack of infrastructure for cyclists and motorcycle riders has been one the main contributing factor to high rate of road traffic crashes involving users of these means of transport. Infrastructure for non-motorized and intermediate Means of Transport (NMIT's) have not been mainstreamed into the country's transport system despite the fact that use of these means of transport in Kenya is a reality that the Government cannot run away from.¹¹² In the recent years, use of bicycles and motorcycles (*boda bodas*) has greatly increased. By the end of 2011, about 500 000¹¹³ motorcycles were registered. The number has been increasing with a margin of 140 000 motorcycles registered monthly.¹¹⁴ The government has not been able to address the need to develop infrastructure to accommodate movement of these categories of transport. Currently, cyclists and motorcycle riders compete for space along the roads with vehicles. This has led to increase in road traffic crashes leading to setting up of specific wards in different parts of the country to accommodate victims of crashes arising from accidents involving motorcycle riders and cyclists.¹¹⁵

A good example of road constructed without incorporating facilities for pedestrians, cyclists and riders is the Thika Super highway. The Nairobi – Thika highway is a dual carriage way of about 45 kms currently undergoing rehabilitation and expansion.¹¹⁶ The road is part of the classified international trunk road which originates from down town Nairobi and extends to Moyale at the Ethiopian border. It is also an important link on the Great North Trans-African Highway.

The stated objective of the rehabilitation and expansion of the highway is to improve the road services along Nairobi –Thika corridor and enhance urban mobility within the metropolitan area by reducing traffic congestion and, contribute to the development of sustainable urban public transport system for the Nairobi metropolitan area.¹¹⁷

¹¹²Asingo P.O. The Institutional and Organization Structure for Public Transport in Kenya ; Institute of Policy Analysis and Research.(Discussion Paper No. 5 of 2004)

¹¹³Source. Registrar of Motor Vehicles; Road Transport Dept.

¹¹⁴ Ibid.

¹¹⁵ During stakeholders consultative meeting held by the National Road Safety Council from September to December 2011 in various Provinces, the Council was informed that many hospitals particularly those in Nyanza and Western Kenya have special wards for motorcycle and bicycle accident victims. Source: Information obtained from minutes of stakeholder meetings compiled by the National Road Safety Council Secretariat.

¹¹⁶Appraisal Report on Nairobi- Thika Highway Improvement Project. African Development Fund- Infrastructure Department , September 2007 available at <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/KE-2007-087-EN-ADF-BD-WP-REV.1-KENYA-AR-REV.1-NAIROBI-THIKA-HIGHWAY-PROJECT.PDF> accessed on 5/7/2011

¹¹⁷ Ibid.

One of the stated indicative targets of the project is the reduction of an average annual accident rate on the Nairobi-Thika section by 70% from 230 to less than 70 annually.¹¹⁸ It is a paradox that instead of reducing road crash rates as stated, the super highway is already claiming lives even before it is completed and commissioned.¹¹⁹ Currently, driving along Thika super highway is a problem. This is because it has been constructed without provision either for pedestrians, cyclists or other non-motorized means of transport.¹²⁰

The failure to incorporate facilities for non-motorized and intermediate means of transport in Kenya differs from what is obtaining in other countries. Unlike Kenya, which pays lip service to the NMIMTs, China has traditionally emphasized NMIMT. China is the world's largest manufacturer of bicycles and predictably, therefore, has the largest bicycle fleet in the world. As a result, bicycles have been a major mode of transport in China, and their usage only began to decline in early 1990s, due to increased access to more convenient, safer and faster modes of transportation. By 1995, bicycle usage in major cities like Shanghai, Beijing and Guangzhou stood at 33% of all trips.¹²¹

Similarly, countries like Chile, Peru and Philippines, which had largely ignored NMIMTs, are now shifting from motorized transport to the NMIMTs. Chile, for example, constructed a 40km bike line in Santiago City, of which 19 kms was funded by the Global Environmental Facility (GEF). This was meant to facilitate increased bicycle use, ease road congestion and fight environmental pollution.¹²²

Likewise, the World Bank financed an NMIMT project in Lima-Callao, Peru, in the early 1990s. Currently, the GEF is supporting the Lima-Callao project through extension of existing bikeway network to connect public bus system, improved bikeway safety, development of bike parking bays, establishing a credit programme for bicycle acquisition, and bicycle promotion campaigns.¹²³

¹¹⁸ Supra fn 116

¹¹⁹ As at the compilation of this study, it was reported that 51 people, among them 31 pedestrians had been killed along the Thika Super Highway. (See The Star Newspaper of 6th April 2012 p 6)

¹²⁰ Source: National Road Safety Secretariat. Infrastructure Committee safety audit carried out on 1st May 2012.

¹²¹ World Bank Report No. 26444 KE Vol 1-3 2002, Transport Sector Memorandum, Washington DC 2002 cited in Asingo P.O, The Institutional and Organizational Structure of Public Transport in Kenya.

¹²² Ibid.

¹²³ Ibid.

In Philippines, GEF supported the Marikina bikeways project in the city of Marikina through a grant of the US\$ 1.9 million. The project aimed at making bicycles safer and more convenient mode of transport in Marikina city within the metropolitan Manila. The project involved construction of 66kms train and road lanes networks specifically designed for NMIMTs, as well as bicycles parking and traffic calming systems.¹²⁴

The other aspect of road safety features that has not been incorporated into the road construction in Kenya is road signs. These facilities have an important role to play in warning motorists of different aspects of the road, thus enabling them to prepare in advance. Lack of road signs exposes motorists to danger of encountering aspects of the road that need prior preparation thus leading them to end up causing road traffic crashes. Signs indicating where school children cross, black spots, bumps, where animals cross, bridges, road terrain for example steep descent, are very important. Many roads constructed in Kenya currently lack these features yet it is a requirement that they should be incorporated. Other road safety features that are not adequately provided in Kenya's road infrastructure are bumps and other traffic culming facilities particularly in built up areas. The situation is worse in rural areas.¹²⁵

Finally, most of the roads in Kenya have been designed and constructed without provision of infrastructure for stopping and resting by long distance drivers.¹²⁶ They therefore lack places to rest and relieve fatigue. Little wonder that the vehicles are currently one of the leading causes of accidents. Most of them are parked dangerously at night leading to crashes.

¹²⁴ Supra fn 121

¹²⁵ In some rural parts of the Country, people have resorted to erecting their own bumps, particularly in black spot areas. Some of such bumps end up increasing road traffic crashes because they are not erected by professionals.

Source :Records of the National Road Safety Stakeholders meeting held in Kisii and Migori in August 2011

¹²⁶ Source: Records of the National Road Safety Stakeholders conference held in Nairobi at Bomas of Kenya on 19th October 2010 (Obtained from the National Road Safety Council Secretariat)

2.4 Concerns with regard to road maintenance.

There also exist challenges with regard to road maintenance. One challenge is that little effort has been made to incorporate safety features during road maintenance.¹²⁷ The other challenge is that maintenance in some instances is done in compromised manner leading to the maintained and repaired road wearing out within a short duration. This is in spite of the fact that there exists a legal and institutional framework that should ensure that road maintenance is done in a manner that incorporates safety features and guarantees durability to the roads repaired.

Currently, road maintenance is the responsibility of several institutions which include the three Authorities under the Ministry of Roads, Local Authorities, Kenya Wildlife Service, Kenya Forest Service, Ministry of Regional Development and Members of Parliament.

Funding for Road Maintenance is mainly sourced through road maintenance levy. The levy is established under the Road Maintenance Levy Act, Act Number 9 of 1993. The Act empowers the Minister for roads in consultation with the Minister for Finance, by orders published in the Gazette, to impose on any or all petroleum fuels entered for home use in Kenya, a road maintenance fuel levy which may be determined from time to time and in such a manner that the Minister may specify in the order. The Act further provides for a road maintenance levy fund. The fund consists of proceeds from the levy and transit tolls levied under the Public Roads Toll Act. The Act requires all fuel marketers to register as remitters and pay to collectors the levy payable on petroleum fuels entered for home use.

Apart from the roads maintenance levy funds, maintenance of roads in Kenya is also funded through Constituency Development Funds and through donors. It is therefore evident that there are funds set aside to be used for maintenance of roads in Kenya. As observed in the earlier paragraphs, road maintenance has not been able to address the concerns regarding lack of road safety features, yet maintenance would be a good opportunity to incorporate safety features that were not incorporated at design and construction level.

¹²⁷Source: Records of the National Road Safety Council- Enforcement Committee Compliance Audit conducted along Nairobi - Mombasa road to develop data on areas prone to accidents (black spot areas) July 2011. (Obtained from the National Road Safety Council Secretariat)

In some instances, the roads maintained do not last long enough to justify the funds used in maintaining them. Some of the factors that contribute to this compromise include corruption and laxity in inspection when the maintenance is completed.

2.5 Proposed Interventions.

It is evident from this discussion that design, construction and maintenance of road infrastructure in Kenya has not been able to incorporate facilities that guarantee safety. This is in spite of the fact that there exist manuals that make it a requirement that these facilities should be incorporated. This invites the question on whether agencies concerned with road design, construction and maintenance have been thorough in inspecting roads constructed before the constructors are cleared and paid. It may be concluded that inspection and certification of roads completed has not been very effective.

It has been handled in a compromised manner. Yet it is a very important part of road infrastructure development since the government relies on officers charged with inspecting and certifying completion of roads to ensure that only roads built to standard are certified.

There has also been instances where road constructed or repaired get worn out within short a span leading to compromise to safety of people transported.¹²⁸ This shows that road safety audit has not been effectively carried out in Kenya.

In order to address these challenges and enhance safety, it is recommended that the Kenya Government should address the current weaknesses inherent in inspection and certification of roads constructed. Stringent measures should be put in place which includes severe penalties on both the contractors and officers who certify roads that have been certified to be completed without incorporating safety features.

¹²⁸ Supra fn 112

There should be consistent and widespread use of road safety audits¹²⁹ to help in assuring safety outcomes from road improvement projects and designing roads.¹³⁰ In addition, the Government should review its laws and develop comprehensive laws that ensure that infrastructure development incorporates safety features that guarantee safety of all road users.

In order to ensure that safety features are incorporated into designing and construction of roads, there is need to incorporate the current guidelines into the Roads Act and spell out severe penalties that will be meted against contractors who fail to incorporate safety into their work. Additionally, the continued development and maintenance of roads without incorporation of road safety features points to the possibility of corruption involving road designers/ developers and officers charged with inspection and certification of completion of work before payment is made. This should be addressed.

In order to address this challenge, there is need to ensure that road maintenance conforms to the designs. For instance, where design did not incorporate safety measures, there is need to consider incorporating important safety features like road signage and bumps, and pedestrian pathways during maintenance. Finally, there is need to decisively deal with the challenge of corruption that is currently a contributing factor to compromise in quality of road maintenance in Kenya.

In terms of institutional framework, the current institutions appear to be unable to effectively ensure that safety is incorporated into the construction. There is therefore need to consider empowering a separate independent body to be charged with the responsibility of inspecting and certifying that all road safety features are incorporated into design and construction of road infrastructure.

¹²⁹ Road Safety Audits have been defined as the systematic checking of the safety aspects of new highways and traffic management schemes including modifications to existing layouts. See Roads and Highways. Road Safety. The Transport help desk .World Bank project p 3 available at <http://www.worldbank.org/transport/roads/safety/html> accessed on 10/2/2011

¹³⁰ The benefits of road safety audits and safety impact assessment include;(i) minimizing the task of accidents occurring in future as a result of planning decisions on new transport infrastructure, (ii) reducing the risk of accidents occurring in the future as a result of unintended effect of the design of the roads, (iii) reducing long term cost associated with a poor road design, (iv) enhancing the awareness of road safety needs among policy makers and infrastructure designer. See National Cooperation Highway Research Program. Synthesis 336 Available at http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_336.pdf accessed on 10/2/2011

The current mandate of the National Road Safety Council could be expanded to include performing this important function. The National Road Safety Council is a body formed within the Ministry of Transport. The current council was formed through Kenya Gazette notice number 8438 of 12th September 2008. The council comprises of members drawn from the public and private sector and includes representatives from Ministry of Roads, Ministry of Transport, Ministry of Public Health and Sanitation, Ministry of Local Government, the Commissioner of Police, Transport Licensing Board, the Registrar of Motor Vehicles, Motor Vehicle Inspection Unit, Kenya Bureau of Standards, Kenya Roads Board, Kenya Institute of Public Policy Research and Analysis, City Council of Nairobi, Association of Kenya Insurers, Kenya Private Sector Alliance, Association of Motor Vehicles Manufacturers, Matatu Welfare Association, Matatu Owners Association, Institute of Development Studies (UoN), Association of Persons with Disability (APD), Kenya Transport Association (KTA) and Kenya Long Distance Drivers Association.

The main function of the Council as stated in the gazette notice is to advise the Minister for Transport on all matters pertaining to road safety. Specifically, the Council is mandated to; (i) determine and set out goals and objectives for the promotion of road safety work in Kenya, (ii) plan and develop road safety education and campaigns strategy to ensure compliance with acceptable and proven road safety principles ,(iii) coordinate, monitor and evaluate road safety activities programmes and strategies, (iv) develop and maintain comprehensive databases and publish reports on road safety, (v) set standards for road safety enhancement and ensure compliance thereof, (vi) recommend adoption of precautionary measures to prevent road accidents, (vii) enlist aids of all agencies and individuals, public and private who in the opinion of the council are able to promote acceptable and proven road safety principles and, (viii) foster and promote research on road safety.¹³¹

The Council works through three Committees namely, Infrastructure and Engineering Committee, Education and Awareness Committee, and Enforcement and Compliance Committee. The daily operation of the council is managed by a secretarial located at the Ministry of Transport Headquarters

¹³¹Kenya Gazette Notice Number 8438 of 12th September 2008. Government Printer, Nairobi

One of the main challenges that has hampered the efforts of the Council to effectively discharge its mandate is inadequate funding. The other challenge is that the council in its current set up is more of an advisory outfit formed by a gazette notice and not an autonomous body formed by an Act of Parliament. ¹³²There is a need to review the current institutional set up for road design, construction and maintenance with a view to avoiding duplication of roles and consolidate use of available funds.

Finally, the government should ensure that all future road design, construction and maintenance incorporate road safety features discussed in this chapter. Additionally, funds should be set aside to be used in incorporating safety features into the already constructed roads. This should include fitting of road signs, road bumps, pedestrian pathways, cyclist and motorcycle riders' trucks and foot paths among others.

¹³²Source: Interview conducted with the Secretary National Road Safety Council Secretariat on 5th April 2011

CHAPTER THREE

HUMAN BEHAVIOUR

3.1 Introduction

This chapter looks at human behavior as one of the major contributors to road traffic crashes. It specifically focuses on behavior of drivers and all other road users as a contributor to road traffic accidents. The chapter appreciates statistics that indicate that about 85%¹³³ of road traffic crashes occur due to human error. Human error has been defined as the performance of an incorrect or inappropriate action or a failure to perform a particular action.¹³⁴ The chapter begins by looking at drivers training and licensing. It then proceeds to look at vehicle inspection, certification and licensing. Finally, the chapter discusses in some detail behavior of drivers and other road users and how the behavior contributes to road traffic accidents. One of the aspects of human behavior discussed in detail is drunk driving. The rationale behind this is that drunk driving as an aspect of human behavior is one of the causes of road traffic crashes.¹³⁵ The chapter makes several recommendations that should be put in place to address identified challenges.

¹³³Source : Kenya Police. Traffic police Department

¹³⁴Paul Sulmon, Michael Regan and Ian Johnson, Human Error and Road Transport; Literature Review, Phase one. Report No. 256 ,2005 p 4

¹³⁵ Bliss A, King E, Silkok D and Ward P, Drinking and Driving, A Road Safety Manual for Decision Makers and Practitioners. World Health Organizations. 2007. p 3-4

3.2 Training, Testing and Licensing of drivers

Kenya has experienced a steady growth of vehicle population over the years from the time it gained independence to date. The table below gives a summary of growth in vehicle registration in Kenya from July 2006 to January 2012.¹³⁶

Table 7 showing growth of vehicle population in Kenya from 2006 to January 2012

Year	2006	2007	2008	2009	2010	2011	2012
Vehicle population	1,083,007	1,176,577	1,297,520	1,454,249	1,651,257	1,849,911	1,863,632

Source: Kenya Revenue Authority Road Transport Department.

The growth in the number of vehicles and expansion of road infrastructure has also been marched with corresponding increase in the number of drivers. The increase in the number of drivers in Kenya's roads has been accompanied by an increase in the number of road traffic crashes and associated fatalities and injuries, and a consequent high cost to the nation in terms of productivity and health cases.

In the preface to the World Report on Road Traffic Injuries Prevention (2004), the president of Kenya, Mwai Kibaki is quoted as saying:¹³⁷

“Over 3000 Kenyans are killed on our roads every year; most of them between the age of 15 and 44 years. The cost to our economy of these accidents is in the excess of US\$50million exclusive of the actual loss of lives.....road traffic injuries are a major public health problem..... In 2003...the government took up the road safety challenge, it is focusing on specific measures to curtail the prevalent disregard of traffic laws”

¹³⁶ Source: Kenya Revenue Authority; Road Transport Department.

¹³⁷As cited in Preston Chitere; “Public Service Vehicle Drivers in Kenya; Their Characteristics and Compliance with Traffic Regulations and Prospects for the Future, Institute of Policy Analysis and Research, Discussion paper No. 081/2006. p 1

In these remarks, the president alluded to the high level of indiscipline on Kenyan roads characterized by the lack of observation of traffic rules and regulations, high incidences of accidents and high cost of accidents to the economy. Available statistics on causes of traffic crashes in Kenya indicates that human factor is the most significant cause of crashes, accounting for about 85% of the crashes.¹³⁸ Vehicle related factors, road environment factors and other unclassified causes share the remaining percentage. Statistics further show that drivers including cyclists are the primary causes of crashes, accounting for more than 40% of the crashes.¹³⁹ The table below shows the causes of accidents in Kenya between the years 2000 to 2010.

Table 8 showing causes of accidents in Kenya between the years 2000 to 2010

Causes of accidents	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Drivers & M/Cyclists	5432	5371	5331	5741	4257	5444	5646	5433	5087	6075	5284
Pedal cyclist	1409	1371	1680	1510	1369	1545	1408	1288	1343	1257	1159
Pedestrians	3810	3946	3252	2958	2628	3035	2676	3089	2577	2450	947
Passengers	812	795	727	654	505	466	400	604	376	415	401
Animals	75	71	92	82	61	85	81	69	61	107	217
Obstruction	99	86	108	95	132	100	107	107	76	86	94
Vehicle defects	793	165	746	641	491	557	530	600	445	528	489
Road defects	183	165	197	192	174	164	220	260	185	149	131
Weather	24	55	64	80	69	89	86	119	66	95	73
Other causes	1323	1291	1218	1425	1031	914	1047	904	993	1207	976
Total	13960	13280	13418	13378	10717	12399	12201	12473	11509	12369	9771

Source Kenya Police Traffic Department.

¹³⁸Supra fn 34

¹³⁹Ibid.

The figures show that in the year 2010, a total of 9,771 accidents happened in Kenya. Out of this, 5484 were caused by drivers representing 54% of the total accidents caused in the year.

The current institutional framework for training, testing and licensing of drivers in Kenya is placed in the offices of the Traffic Police, the Registrar of Motor Vehicles¹⁴⁰ and driving schools. Training is done by driving schools, most of which are privately owned.¹⁴¹ Testing is done by the traffic police and licensing is done by the Registrar of Motor Vehicles.

The legal regime that governs these functions is the Traffic Act Cap 403,¹⁴² Laws of Kenya and additional legal notices. Part IV of the main Act and part III of the subsidiary legislation gives directions on driver training, testing, and licensing.

The Act provides in Section 30 that; no person shall drive a Motor Vehicle of any class on a road unless he is the holder of a driving license or a provisional driving license endorsed in respect of that class of vehicle. The section further provides that no person who owns or has charge of a Motor Vehicle of any class shall cause or permit any person to drive such Motor Vehicle unless such a person is the holder of a valid driving license endorsed in respect of the class of that motor vehicle.

Section 31 of the Act provides for the conditions for granting a driving license. The section provides that, a licensing officer shall not grant an applicant a driving license endorsed in respect of any class of Motor Vehicle unless the applicant; (a) satisfies the licensing officer that he has passed a test of competence to drive that class of motor vehicle, (b) makes a declaration in the prescribed form as to whether or not he is suffering from any such disease or physical disability which would be likely to cause the driving by him to be a source of danger to the public, and (c) is able to read with glasses if worn, a motor vehicle identification plate at a distance of 25 metres.

Section 33 gives guidelines on ages that qualify to be issued with a driving license. Section 39 gives guidance on conducting of driving tests. It provides that driving tests shall be carried out to test the applicants; (a) knowledge of the rules of the road, (b) knowledge of recognized road signals and

¹⁴⁰ Section 30(4) of the Traffic Act empowers licensing officers appointed by the Registrar of Motor Vehicles to issue driving licenses on behalf the Registrar.

¹⁴¹ National Road Safety Action Plan(2009-2014). Produced by the Government of Kenya in collaboration with the SIDA Roads project 2000. P 36

¹⁴² Government Printer (Revised Edition) 1988

road signs, (c) knowledge of any authorized road or Highway Code, and (d) physical fitness to drive a motor vehicle.

Section 40(1) empowers the Registrar of Motor Vehicles; (a) to revoke the driving license of any person who, in the opinion of the Registrar appears to be suffering from any disease or disability likely to cause the driving by him of a motor vehicle to be a source of danger or (b) order a fresh driving tests in case the holder of the driving license who appears to the Registrar to be so deficient in driving ability as to be a source of danger to the public and if the license holder fails to pass such a test, order that his license be revoked. Part VIII of the Act deals with cancellation and endorsement of driving licenses.

The Act does not have any elaborate provisions for training, testing or licensing of cyclists. Section 89 gives guidance on riding of bicycles and provides that; (a) not more than one person shall be carried in addition to the rider on any bicycle, nor shall any person so carried otherwise other than sitting on a carrier securely fixed to the bicycle or on a step separately fitted to carry a passenger and, (b) no person shall carry on a bicycle a load which because of its size or manner in which it is carried is likely to be a danger to other persons using the road.

Regulation of riding motorcycles is governed by legal notice no.173 of 2009¹⁴³ which provides that; (a) a person shall not ride on a motorcycle of any kind, class or description without wearing a helmet and a jacket that has reflectors, (b) a person who rides on a motorcycle shall provide a helmet and a jacket that has reflectors to be worn by the passenger at all times, (c) every motorcycle shall be insured against third party risks in accordance with the Insurance (Motor Vehicle Third Party Risks) Act and, (d) a person shall not ride a motorcycle unless that person has a valid driving license issued in accordance with the provisions of the Traffic Act.

As is evident from the foregoing, Kenya has institutional and legal frameworks that deal with training, testing and licensing of drivers. There also exists legislation governing operation of cyclist and motorcycle riders. However, drivers and riders have continued to be the leading causes of road traffic crashes in Kenya. Some of the reasons behind this are the weaknesses inherent in the institutional and legal structures.

¹⁴³ Traffic Amendment Rules 2009

Institutional weaknesses that exist include the fact that most driving schools in Kenya are currently owned by private organizations whose main interest is making profit.¹⁴⁴

The private driving schools have fixed training sessions and don't provide specialized training for PSV and commercial vehicle drivers. The result of this has been a high rate of accidents involving PSV and truck drivers. Many of them start as turn boys or conductors and end up as drivers. There exists weak institutional framework for driver training, testing and licensing of drivers. This is unlike other trainings that are well regulated by the government.

The government lacks effective regulation on licensing of driving schools and driver trainers. Currently, many driving schools lack the capacity to effectively train drivers.¹⁴⁵ Additionally, there are no clear guidelines governing qualification of trainers. Most of them lack competence, and are therefore incapable of providing adequate training. The result of this has been that some driving schools operators collude with driving examiners to pass drivers who are not competent to drive.¹⁴⁶

Driver testing and examination is another area that contributes to increase in road accidents in Kenya. Currently, the examination is done by the traffic police officers. It is worth noting that the same traffic police officers are responsible for enforcement of laws governing driving in Kenya.¹⁴⁷ This poses a challenge of conflict of interest. It is also worth noting that examination of drivers is not the core duty of the traffic police department. Currently, officers entrusted with testing of drivers are few and overworked. This compromises their ability to effectively examine prospective drivers.¹⁴⁸

¹⁴⁴ Supra Fn 137.

¹⁴⁵ During crackdowns mounted by officers from the traffic police, TLB, KRA and Motor Vehicle Inspection Unit in different parts of the country in 2010, several PSV and commercial vehicle drivers were found to be operating on fake driving licenses. Source: Transport Licensing Board Secretariat.

¹⁴⁶ Source: Registrar of Motor Vehicles. Road Transport Department.

¹⁴⁷ Traffic Act Cap 403 Rule 13. Government Printer 2010. Edition. Nairobi

¹⁴⁸ Source: Kenya Police Service Strategic Plan 2003-2007. This plan lists shortage of staff as one of the challenges it is experiencing. The document indicates that the police population currently is 1:1150. Available at www.kenyapolice.go.ke accessed on 27/2/2012.

In terms of licensing of drivers, the Traffic Act empowers the Registrar of Motor Vehicles or licensing officers appointed by the registrar to license drivers.¹⁴⁹ The Registrar issues licenses guided by the advice from the examiners (traffic police). The Registrar has no capacity to ascertain the competence of the driver before issuing the license. He relies fully on recommendations made by the traffic police even if the process of examination was compromised. Additionally, the type of driving license currently issued by the Registrar is outdated and easy to imitate.¹⁵⁰ This has led to the existence of numerous fake driving licenses in Kenya leading to increase in road crashes.

The discussion in the foregoing paints a picture of a compromised training, testing and licensing of drivers in Kenya. Currently a sizable number of drivers who operate in Kenya are not properly trained or licensed. Many of them, particularly those who operate public or commercial vehicles are not qualified in terms of training and licensing to operate those vehicles. Driving of public and commercial vehicles are therefore currently dominated by people who should not be entrusted with lives.¹⁵¹ Chitere has established that more often the prospective drivers begin as touts and learn from those who already know how to drive.¹⁵² They then go to driving schools, mainly to book for driving tests. Some even acquire driving licenses without going for the test.

Unlike other professionals in Kenya, driving training and licensing remains one of the areas that are not regulated. Yet it is one of the professions that deal directly with human lives. Given the casual manner in which driver training, testing and licensing is handled in Kenya, it is no wonder drivers are the major cause of crashes in Kenya.

The following paragraph summarizes the challenge of driver training, testing and licensing in Kenya; (a) Drivers are the leading causes of road crashes in Kenya¹⁵³. This is largely attributed to poor training, testing and licensing of drivers, (b) there is no National Curriculum for driving schools to follow. The caliber of instructors and quality of instructions is generally poor. Schools in heavily congested urban centers don't allow for adequate driving skills practice due to low moving

¹⁴⁹ Sec 30 (1)

¹⁵⁰ This contrasts with the practice in other neighboring East Africa community states (Uganda & Tanzania) where use of electronic (smart) driving licenses has been embraced.

¹⁵¹ Supra fn 137

¹⁵² Ibid

¹⁵³ Republic of Kenya, National Road Safety Action Plan 2009-2014 (produced by the Ministry of Transport supported by Gok /Sida roads 2000 project Nairobi 2009)

traffic,¹⁵⁴ (c) PSV and commercial vehicle drivers require little more than holding a standard license for four years before being eligible to drive the public service vehicles. Currently, they are not required to prove that they have been driving for four years period;¹⁵⁵ (d) the police test the students, inspect the schools, license the instructors and enforce the law. This combination of roles potentially creates a conflict of interest,¹⁵⁶ (e) driving fitness including eyesight is not adequately catered for in the driver testing process, (f) the current driver license is manual, can be tampered with and does not have provisions for entering endorsements and tracking drivers,¹⁵⁷ (g) renewal of driver's license is not based on any testing to confirm competence of driver seeking to renew license. It is more of a revenue generation exercise.

Some drivers have acquired driving licenses without having necessary skills and knowledge to use the road safely and properly especially PSV and commercial vehicle drivers. Corruption is also a serious challenge contributing to the low levels of standards.

Training, testing and licensing of motorcycle riders in Kenya paints a worse scenario. As indicated in earlier parts of this thesis, currently, there exist no clear guidelines on training, testing and licensing of motorcycle and bicycles riders. The scanty legislation that exists has more to do with operation than training of operators of this mode of transport.

The exemption of motorcycle importers, from paying duty by government in the year 2009 led to influx of motorcycles and bicycles in the country.¹⁵⁸ Motorcycles currently stand out as one of the most important modes of transport in Kenya, particularly in rural and some urban areas. Statistics indicate that there currently exist 500,000 motorcycles registered in Kenya. Statistics further show about 140,000 new motorcycles are registered in Kenya every month.¹⁵⁹

The influx of motorcycles and bicycles has led to increase of road crashes. Currently, many hospitals in different parts of the country have specific wards set aside for victims of motorcycles

¹⁵⁴ Ibid.

¹⁵⁵ Ibid.

¹⁵⁶ Ibid.

¹⁵⁷ Ibid.

¹⁵⁸ Source: An Interview Conducted with the Registrar of Motor Vehicles on March 2011

¹⁵⁹ Ibid.

and bicycle crashes.¹⁶⁰ This mode of transport has become a major source of road traffic crashes due to several factors. The first is that riders lack adequate training on how to ride and how to use the roads. Most of the driving schools in Kenya have no competence of training of riders. Apart from the Automobile Association of Kenya (AA) and Rocky driving schools, other driving schools have not incorporated the component of training of riders into their programs.¹⁶¹

The other challenge is lack of clear guidelines on licensing of riders of this mode of transport. The Local Authorities that are expected to license them have not given this mode of transport the priority it deserves. This explains why all motorcycles and bicycles currently operating in Kenya are not licensed.¹⁶² In general, the Kenya government has not developed clear policies on training, licensing and regulation of operation of this mode of transport.

In order to address these challenges, it is proposed that the Kenya Government should review the legal and institutional framework for driver training, testing and licensing with a view to streamlining the current set up. One of the interventions urgently needed is the development of well defined syllabus for driver training and testing.

Such a syllabus should have clear guidelines for training of different categories of drivers. For example, there is a need for compulsory additional training for public and commercial transport drivers in addition to the initial general training.

The Government should also remove from the police the responsibility of testing of drivers. This should be contracted to competent organizations like Automobile Association of Kenya under well-defined terms. Additionally, there is need to develop well defined qualifications for driver trainers. This will help in ensuring that drivers are trained by people with proven qualifications and properly vetted by the Government.¹⁶³

¹⁶⁰ Information gathered during the National Road Safety Council of Kenya stakeholder meetings held in Central, Eastern, Western, Nyanza and Rift Valley Provinces during the months of June July and August 2011. Source: National Road Safety Council Secretariat.

¹⁶¹Source: Interview Conducted with the Director General of Automobile Association of Kenya on 28th April 2011.

¹⁶² Source: Transport Licensing Board Secretariat.

¹⁶³ The process of development of electronic driving license alternatively referred to as second generation licenses was started by the Ministry of Transport and Kenya Revenue Authority but stalled. The Government should revive and complete this project as it will help in eliminating unqualified drivers who currently operate on fake driving licenses.

Finally, the Government should review the current driving licenses with a view to coming up with an electronically generated driving license which is tamper proof. This will help in addressing the problem of current existence of fake driving licenses in the market.

Training, testing and licensing of drivers has been very effective in other countries. The following examples are worth noting. In most European countries for example, governments appreciate the important role that driver training, testing and licensing plays in reducing road crashes and enhancing safety. Denmark, Sweden, Luxembourg, Finland, New Zealand and USA therefore have developed programs that govern the subject.¹⁶⁴ They appreciate the fact that driving is a complex task that requires adequate skills and competence. They have elaborate programs that span from pretest training to post training.¹⁶⁵ They appreciate the fact that, driver education should expand from knowledge and skills of vehicle maneuvering and the mastery of traffic situations to include more knowledge about driving goals and context as well as goals for life, risk awareness and self evaluation. They also appreciate the fact that the main aim of driving tests is to enhance road safety.

Driving tests attempt to meet the safety objectives by means of driver selection which means that those who lack the required competence to drive are not permitted.¹⁶⁶ In most of these countries, driving testing focuses on skills regarding basic vehicle maneuvering and mastery of different traffic situations. In terms of training, they have both school based pre training education and school based driver training programs. Additionally, they have driver improvement programs and voluntary post-test courses.¹⁶⁷ In France, Germany and Britain, testing is elaborate and covers pre driver education which is compulsory in all the schools as well as detailed practical and theory testing.¹⁶⁸

¹⁶⁴ Ibid

¹⁶⁵ Jan Capek & Jiri Sloup, Road User Education & Licensing; Road Safety Campaigns (.Traffic Environment and Safety in Society) Sept 2003

¹⁶⁶ Supra fn 165

¹⁶⁷ Ibid.

¹⁶⁸ Ibid.

In Germany, becoming a driver instructor can take thousands of dollars and many years of study.¹⁶⁹ In Britain, exams both oral and written and on the road are so rigorous that a new driver's chance of passing without having enrolled in a professional school is low.¹⁷⁰ Also in Britain, after licensing and some experience, a supplementary course called *plus pass* makes the driver eligible for a big insurances discount (up to 30%).¹⁷¹

It's worth indicating, that the low level of road traffic crashes in these jurisdictions in spite of high level of motorization is attributable to the seriousness with which they handle issues of driver training, testing and licensing including severe consequences of committing traffic offences by drivers.¹⁷² Kenya's driver training, testing and licensing is wanting and calls for urgent review.

3.3 Vehicle Inspection and Certification

This limb examines the current state of vehicle inspection and certification in Kenya. It also looks at the standardization of vehicles (standards for body building). The objective is to examine whether the inspection mechanism is adequate to ensure that all vehicles allowed to operate in Kenya are of sound mechanical condition and of standards that guarantee safety of people transported in Kenya. This discussion is informed by the fact that there have been many instances in Kenya where vehicles get heavily damaged even on slight impact. There have also been many instances where vehicles cause road accidents due to failure of breaking system.¹⁷³ The question that arises then is, is Kenya's vehicle inspection adequate enough to ensure that only vehicles in sound mechanical condition are allowed to operate? Does the vehicle inspection unit have capacity to effectively inspect and certify mechanical soundness of vehicles?

¹⁶⁹ Ibid.

¹⁷⁰ Ibid

¹⁷¹ Ibid

¹⁷² Elvik R, Quantified Road Safety Targets- a Useful Tool for Policy Making, Accident Analysis and Prevention 1993.

¹⁷³ Source: Director of Motor Vehicle Inspection Unit. Nairobi January 2011

Inspection and certification of vehicles in Kenya is a responsibility of the motor vehicle inspection unit. The current Government arrangement places the unit under the Ministry of Transport.¹⁷⁴ However, in terms of operation, the unit works under the police department.¹⁷⁵ The unit is headed by a certifying officer appointed by the Minister for Transport.¹⁷⁶ The main function of the unit is to inspect and certify mechanical worthiness of vehicles. The unit currently conducts several types of inspection which include, (i) initial inspection done to a newly registered vehicle, (ii) periodic inspection which is done to a vehicle annually, (iii) modification inspection which is done to determine whenever there are changes in the length, height, width, maximum pay load and other specifications, (iv) inspection of vehicles involved in traffic accidents, (v) on roads or random inspection which is done to; take the worst polluting vehicles off the road, take unroadworthy vehicles off the road, check on vehicles that do not comply with legal requirement for construction, equipment and use of vehicles, check on vehicles operating without statutory papers or fake documents, make the motoring public aware of the importance of maintenance of vehicles and keeping of the legal emission limits and safety standards all the year.¹⁷⁷

The inspection and certification of vehicles in Kenya is currently not up to standard. Many vehicles operate along Kenya's roads without going to any inspection center. This has been a major contributor of road traffic crashes in Kenya as vehicles operate in poor mechanical conditions thus vulnerable to road crashes. One of the factors contributing to existence of uninspected vehicles is lack of capacity by the inspection unit to cope with demands for inspection. Currently, the unit has 18 centers spread in different parts of the country.¹⁷⁸ These centers are not adequate to meet the demand for inspection and certification of the vehicle population in the country. This is compounded by shortage of well trained personnel.

¹⁷⁴ Organization of the Government of Kenya (issued by the Office of the President) May 2008

¹⁷⁵ Information collected during an interview conducted with the Director of Motor Vehicle Inspection Unit. Nairobi January 2011

¹⁷⁶ Section 3 (3) Traffic Act.

¹⁷⁷ Source: Motor Vehicle Inspection Unit. Likoni Road Nairobi

¹⁷⁸ The centers are located in Nairobi (two centres), Thika, Kakamega, Kisumu, Eldoret, Mombasa (two centres), Malindi, Kisii, Nyeri, Embu, Meru, Kitale, Nyahururu, Kericho, Garisa and Voi.

Currently, the department has a work force of about 100 staffs.¹⁷⁹ Most of the staffs are mechanics with no advanced training on mechanical matters. The available staffs are therefore not able to effectively inspect and certify a total population of about 1.8 million¹⁸⁰ vehicles currently registered in Kenya. Out of the 1.8 million, the unit is currently expected to inspect and certify road worthiness of public service and commercial service vehicles. They are not able to inspect all public and commercial service vehicles in the country.

Table 9 showing number of vehicles inspected in Kenya between 2009 and 2011

Year	Vehicles Inspected	Estimated population to be inspected
2009	165,378	500,000
2010	168,453	550,000
2011	182,974	680,000

Source. Motor Vehicle Inspection Unit

Personal or private vehicles which also need to be inspected and certified are therefore still left out yet they too pollute the environment and cause road traffic crashes. This differs with practice in other African countries like Benin and Cote d'voire which have mandatory inspection for all motor vehicles in the country.¹⁸¹ Currently, a minimal percentage of categories of vehicles expected to be inspected by the unit are taken for inspection. In fact, very minimal number of commercial vehicles like lorries, trailers and trucks are taken for inspection. The failure by owners of this category of vehicles to take them for inspection has been attributed to the fact that they were exempted from complying with licensing and regulatory requirements.¹⁸²

¹⁷⁹Source: Motor Vehicle Inspection Unit.

¹⁸⁰Source: Registrar of Motor Vehicles. Road Transport Department.

¹⁸¹Terje Asum. *Road Safety in Africa. Appraisal of road safety initiatives in five African countries.* (Sub Saharan Africa Transport Policy Programme) The World Bank and Economic Commission for Africa. SSATP working Paper No. 33 (1998)

¹⁸² The Government exempted all commercial vehicles through the 2007 Finance Bill from complying with licensing and regulatory requirements. The result has been that many of the commercial vehicles operators currently don't bother to take their vehicles for inspection. This has resulted into continued accidents involving this category of vehicles. Source: Transport Licensing Board.

Lack of modern equipment and shortage of funds is another challenge that the inspection unit has been grappling with. The unit currently operates on old and dilapidated equipment that were installed many years ago. Little attempt has been made to modernize the equipment.¹⁸³ This has been due to lack of adequate funds. Corruption and existence of fake documents has also been identified as another challenge. All these factors have made it difficult for the inspection unit to effectively discharge its duties. The result has been increase in number of road traffic crashes caused by vehicles which should not be on the roads due to their poor mechanical state.

Building of bodies of vehicles particularly those used for public transport in Kenya has many challenges that lead to poorly built vehicles operating along Kenya's roads. This explains the frequency with which bodies of public service vehicles are ripped off in the event of road traffic crashes in Kenya even at the slightest impact. Currently, there is no clear Government policy on licensing and regulation of vehicle body builders in Kenya. The Kenya Bureau of Standards role is tilted towards setting standards. The bureau has no capacity to inspect body building process up to completion and to confirm that the body is built to a standard that guarantees safety of people to be transported by the vehicle.¹⁸⁴ Lack of clear policy on regulating vehicle body building in Kenya, has led to mushrooming of *Jua-kali* garages involved in body building. Most of these garages are driven by the desire to make profit and therefore have no regard to ensuring that vehicle bodies are built to expected standards.

It is worth noting that a percentage of public service vehicles for example 14 Seater Matatu's that are used in Kenya are not manufactured or built in Kenya, but is imported from outside the country. These vehicles are not designed to transport passengers in the country of origin, but are vans designed to carry goods. This explains the extreme damage that these categories of vehicles have been having whenever they are involved in road traffic crashes. It is however encouraging to note that the Kenya Government banned the importation of new PSV with a sitting capacity of 25 seaters and below with effect from 1st January 2010.¹⁸⁵

¹⁸³ A program started by the Ministry of Transport to computerize facilities used in the unit has not been completed to date. Source: Ministry of Transport. Road Transport Department.

¹⁸⁴ Source: Records of meeting between the National Road Safety Council Infrastructure Committee and Kenya Association of Body Builders held at the Ministry of Transport on 7th September 2011.

¹⁸⁵ Legal notice no 209 of 21st December 2010, The Government is in the process of phasing out public service vehicles with carrying capacity of 25 and below. This policy decision has elicited complaints from current operators of 14 seater

In order to address these challenges and enhance safety along our roads, it is proposed that the Government should consider privatizing vehicle inspection functions. The functions should be contracted to competent garages under well-defined terms. The unit should be left with the function of performing regulatory duties on behalf of the government. These will include checking and ensuring that the contracted garages perform their duties as per the terms of the contract.

It is also proposed that the Government should make it a requirement that all vehicles operating in Kenya, including private vehicles should be subjected to annual inspections. This will help in enhancing safety along Kenya's roads.

In terms of body building, it is proposed that the Government should develop clear guidelines on registration and licensing of body builders.

Additionally, the Government should review existing institutional framework and come up with a body fully mandated to inspect and certify vehicle bodies built in Kenya. This will guarantee safety as it will ensure vehicle bodies are built in accordance with set standards. Implementation of these proposals will help in ensuring that Kenya's vehicles inspection and standardization measure up to acceptable standards currently obtaining in some of the developed countries. The following examples are worth noting.

In Australia, there is a clear and well-designed process of inspection, standardization and certification of vehicles.¹⁸⁶ Before a vehicle can be registered for the first time in Australia, it must comply with the Federal Motor Vehicle Standards Act 1989.¹⁸⁷ This applies to new and used imported vehicles and locally manufactured vehicles. The Motor Vehicle Standards Act requires vehicles to meet the national standards covering safety and emission requirements.¹⁸⁸ The national standards are currently the Australian Design Rules (ADRs). When a vehicle has been certified as meeting the ADRs, it can be fitted with a compliance plate.

who are opposed to the decision. The Government is currently considering reviewing this policy decision with a view to allowing importation of new 14 seaters in the same routes.

¹⁸⁶Vehicle Certification in Australia, by RVCS available at <http://rvcs.dotars.gov.au/cert.html> last accessed on 07/02/2012

¹⁸⁷ Ibid.

¹⁸⁸ Ibid.

The fitting of a compliance plate is mandatory under the Motor Vehicles Standards Act, and it indicates to the registering authority that the vehicle is eligible for registration.¹⁸⁹ The process of obtaining approval to fit a Compliance Plate is called vehicle certification. The certification process in Australia is administered by the Vehicle Safety Standards Branch (VSS). Registration and use of vehicles, roadworthiness of vehicles in service, and approval of modifications to vehicles in service, are administered by the various State and Territory registering authorities.

The Australian vehicle certification system is a type approval system. This means that a vehicle representing the design of that make-model (the "type" of vehicle) is tested to demonstrate compliance with the safety and emissions standard. If the vehicle tested complies then all others of the same design (for example, the same "type") will also comply.¹⁹⁰

Vehicle Safety Standards does not test vehicles itself for certification purposes. The manufacturer is responsible for ensuring compliance with the ADRs. The Australian certification process allows the vehicle manufacturer ("the licensee") to conduct the tests required by the various ADRs. The manufacturer can conduct those tests wherever is convenient to the manufacturer providing, of course, that the tests are conducted properly.

In order to demonstrate compliance with all the applicable ADRs, several test vehicles are usually required, especially for passenger cars and light commercials.¹⁹¹ Having conducted all the appropriate tests, the manufacturer must then submit an application for approval to fit Compliance Plates to the particular make/model of vehicle that has been tested. In order to demonstrate to VSS that the testing has been done correctly and that the vehicle passed, the manufacturer is required to submit to VSS key results from the testing process; that is, a summary of the evidence of compliance to the applicable ADRs.¹⁹²

¹⁸⁹Ibid .

¹⁹⁰Supra fn 186

¹⁹¹Ibid.

¹⁹²Vehicle Certification in Australia, by RVCS available at <http://rvcs.dotars.gov.au/cert.html> last accessed on 07/02/2012

For some vehicle categories, a sample of each of the model variants must also be made available for VSS to inspect. This inspection also satisfies the registration inspection requirements of the States and Territory registration authorities (hence it's called Single Uniform Type Inspection or SUTI).¹⁹³ When VSS is satisfied that the vehicle complies, the Administrator of Vehicle Standards issues a document known as a Compliance Plate Approval. This is the authority to allow the manufacturer to fit compliance plates to vehicles of the specified make/model.¹⁹⁴

The information provided by a manufacturer is subject to checking using quality assurance audits of the manufacturing facilities and inspections of the test facilities. Together, these ensure that the vehicles (or parts of vehicles) tested were constructed to the production design, that the tests were carried out correctly, that the tests showed that the vehicle (or parts) passed the tests, and that all the vehicles being produced are to the same design. Thus, if the design is known to comply, and all of the production is to the design, then all the vehicles produced also comply.¹⁹⁵

Manufacturers who supply limited numbers of vehicles may be able to use the Low Volume Scheme. The low volume scheme caters for manufacturers who supply less than 25 or 100 vehicles per year depending on the category. Vehicles imported into Australia by individuals, or for wrecking, racing may be able to use the Imported Vehicles scheme.¹⁹⁶ Individually constructed vehicles are not required to be certified. They are administered directly by the State and Territory registering authorities.¹⁹⁷

3.4 Licensing and Regulation

This limb looks at licensing and regulation of transport in Kenya and its impact on road safety. The objective is to interrogate the capacity of the licensing bodies to enhance road safety and the weaknesses currently inherent in the licensing procedure. Transport licensing is a very important component of enhancement of road safety and reduction of road traffic crashes.

¹⁹³Ibid.

¹⁹⁴Ibid.

¹⁹⁵Supra fn 192

¹⁹⁶Ibid.

¹⁹⁷Ibid.

A well designed licensing procedure ensures that only vehicles that are properly inspected, certified and registered are licensed to operate. It also ensure that vehicle licensing is guided by proper research on traffic demand thus eliminating wasteful competition or over licensing of vehicles in particular routes which at times lead to breaking of road safety laws as transporters compete for available passengers.

A well designed regulatory regime ensures that there is order and that clear penalties are spelt out to be meted against transporters who choose to violate road safety laws. It also helps in ensuring that transporters give priority to the safety of people they transport.

Licensing and regulation of public transport in Kenya is currently the responsibility of Transport Licensing Board (TLB) established by the Transport Licensing Act.¹⁹⁸ The objective of the Act as provided in the preamble is to provide for the coordination and control of means of and facilities for transport. The board's main function therefore is to license and regulate activities within the road transport subsector. The licensing is done through allocation of routes and issuing of licenses to public transporters who have complied with road safety laws. As a regulator, the board is expected to ensure that all public service vehicles operating in the country are properly licensed and well regulated. However, the reality on the ground reveals that it has not been able to effectively perform these duties. Currently, many public service vehicles (PSV) operate either without licenses or with fake licenses.¹⁹⁹ This has resulted in increase in road traffic crashes as vehicles which do not get genuine licenses from the board are those that have not complied with road safety requirements which include proper registration, inspection and certification.

The inability of the TLB to effectively discharge its duties is due to several factors which include; (i) *Lack of capacity*. The TLB in its current set up does not have the capacity to license all the 90 000 public service vehicles registered in Kenya. The board comprises of a Chairman, nine members and a skeleton staff drawn from the Kenya Revenue Authority and the Ministry of Transport.²⁰⁰ It has no staff stationed in every part of the country to perform the function of licensing. The board therefore has to move from one Province to another to issue licenses.

¹⁹⁸ Cap 404, Laws of Kenya

¹⁹⁹ Source: Transport Licensing Board Secretariat records. Ministry of Transport. Nairobi 2011

²⁰⁰ Section 3 (1) of the Act provides for the Membership of the Board.

This is a cumbersome and frustrating procedure that leaves transporters with no option but to look for alternative licenses to enable them operate. (ii) *Lack of computerization*. The success of any licensing authority in the modern world to a large extent depends on automation. This enables the authority to capture, analyze and use the data to license and regulate. The TLB's operation is currently not computerized. The board is therefore not able to issue licenses based on traffic need assessment.²⁰¹

This has led to over licensing of vehicles in certain routes leading to competition for passengers, which results in breaking of traffic rules by operators. (iii) *Outdated laws*. The TLB Act was enacted in 1938, when the level of motorization in Kenya was still very low. The Act in its current set up is therefore not able to provide for a well-designed licensing and regulatory regime and therefore needs an overhaul.

The other bodies that are authorized to license vehicles are the local authorities. They are expected to license all taxis operating within their areas of jurisdiction.²⁰² This function has not been well performed as most local authorities have not been able to effectively regulate operation of taxis. This has been aggravated by the recent emergence of intermediate modes of transport in different parts of the country for example *Tuk Tuks* and motorcycles. Motor cycles (*boda boda*) have emerged as one of the leading causes of road traffic crashes. As at the end of the year 2011, about 500 000 motorcycles had been registered. It was also reported that there is a monthly increase of 14 000 motorcycles.²⁰³ Currently, there is no clear law governing licensing and registration of this mode of transport. Local authorities that are expected to license them have not developed clear by laws to license and regulate their operation. There is urgent need to address this anomaly.

In order to address the licensing challenges, it is proposed that the Government should review the current institutional framework and consider forming an authority which will be performing the functions of licensing and regulation of public transport. The authority must be properly staffed, funded and be well equipped. Additionally, local authorities should be compelled to embark on registration; licensing and regulation of operation of all non-motorized and intermediate means of transport for example bicycles and motorcycles currently operating on their areas of jurisdiction.

²⁰¹ Source: Interview with the Secretary Transport Licensing Board held on 5th July 2011

²⁰² Section 118A of the Traffic Act Cap403. Government Printer. Nairobi. 2010

²⁰³ Source: Registrar of Motor Vehicles. Road Transport Department. Nairobi.

Finally, there is need to either review the Transport Licensing Act, Cap 404 or repeal it and come up with a more comprehensive and up to date Act that will effectively address licensing challenges and enhance road safety.

3.5 Behavior and Awareness of drivers and other road users

Statistics indicate that 85% of road crashes in Kenya are caused by human error.²⁰⁴ A large percentage of this is attributable to driver behavior and awareness. In a study of road crashes carried out in Leeds, United Kingdom,²⁰⁵ Corten *et al* observed that the main problem among drivers which lead to crashes include; failure to give way, lack of anticipation, loss of control and improper overtaking. They noted that the underlying reason for all this is basically over speeding, obstruction by parked vehicles, poor visibility and wrong judgments. Other causes include drunk driving and lack of knowledge of the high way code.²⁰⁶

Mitula has also observed that the problems identified by Corten also exist in Kenya.²⁰⁷ Kenyan drivers cause crashes mainly because of behavioral and attitudinal problems. These problems include; failure of drivers to give way to other road users, improper overtaking, lack of anticipation, wrong judgments, careless driving ,violation of speed limits, influence of drugs, stress and fatigue due to long hours of work and the quest to meet daily targets set to them by vehicle owners.²⁰⁸ Additionally, many PSV and commercial vehicle drivers are poorly paid, leading to lack of motivation. For example' in a study conducted in 2003 in Eldoret,²⁰⁹ it was found that majority of drivers work on contracts and daily rated /casual basis and a few on permanent self employed basis. 44.6% were employed as casual/temporary, 34.4% on contract and 19.2 % on permanent basis. 0

²⁰⁴ Supra fn 34

²⁰⁵ Cited in Winnie Mitula& Patrick Asingo, Implementing Road Transport Measures in Kenya ; Policy Issues & Challenges (UoN IDS Working Paper No. 545)

²⁰⁶ Ibid.

²⁰⁷ Ibid.

²⁰⁸ Ibid.

²⁰⁹ Odero W, Alcohol Related Road Traffic Injuries in Eldoret, East African Medical Journal, 1998.

Most of them were found to be under paid leading to loss of morale and development of negative attitude towards work. The result of this has been disregard of traffic laws and lack of interest in ensuring that vehicles are driven in a safe manner.²¹⁰

Poor attitude is not restricted to drivers, but is also prevalent among cyclists and riders. One of the reasons why many motorcycle riders currently cause accidents is negative attitude towards work. Most of the riders do not own the motor cycles but are either employed by the owners or hire the motorcycle at a fee on a daily basis.²¹¹ The income that the riders and cyclists get is minimal and not enough to sustain them. They therefore resort to other behaviors like overloading and over speeding to meet daily targets. The result has been increase in crashes involving this mode of transport.

In terms of awareness, it has been indicated in earlier discussion that a good number of drivers and riders lack proper training and legitimate licensing. Many obtain their licenses illegally through corrupt means and therefore lack knowledge of the Highway Code and relevant traffic laws.²¹² The case of motorcycle riders is more dire. Currently, many driving institutions have no programs for training riders. The riders therefore lack knowledge of traffic laws. The current practice is that a person walks into a motorcycle shop, purchases a motorcycle and gets a 30min to 1 hour training and zooms into the road carrying passengers, without any basic knowledge of how to ride or use the road.²¹³ Additionally, there is no law compelling motorcycle dealers to ensure that a person who purchases a motorcycle also purchases riding gears like helmet and reflective jackets. Currently therefore, many motorcycle riders and their passengers operate without using safety gears.

²¹⁰ Ibid.

²¹¹ Supra fn 112

²¹² Source – Kenya Police. Traffic Department available at <http://www.kenyapolice.go.ke/> accessed on 23/07/2011

²¹³ Source: Records of the National Road Safety Council Stakeholders Meeting held from the 3/8/2011 to 9/8/2011 National Road Safety Secretariat. 2011

The other category of the road users is pedestrians and passengers. Currently, pedestrians are leading in terms of road crash victims. Even though this is to a large extent attributed to lack of adequate infrastructure, it is also attributed to lack of knowledge of rules regarding use of roads such as crossing of roads.²¹⁴

Passengers using roads in Kenya have also to some extent been contributors to road traffic crashes. Most of them allow themselves to be overloaded. Some at times urge the driver to speed to enable them reach their destinations on time, and in most cases they don't complain whenever PSV driver who is driving them is over speeding. Additionally, a good number of them don't use safety belts even where the safety belts are provided.²¹⁵

In order to address these challenges, it is proposed that the Government should set aside adequate funds to be invested in road safety awareness education. The National Road Safety Council should spearhead the campaign. The campaign should be conducted both through media, stakeholders meetings and bill boards among others and should target all road users. The Government should also consider incorporating road safety education into the education systems. It should be taught in schools.

There exist examples of places where road safety education and awareness campaigns have been done with success. The following are worth noting. In Australia, New Zealand, North America and Europe, effective awareness campaigns have been able to help in reduction of road crashes.²¹⁶

One of the case studies illustrating this is an awareness campaign that was carried out by the Victorian Transport Commission (TAC) in Victoria Australia.²¹⁷ The program which commenced in the late 1980s represented a fundamental shift away from the existing road safety advertisement programs towards a more systematic approach.

²¹⁴ Ibid.

²¹⁵ Source: Records of the National Road Safety Council Stakeholders Meeting held from the 3/8/2011 to 9/8/2011 National Road Safety Secretariat. 2011

²¹⁶ Peter Elsenaar et al, Road Safety Best practices, Examples and Recommendations, (Global Road Safety Partnership, Nov 2005, Switzerland

²¹⁷ Ibid.

Funding for this program was dramatically increased which in turn led to greater public profile, improved quality of advertisements and an increased role of awareness as a support mechanism for enforcement operations. The TAC main objective was to develop an awareness campaign that had the potential to provoke all drivers to actively rethink their attitude towards drunk driving and speeding. The program had over 65 road safety campaigns covering various themes including drunk driving, speeding, fatigue, wearing of seat belts and motorcycle riding.²¹⁸ The result of this campaign was very impressive. There was substantial decrease in road crashes in Victoria, high level of awareness was created, road crashes was reduced by 12% to 13% when the campaigns were at their highest pick and fatality risks were minimized.²¹⁹ This kind of intervention is still lacking in Kenya.

The discussion on behavior of drivers and other road users cannot be complete without looking at the challenge of drunk driving. This is because many of the major accidents recorded in Kenya have been caused by drunk driving. The next limb of this discussion therefore looks at drunk driving as a major component of driver behavior.

3.5.1 Drunk Driving

One of the causes of road traffic crashes in Kenya related to behavior of drivers is driving under the influence of alcohol or drugs. Drunk driving has been a major cause of many accidents particularly grisly crashes experienced in the country.²²⁰ This is in spite of the fact that drunk driving is illegal in Kenya. The Traffic Act prohibits driving under the influence of alcohol.²²¹ The Act provides that any person who when driving or attempting to drive or when in charge of a motor vehicle on a road or other public place, is under the influence of a drink or drug to such an extent as to be capable of having proper control of the vehicle, shall be guilty of an offence, liable to a fine not exceeding Kshs 10,000, or imprisonment for term not exceeding 18 months or both. Such a person will further be disqualified for a period of 12 months from the date of conviction from holding or obtaining a license.

²¹⁸Voas RB et al, Controlling Impaired Driving through Vehicle Programs: an Overview. Traffic Injury Prevention 2004

²¹⁹ Ibid.

²²⁰Traffic Amendment Bill 2012. Kenya Gazette Supplement No.19 of 2012 2nd read June 2012.

²²¹ Sec 44

The Act further prohibits drinking when driving or in charge of a Public Service Vehicle.²²² It provides that any person who, when driving or in charge of, or during any period of duty in connection with the driving of a public service vehicle, drinks any intoxicating liquor shall be guilty of an offence and liable to a fine not exceeding Kshs 15,000 or to imprisonment of a term not exceeding two years or both. It further provides that any person who gives any driver or any person in charge of a public service vehicle any intoxicating liquor whether for reward or not shall be guilty of an offence and liable to the same penalties as a person guilty of drinking and driving.²²³

It is unfortunate that drunk driving is still a major cause of crashes in Kenya in spite of the existence of these laws. Driving under the influence of alcohol is a very dangerous act. This is due to the effect of alcohol or drugs on a driver. The consumption of alcohol even in relatively small amounts increases the risk of being involved in a crash for motorists, cyclist, riders and pedestrians.²²⁴ Not only does alcohol impair processes critical to safe road use, such as vision and reaction time, it is also associated with impaired judgment and so is often linked to other high risk behavior such as speeding.²²⁵

Alcohol impairs vision, thus posing greater risk in identifying risks in the road environment. Alcohol impairs the main requirement for driving which includes cognitive psychomotor skills and increases the likelihood of high risk behaviors such as speeding.²²⁶

²²² Sec 45

²²³ Sec 46

²²⁴ Biehl Bernard *et al* , Reducing Traffic Injuries Resulting From Alcohol Impairment, (European transport Safety Council) Brussells Jan 1999

²²⁵ Dunbar JA *et al* , Drinking and Driving: Success of Random Breath Testing in Finland, British Medical Journal, 1987

²²⁶ Ogden E.J.D *et al* The effects of Alcohol and other Drugs on Drivers Performance. Traffic injury intervention 2004, p 185-198 and Mascowitz H *et al* Driver Characteristics and impairment at various BAC. National Highway Traffic Safety Administration. US Department of Transport 2006

Because of its psychological effect, it poses difficulty in appropriate coordination, which is required in maneuvering the vehicle especially in poor conditions by affecting the psychometer performance so that the responses are inadequate or inappropriate to a crisis situation.²²⁷ Studies indicate that the amount of injuries sustained from a given crash is higher under alcohol influence.

Drunk driving, sometime referred to as ‘drinking under the influence’ (DUI) or ‘driving while impaired’ (DWI) is considered to be one of the most dangerous anti-social behaviors linked to alcohol consumption, not least because it is considered to be one of the leading causes of road traffic injuries and fatalities.²²⁸

Drunk driving is still a big problem in Kenya. The problem is not restricted to public and commercial vehicle drivers but also spreads to private vehicle users. Many private vehicle users get involved in road crashes as a result of alcohol influence particularly on Fridays, over the weekends and during public holidays.²²⁹ The current increase in the number of crashes involving motorcycle riders is also attributable to drunk driving. Many riders who get involved in crashes ride under the influence of alcohol, thus lacking ability to control the motorcycles.²³⁰

The Kenya government is yet to come up with clear interventions that will help to eradicate drunk driving. The Governments’ attempt to introduce alcometres as means of checking the alcohol content in drivers failed, as use of the gadget was suspended by the court as a result of complaints lodged by those opposed to its use. The main reason for suspending the use of alcoblow was that the use of the gadget was not supported by any legal provisions.²³¹

²²⁷Drinking and Driving; A Road safety manual for decision maker and practitioners, (Global Road Safety Partnership Geneva) 2007

²²⁸A Davis ,A Quimby & W. Odero et al, Improving Road Safety by Reducing Impaired Driving in Developing Countries; A Scoping Study, (unpublished project report) Transport Research Foundation Group of Companies 2003.

²²⁹ Source: Kenya Police: Traffic Police Department.

²³⁰ Ibid.

²³¹Kenneth Wanjohi Gacheru, Albert Chege and Elam Etemo Vs Republic .High Court in Nairobi 2006 (Unreported)

It was also reasoned that the use of the gadget was unhygienic as people, who may be suffering from communicable diseases were being forced to breath into one alcoblow. There was also the concern that the police who were expected to enforce use of alcoblow were abusing the process for example, by way laying people as they leave drinking points and compelling them to breath into the instruments. It should be noted that the courts gave an order stopping use of the gadget. The Government did not challenge the order or pursue the matter to its conclusion.

The Government recently reintroduced use of alcoblow, this time through a legal notice.²³² The legal notice provides that no person shall drive or be in charge of a motor vehicle on a road or other public place if the person has consumed alcohol in such quantity that the blood alcohol concentration in his body is beyond the prescribed limit. The gazette notice further provides that where a police officer in uniform has reasonable cause to suspect that a person driving or attempting to drive or who is in charge of a motor vehicle on a road or other public place; (a) has committed a traffic offence whilst the vehicle was in motion or (b) appears to have consumed alcohol in his body, the police officer may require the person to provide a specimen of breath for the test. A specimen will be deemed to be sufficient where; (a) it is sufficient to enable the test or the analysis be carried out or, (b) is provided in such a way to facilitate the achievement of the objective of the test.

The notice further provides that if an accident occurs owing to the presence of motor vehicles on a road or other public place, a police officer may require the person whom he has reasonable cause to believe was driving or attempting to drive or was in charge of the vehicle at the time of the accident to provide a specimen of breath for breath test. The specimen of breath may be provided at the scene of the accident or at the police station specified by the police officer making the requirement thinks fit. The gazette notice sets the prescribed limit as (a) 35 micrograms of alcohol in 100 milliliters of breath, (b) 80 milligrams of alcohol in 100 milliliters of blood or (c) 107 milligrams of alcohol in 100 milliliters of urine.

²³² Legal Notice Number 138 of 5th October 2011 (Kenya gazette Supplement number 130).

This gazette notice though providing legal justification to use of alcometres has weaknesses that are likely to attract legal challenge. One of the weaknesses is that it does not prescribe the type of breathalysers that should be used. One of the reasons for the failure of the first attempt to use alcoblow was that the type used was unhygienic. It was therefore advisable that drafters of this gazette notice could have indicated a requirement that the type of breathalysers used should be one that safeguards health.

In order to deal with the problem of drunk driving in Kenya, the Government should refine the legal notice 138 of 5th October 2011, with a view to incorporating the requirement that breathalysers used should be ones that safeguards the health of those using them. It should then proceed to immediately start using the breathalizers. There is also need to review the BAC level with a view to bringing it down. Studies have shown that where BAC level is low, rates of road traffic crashes also go down.²³³

The table 10 showing a selection of BAC levels worldwide.

Country	Standard BAC (mg/ml)
Albania	0.1
Australia	0.5
Norway	0.2
Singapore	0.8
Slovak Republic	0
South Africa	0.5
Sweden	0.2
Thailand	0.5
United States	0.8
Zimbabwe	0.8

Source: Blood Alcohol Concentration Limits Worldwide, International Centre for Alcohol Policies; 2002. Report 11

²³³Bernholff and Behrendorf in their work, *The Effects of Lowering the Alcohol Limit in Denmark. Accident Analysis and Prevention* 2002 evaluated the effect in Denmark of lowering the BAC level limit from 0.8%-0.5%. They found a significant reduction in numbers of drivers drinking within two hours of driving and the number of people either drinking nothing or only having one drink before driving increased from 70%-80%.

In terms of legal interventions, the Government should introduce very stiff penalties to be meted on those found to be driving under the influence of alcohol. The penalties should include withdrawing of driving licenses for such people for at least one year. The fines must be deterrent enough to discourage people from attempting to drive under the influence of alcohol. Finally, the Government should mount continuous and sustained awareness campaigns. It may consider partnering with the private sector in this regard. These proposals have been implemented in other countries with success. The following examples are worth noting.

With the realization that drinking and driving is dangerous, the developed nations have concluded that drunk driving is hazardous to society and have made this behavior unacceptable and a serious criminal offence.²³⁴ They appreciate the fact that drunk drivers are not only a danger to themselves but also to their passengers and other road users.²³⁵ Norway was the first country to introduce the first (*per se*) law in 1936.²³⁶ A *per se* law is a law which makes it an offence by itself to drive with blood alcohol content above a certain limit (which is the legal limit). The Norwegians set their legal limit at 50 mg/100 ml. This led to the promulgation of a law adopting blood alcohol content (BAC) levels in many other countries.²³⁷

In central and Eastern Europe, drinking and driving is strictly prohibited with BAC levels controlled at 0.0mg/ml and 0.5mg/ml.²³⁸ Those convicted of driving under the influence of alcohol in all Central and Eastern European countries can have their license revoked after the first offence. In Bulgaria, the authorities may permanently revoke the offender's license after a second offence.²³⁹

²³⁴ Supra fn 233

²³⁵ Ferguson M *et al*, Drink Driving Rehabilitation, The Present Context, Brisbane, Queensland, Queensland University of Technology: Centre for Accident Research and Road Safety, 1999 (Report CR184)

²³⁶ Wagenaar A *et al*, Lowered Legal Blood Alcohol Limits for Young Drivers: Effects on Drinking, Driving, and Driving- after- Drinking Behaviors in 30 States, American Journal of Preventive Medicine 2001

²³⁷ Ibid.

²³⁸ Zwerling C *et al*, Evaluation of the Effectiveness of Low Blood Alcohol Concentration Laws for Younger Drivers: American Journal of Preventive Medicine, 1999.

²³⁹ Ibid.

Australia is another place where interventions have been put in place to reduce drunk driving.²⁴⁰ It embarked on a sustained program to tackle drinking and driving from the mid-1970s onwards. Substantial research information on the impairments effects of alcohol was collected and thus led to support for legislation setting out a maximum BAC level for drivers. Following adoption of legal BAC limits law, large scale police enforcement of BAC limits was undertaken in the 1980s.²⁴¹ This was supported by a range of other interventions including publicity, community announcements, and community activity programs, variations in alcohol licensing and distribution arrangements for alcohol.

There was also ongoing monitoring of performance involving blood tests on drivers involved in the crashes. By the year 2005, alcohol as a factor in crashes had been reduced almost by half and community attitude towards drunk driving had been changed substantially so that there developed a strong community view that drunk driving is socially irresponsible.²⁴²

In France, political commitment led to drastic reduction of road crashes. In 2002, French President Jacques Chirac declared publicly that road safety would be one of the three major priorities of his presidential mandate.²⁴³ Due to this policy pronouncement, France road safety performance between 2002-2004 greatly improved and road crash deaths decreased by 32%. This was attributed to a combination of measures focusing mainly on speeding and alcohol impaired driving. With respect to alcohol related crashes, the measures taken included reducing the permitted BAC level from 0.08 set in 1978 to 0.5 for private vehicle; and 0.2 for commercial and bus drivers. Enforcement was increased. For example, breath tests were increased by 15%. As a result, alcohol impaired driving decreased dramatically with almost 40% accidents in 2004 compared to 2003. 38% of lives saved between 2003 and 2004 were attributable to improved behavior in terms of alcohol impaired driving.²⁴⁴

²⁴⁰ Johnson IR. The Effects of Roadway Delineation on Curve Negotiation by Both Sober and Drinking Drivers. Melbourne, Victoria, Australian Road Research Board, 1983 (Report ARR 128).

²⁴¹ Ibid.

²⁴² Ibid.

²⁴³ European Drivers and Road Risk-SARTER3. Arcuiel, France 2004 Available at <http://sartre.inrets.fr/english/satrez3E/Booklets/english/Pager.htm> last accessed 18th Sept 2011

²⁴⁴ Ibid.

In South Africa, drunk driving has remained a challenge for many years. Here, the problem is not restricted to public and commercial vehicles,²⁴⁵ but also covers private vehicle owners and university students.²⁴⁶ However impressive efforts have been made in South Africa to address this challenge. The South African government has been able to initiate several programs.

One of the interventions made is collaboration between the South African Breweries and the law enforcement agencies.²⁴⁷ Under this program, the South African breweries (SAB) have been able to open state of the art alcohol evidence centers (AECs) in different parts of the country. The AECs are equipped with the necessary equipment to detect a driver's breath alcohol concentration level accurately, through a single breath sample. To date, 15 AECs have been open around the country effectively covering most major centers in South Africa.²⁴⁸

The accuracy of the data collected at these centers has dramatically improved the prosecution rates of those detained under suspicion of driving under the influence of alcohol. The equipment supplied to the centers includes; breathalyzers, a close circuit television network and a server to monitor the testing process. The breathalyzers are able to take an instant and accurate reading of an individual's alcohol level. The reading is then used as evidence to secure a conviction of drunk driving. These efforts have contributed to reduction in drunk driving fatalities in the areas where they are most prevalent.²⁴⁹

The other program introduced by SAB is the sponsorship of the South Africans against Drunken Driving (SADD) program. This program has been concentrated in universities reaching tens of thousands of students through a peer education approach. The aims of this program has been; (a) to change attitudes so that 'friends don't let friends drink then drive', (b) to teach young people about the effects of alcohol on driving skills so that they can make a responsible decision and choose not to drink and drive, (c) to teach young people about the harmful effects of alcohol abuse and advice on alternatives, (d) to bring down the high injury and death rate as a result of drunken driving in

²⁴⁵ Mock C et al, Role of Commercial Drivers in Motor Vehicle Related Injuries in Ghana. Injury Prevention, 1999.

²⁴⁶South Africa Breweries Ltd, Leading the Way in Tackling Alcohol Abuse.

²⁴⁷ Ibid.

²⁴⁸ Ibid.

²⁴⁹Toomey TL *et al*; Qualitative Assessment of Training Programs for Alcohol Servers and Establishment Managers. Public Health Reports, 2008

the student population group. The efforts of SADD have led to reduction of road crashes in South Africa.

It is evident from this discussion that in the developed and some developing economies where road safety has been enhanced; there has been serious and well thought out interventions. These economies identified drunk driving as a major challenge and accorded it the seriousness it deserved. For Kenya to be able to reduce road crashes, it must recognize drunk driving as one of the serious contributors to road crashes and make deliberate attempts to eradicate it

CHAPTER FOUR

ENFORCEMENT OF TRAFFIC LAWS.

4.1 Introduction.

This chapter discusses enforcement of traffic laws and its relationship to road safety in Kenya. The chapter appreciates the important role played by enforcement in enhancing road safety and reducing road traffic crashes not only in Kenya, but also in other parts of the world. The chapter looks in some detail at corruption as a contributing factor to laxity in enforcement of traffic laws. The chapter further looks at other factors that contribute to poor enforcement of traffic laws. These include conduct of courts and types of fines currently levied against traffic offenders.

Traffic law enforcement has been defined as the area of activity aimed at controlling road user's behavior by preventative, persuasive and punitive measures in order to effect the safe and efficient movement of traffic.²⁵⁰ It has also been defined as a function that includes all police activities relating to the observation of traffic violations and the police actions to be taken, such as warning, reporting, summoning and arresting.²⁵¹ The specific components of the actual process of traffic law enforcement are; (i) legislation which specifies the laws and regulations governing the safe use of traffic systems by road users, (ii) traffic policing which ensures compliance to the legislations by road users and, (iii) legal sanctions which imposes punishment on the road users who violate the legislation. While all these three components are important in determining the impact and effectiveness of traffic law enforcement systems, it is the actual policing activities of the traffic law that are of pivotal importance.²⁵²

²⁵⁰S. O Mohammed and F.J.J Lubuschagne, "Can Draconian Law Enforcement Solve the South African Road Safety Crisis?" Infrastructure Systems and Operations, Built Environment, CSIR, Pretoria 0001.

²⁵¹Dominic Zaal, Traffic Law Enforcement: A Review of the Literature, 1994 Report no.53, Institute for Road Safety Research, Monash University Accident Research Report.

²⁵² Ibid.

The traffic police in enforcing traffic laws are expected to fulfill a wide variety of roles that enhance safety of people using roads. Road policing is expected to perform the following important functions.²⁵³

(i) Deter illegal, dangerous and careless behavior on the road

The visible enforcement of road traffic law is an effective deterrent to dangerous behavior. If drivers and riders believe there is less chance of being detected and prosecuted, they are more likely to behave dangerously which will mean more road crashes and more deaths and injury. The very presence of a police vehicle has an effect on driver behavior.²⁵⁴

(ii) Detect illegal, dangerous and careless behavior on the road

The number of convictions for motoring offences demonstrates that there is a high level of illegal activity on the roads. These figures under-estimate the actual number of offences as many are not detected. Higher levels of roads policing will result in more road criminals being detected or deterred with a resulting decrease in collisions and ultimately casualties.²⁵⁵

(iii) Identify offenders

Investigating crashes enables those who have behaved illegally and dangerously to be identified and prosecuted.²⁵⁶

(iv) Identify the causes of crashes

The data collected by the Police enables crash trends to be identified and monitored so that other road safety activities can be targeted appropriately. This data helps to form road safety policy. For example, it identifies topics for education campaigns or research. The Police also advise Highway Authorities on road engineering schemes and road design.²⁵⁷

²⁵³The Royal Society for prevention of Accidents “ Road Policing and Road Safety” A Position Paper, 2004

²⁵⁴Ibid.

²⁵⁵Ibid.

²⁵⁶Ibid.

²⁵⁷Ibid.

(v) Change the attitudes of road users

Enforcement plays an important role in educating the road-using-public and helps to change social attitudes.²⁵⁸

(vi) Educate road users

The Police work with other agencies to conduct education campaigns. When a new law is to be introduced, the Police will normally be raising awareness in advance, and then warn offenders for a short period before starting to issue fines or tickets. The Police are often directly involved in training schemes. A good example is when the Kenya Government introduced legal Notice No.161 of 2003. The police was part of the Government team that was involved in educating vehicle owners on the content of the legal notice and the need to comply with the provisions of the law²⁵⁹.

(vii) Prevent other forms of crime

Targeting traffic offenders detects and disrupts other forms of crime. Research²⁶⁰ shows that traffic offenders are more likely to be involved in other criminal activity and that "targeting serious traffic offenders could be used as a tool to disrupt mainstream crime". The research also states that "traffic officers have a dual role in the detection of both traffic and mainstream criminal offences". Another study²⁶¹ found that about 25% of motoring offences are committed by drivers who have also committed non-motoring offences.²⁶²

²⁵⁸Supra fn 253

²⁵⁹ The Legal Notice has been referred to as the Michuki rules in reference to the late Hon. John Michuki, who was the Minister for Transport when the rules were gazetted. The Legal Notice provides for fitting of speed governors and safety belts in public and commercial vehicles, reduction of carrying capacity of PSV vans to 14 passengers, employment of PSV drivers and conductors on permanent basis, vetting of all PSV drivers and conductors and painting of dotted yellow lines in all matatus. The legal Notice also makes it a requirement for all PSV drivers and conductors to have uniforms. Source: Records of the Transport Licensing Board Stakeholders awareness campaign following the introduction of the legal Notice No. 161 of October 2003.

²⁶⁰The Criminal Histories of Serious Traffic Offenders: Home Office Research Study 206: 2000 available at <http://library.npia.police.uk/docs/hors/hors206.pdf> accessed on 3/4/2012

²⁶¹Broughton: The number of motoring and non-motoring offences: TRL 562 available at http://books.google.co.ke/books/about/The_Number_of_Motoring_and_Non_motoring.html?id=62ViHQAACAAJ&redir_esc=y accessed on 3/4/2012

²⁶² Ibid.

viii) Identify and Remove Dangerous Vehicles

The traffic police in Kenya have been participating together with Government agencies in conducting crackdowns (road side inspection) and to monitor compliance with road safety laws. Usually, a substantial proportion of the vehicles impounded during these crackdowns have serious defects or their drivers have contravened traffic regulations.²⁶³

4.1 Extent to which traffic law enforcement has been effective in enhancing road safety and reducing road accidents.

As has been indicated in the foregoing paragraphs, the main objective of traffic law enforcement is the enhancement of road safety. An effective traffic law policing helps in accident reduction and maintenance of law and order among road users. Kenya has continued to lose an average of 3000 lives annually.²⁶⁴ It can be safely argued that a key contributor to continued loss of lives along Kenyan roads is weakness in enforcement of traffic laws. Enforcement of traffic laws in Kenya therefore currently does not measure to expected levels. This has resulted in continued violation of traffic laws by traffic offenders leading to continued loss of lives along Kenya's roads. The following paragraphs discuss these challenges.

Enforcement of traffic laws in Kenya is currently the function of police as is provided for in section 16 of the Police Act,²⁶⁵ and other enabling statutes.²⁶⁶ Currently, the traffic police department is the body mandated to enforce traffic laws. However, local authorities are also mandated to enforce aspects of traffic laws within their areas of jurisdiction.²⁶⁷

²⁶³Source: Kenya Police, Traffic Department.

²⁶⁴ Ibid.

²⁶⁵Cap 84, Laws of Kenya (Revised and Published by the National Council for Law Reporting-2010)

²⁶⁶Local Government Act-Cap 285 Laws of Kenya, the Traffic Act-Cap 403 laws of Kenya and the Transport Licensing Act Cap 404 Laws of Kenya . The Local Government Act Cap 265 empowers local authorities to develop bylaws for regulation of transport within their areas of jurisdiction. This power is further provided by sections 72A and 72B of the Traffic Act Cap 403. Section 181A of the Act empowers local authorities to regulate operation of taxi cabs. Section 25 of the Police Act empowers the Police to inspect licenses and vehicles. Sec 26 of the Transport Licensing Act Cap 404 ,empowers the police to stop and inspect vehicles. Scetion153 of the Local Government Act, Cap 265 empowers local authorities to engage in transport activities.

²⁶⁷Sec .72A and 72B of the Traffic Act

Traffic police is a department in the Kenya police force. Initially, its mandate was to monitor and maintain records of traffic related cases. It was not until 1974, that it became a fully fledged department of the Kenya police and moved to the current headquarters along Thika road.²⁶⁸ In 1985 it changed its name to Police Traffic Department.

The department falls under the command of the Traffic Commandant who is responsible to the commissioner of police for the administration, training and efficient running of the department. The functions of the traffic department are; enforcement of traffic laws and regulations, apprehension and prosecution of traffic offenders, prevention of road traffic accidents, investigation of road traffic accidents and maintenance of data, creation of road safety awareness to the public through the media, lectures in schools and public institutions /public places, collection of accident statistics/ data including research country wide, disseminating information of traffic matters to the press/media and public in general, enforcing the axle load regulation at the weigh bridges in conjunction with the Ministry of public works, testing of drivers and issuance of certificate of competence, monitoring the movement of all government vehicles, and provision of free flow of traffic along the roads.²⁶⁹

The Local Authorities also have limited role to play in enforcement of traffic laws in their areas of jurisdiction. The other important Government Department which has a role to play in traffic law enforcement is the courts. This is with regard to fining of traffic offenders. Enforcement of traffic laws in Kenyan courts is currently dogged with several challenges which include corruption, minimal fines, lack of support from courts and lack of proper training of traffic officers.²⁷⁰

²⁶⁸ National Task Force on Police Reforms in Kenya chaired by Justice (RTD) Phillip Ramsey. (Presented on October 2009) Government Printer p 52-53

²⁶⁹ Ibid.

²⁷⁰ Final Report of the Task Force on Judicial Reforms. Chaired by Hon Justice William Ouko: July 2010. Government Printer. Nairobi. P 75

Enforcement of traffic laws by traffic police officers is currently below expectation. This is due to several factors which include the following.

4.1.1 Lack of capacity.

Capacity is discussed here mainly in terms of training and equipment. Training is key to performance of functions by any individual or organization. Traffic police officers, currently get trained at Kiganjo and Ngong hills. The content of the training is not elaborate enough to enable them cope with the modern methods of traffic law enforcement.²⁷¹ This is aggravated by the fact that in many instances, police officers who have no background in traffic law enforcement are at times deployed to carry out traffic duties thus leading to compromise in performance of duties.²⁷²

The other aspect of lack of capacity is with regard to facilities needed to enable traffic police officers discharge their duties effectively. Lack of these important facilities has to some extent hampered the effective enforcement of traffic laws.²⁷³ For example, lack of a vehicle to be used means that traffic police are not able to respond to emergencies because they have to rely on vehicles that belong to other departments.²⁷⁴ Lack of automation of the department has made it difficult for the traffic police in Kenya to use modern technology to enforce traffic laws.

Availability of these facilities is important in enforcement of traffic laws. Use of speed recording devices for example has been instrumental in helping to reduce crashes in many countries.

This is due to several advantages associated with the use compared to traditional ways of enforcing traffic laws.²⁷⁵“(i) they increase the probability of detection without overextending the frontline police resources since police do not have to spend long periods of time detecting and apprehending speeders.

²⁷¹Source: Interview conducted with the Traffic Commandant on January 8th 2011

²⁷² Ibid.

²⁷³ Ibid.

²⁷⁴ Currently, the entire traffic police department has not more than ten (10) vehicles. Some Provinces like Western Province have no single vehicle. The traffic officers therefore have to rely on assistance from other police departments whenever they need transportation. This makes it difficult to respond to emergency cases. Source: Kenya Police. Traffic Department.

²⁷⁵ Ibid.

This also means that ‘enforcement pause’ is eliminated, that is ,the device does not need cease operation temporarily while the speeding driver is apprehended,²⁷⁶(ii) they increase road users perception of getting caught through direct observation, associated publicity and/or receiving a ticket when they are unaware that they have been detected, hence the device has a high deterrent effect,²⁷⁷(iii) they increase the perception of fairness of enforcement by taking ‘officer discretion’ out of the question,²⁷⁸ (iv) they have been reported to lead to fewer disputes by motorists regarding their fines and hence provide a more efficient ticketing and payment process,²⁷⁹ (v) they can be used in traction where patrol vehicles cannot safely and effectively be deployed.^{280,,}

In order to address these challenges, the Government should review the syllabus currently used for training traffic officers with a view to incorporating subjects that will enable them to use modern facilities to enforce traffic laws. This should include training in information technology, basic mechanics, law and public relations.

To address the challenge posed by lack of adequate equipment, the government should consider setting aside adequate funds to be used in purchasing vehicles, speed cameras, speed guns and to help in automation of the traffic department. Automation has been used in other countries with great success. Britain is a leading example of places where use of technology to reduce road traffic crashes has been successful.²⁸¹

Under the ‘casualty reduction program’ Britain has been able to use modern enforcement methods to reduce road carnage by impressive margins.²⁸²

Australia is another place where use of automation has helped in reducing road traffic crashes.²⁸³ Here, use of advanced automatic devices helped to reduce road traffic crashes drastically.

²⁷⁶Bredan Callaghan et al. Report on the use of safety cameras: working group on speed cameras. July 2005 available at www.justice.ie/en/JELR/safetycameras.pdf/files/safetycameras.pdf accessed on 3/4/2012

²⁷⁷ Ibid.

²⁷⁸ Ibid.

²⁷⁹ Ibid.

²⁸⁰ Ibid.

²⁸¹ European Transport Safety Council 1999, Police Enforcement Strategies to Reduce Traffic Casualties in Europe.

²⁸² Ibid.

The Netherlands provides another example. Here, use of several speed control schemes based on fixed and mobile photo-radar cameras, video cameras, automatic warning and automated office citation processing has been helpful. Use of automatic speed warnings helped to reduce road traffic crashes by 35%.²⁸⁴ Kenya recently gazetted laws legalizing the use of speed cameras and breathalyzers. However the traffic police are yet to start using these gadgets.²⁸⁵

4.1.2 *Inadequate penalties.*

Penalties have an important role to play in enforcement of any law. Stiff penalties not only serve as a punishment to traffic offenders but are also important in deterring those intending to commit traffic offences. Limited penalties on the other hand have no impact on offenders as offenders have no problem paying such penalties.

Effective enforcement of traffic laws depends on (i) the perceived risk of detection, (ii) the severity of the punishment and, (iii) the immediacy of the punishment. In other words, more drivers are only deterred from offending to the extent that they think they will be caught and then severely and swiftly punished when caught.²⁸⁶ There has been an attempt to develop legislation to provide for instant ticketing for minor traffic offences in Kenya.²⁸⁷ This desire is yet to be realized.

One of the challenges to enforcement of traffic laws in Kenya is the fact that penalties spelt out to be meted on traffic offenders do not correspond to the type of traffic offences committed. Most of them are minimal. This has resulted in motorist continuing to commit traffic offences with impunity.

²⁸³ Australian Transport Safety Bureau 2006, International Road Safety comparisons: The 2004 Report, Canberra City, Australia Capital Territory.

²⁸⁴ The impact of enforcement on accidents The "Escape" Project Contract N°: RO-98-RS.3047

²⁸⁵ Legal notice no. 138 of 5th October 2011 (Kenya Gazette Supplement No. 130)

²⁸⁶ Foucault, M.(1997) Discipline and Punish, Birth of the prison (Transl.Sheridian,A) AllenLane

²⁸⁷ Source: Ministry of Transport. Road Transport Department. Nairobi.

The following tables show penalties on traffic offences in Kenya for the years 2010 and 2011

Table 11 showing total of traffic cases and fines in the year 2010

2010	No. of cases	Fines
January	49,682	93,308,786
February	56,948	90,375,204
March	49,099	82,227,202
April	57,729	101,213,217
May	50,239	93,906,447
June	60,020	93,671,460
July	46,441	89,831,193
August	61,845	105,629,685
September	60,227	83,893,571
October	58,568	92,643,626
November	52,983	96,412,759
December	60,822	104,532,006
Totals	664,603	1,045,417,954

Source: Kenya Police; Transport Department.

Table 12 showing total of traffic cases and fines in the year 2011

2011	No. of cases	Fines
January	56,237	99,196,771
February	59,362	92,965,426
March	72,926	96,059,598
April	83,480	106,654,040
May	65,420	98,735,660
June	55,516	93,736,711
July	51,992	105,057,416
August	80,421	104,101,733
September	58,736	92,293,728
October	50,753	99,696,350
November	57,834	96,560,450
December	64,566	109,889,470
Totals	757,243	1,194,567,353

Source : Kenya Police. Traffic Department

The table shows that in the year 2010, a total of 664,603 traffic cases were prosecuted and 1,045,417,954 shillings was collected as traffic fines. This translates to an average of 1,573 shillings per traffic offence. In the year 2011, a total of 757,243 cases were prosecuted and 1,194,567,353 shillings was collected as fines. This translates to an average penalty of 1,577 shilling per a traffic offence.

An average of less than 2000 shillings for a traffic offence is very low compared to the impact of some of the offences like dangerous driving or over speeding. The following cases further illustrate the point that penalties on traffic offences are minimal and do not deter motorists from committing traffic offences.

In *Republic v Zachariah Ndeko Kyoli*,²⁸⁸ the accused was charged with causing death by dangerous driving contrary to section 46 of the Traffic Act. On 31st October 2006, at about 6.45 am along Kimathi road near Zimmerman, being the driver of GK A 953 F, he drove the said vehicle in a manner that was dangerous and hit a vehicle registration number KAL 539 R causing death of one passenger Pascal Nzumu. The accused was found guilty and was charged a fine of 20,000 or imprisonment for a term not exceeding six months.

In *Republic v Joseph Mwangi Thiongo*²⁸⁹ the accused was charged with nine counts of causing death by dangerous driving contrary to section 46 of the Traffic Act. While driving a Mitsubishi canter registration number. KAA 380, the accused rammed into another vehicle KAN 094L. The impact pushed this matatu forward and it rammed into another matatu KAR 241R.

The accused did not stop after the collision but proceeded on his journey. The two matatus due to the force of the impact were pushed off the road and overturned. As a result, several passengers were injured and nine others died namely; John Wanyama Nyongesa, Thomas Kimani Njoroge, Queen Zadok Okolo, Noel Mwendwa, Denis Mwendwa, Henry Njoroge, Kinyanjui Njenga kariithi, Ngugi John Ileri and Margaret Wangare Chege. The accused was convicted of the charges and fined 20,000 for each of the nine counts, failure to which he was to serve ten months in prison.

*George Mwangi Nguny v R*²⁹⁰, the appellant appealed against decision of the first class District Magistrates Court (Nyeri) on three counts; (i) causing death by dangerous driving contrary to section 46 of the Act, (ii) driving a motor vehicle on the road under the influence of drinks or drugs contrary to sec 44(1) and (iii) failing to stop after an accident contrary to section 73(1). On count one, the appellant was sentenced to two years imprisonment, on count two he was fined Kshs 1,000 in default six months imprisonment and on count three, he was fined Kshs 3000 in default. On appeal the appellate Judge reduced the sentence from two years to 12 months.

²⁸⁸ Traffic case No. 25036 of 2007. The Chief Magistrates Court in Nairobi P 17 (Unreported)

²⁸⁹ Traffic case No. 17553 of 2001 Chief Magistrates Court in Nairobi (Unreported)

²⁹⁰ Criminal Appeal No. 96 of 1992, High Court of Nyeri (Unreported)

In *Republic v Shadrack Abongo Okoth*,²⁹¹ the accused was charged with ten counts of causing death by dangerous driving contrary to section 46 (1) of the Traffic Act. On 21st July 2008 at around 4.30 am along Naivasha Nairobi road in Kiambu District within Central Province, being the driver of a motor vehicle registration number. KAW 145Y Isuzu bus, he drove the vehicle dangerously and caused the death of ten people who were all passengers in a vehicle. The accused was convicted and fined Kshs 10 000 on each of the counts or four months in default.

In *R v Johnson Waiganjo Njuguna*,²⁹² the accused was charged of causing death by dangerous driving contrary to section 46 of the Traffic Act Cap 403, Laws of Kenya. The facts of the case were that on 16th October 2003, at around 8.00 pm in kariobangi round about in Nairobi, the accused driving a vehicle registration number. KAK 538U Isuzu matatu ran over and killed a pedestrian. The accused did not bother to stop. He was charged Kshs 70,000 or jail term of one year.

In *R v Joseph Maina Nyambura*,²⁹³ the accused was charged of causing death by dangerous driving contrary to section 46 of the Traffic Act. The facts of the case were that on 11th July 2004, at about 5.30 pm along Juja road near Kibigori in Nairobi, the accused being the owner of motor vehicle registration number KAH 788Z, Isuzu minibus matatu, drove the said motor vehicle along the said road at a speed which was dangerous to the public thus causing the death of a pedestrian Mr. Allow Hassan. He was convicted and sentenced to serve three years imprisonment.

The Government has not been able to carry out a comprehensive review of the Traffic Act with a view to among other things, enhancing the penalties. An attempt was made in the year 2000 through the Traffic Amendment Bill 2000.²⁹⁴ Unfortunately, the bill did not go beyond the committee stage.

²⁹¹ Traffic Case No. 46 (2) of 2008 , Principal Magistrates Court in Kikuyu (Unreported)

²⁹² Traffic case No. 17259 of 2003, Chief Magistrate court Nairobi (Unreported)

²⁹³ Traffic Case No. 18981 of 2004; Chief Magistrates Court at Nairobi (Unreported)

²⁹⁴ Traffic Amendment Bill 2000. Government Printer. Nairobi.

The table below shows some of the penalties currently available in the Traffic Act.

Table 13 showing some of the offences and penalties available in the Traffic Act.

Offence	Penalty
Over speeding	Fine not less than two hundred shillings and not exceeding two thousand shillings.
Driving under the influence of alcohol	Fine not exceeding ten thousand shillings or imprisonment for a term not exceeding eighteen months He / she will also be disqualified for a period of twelve months from holding a driving license
Causing death by dangerous driving	Imprisonment for a term not exceeding ten years and cancellation of license for three years
Reckless driving	Fine not exceeding five thousand or to imprisonment for a term not exceeding six months
Careless driving	First offence to a fine not exceeding five thousand shillings and for a second or subsequent offender to a fine thousand shilling or imprisonment for a term not exceeding three years
Driving without having a driving license	On a first conviction to a fine not exceeding two thousand shillings or imprisonment for a term not exceeding three months, on each subsequent conviction to a fine not exceeding five thousand shillings or imprisonment for a term not exceeding six months or both.

Source; Traffic Act

It is evident from the table that the penalties are very minimal compared to the offence committed. For example, it is common knowledge that over speeding is one of the main contributors to road traffic crashes. Yet the penalty for such serious offence is not less than two hundred shillings and not more than two thousand shillings.

Related to limited penalties is frustration from courts. Reports indicate that many courts in Kenya issue very minimal fines to traffic offenders.²⁹⁵ This has encouraged continued violation of traffic laws as offenders have no problem of paying the fines and proceeding to commit other offences. The penalties are not only minimal but are also spelt out in a manner that gives judicial officers the discretion of issuing fines as they wish. Almost all the penalties give the maximum figure. They provide for 'not exceeding' without providing minimum 'not less than'. This kind of provision is open to abuse leading to people with similar offences being charged different penalties.

The other challenge related to fines is that traffic officers have not been able to use payment of on the spot fines even though this is provided for in the Second Schedule of the Traffic Act. The Schedule allows a traffic offender who admits committing a minor traffic offence to sign a notification form confirming admission of the offence and send the form together with the amount of the statutory maximum penalty for the offence by registered mail or by post to the traffic court so as to reach the court within seven days from the date of issue of the notification. The offender is also allowed to submit with the remittance any mitigating circumstances which he/she desires the magistrate to take note of. This system can help to minimize the number of cases that go to court. It is not clear why the police have not been using it.²⁹⁶

It is evident from this discussion that limited fines, frustration by courts and failure to use instant fining systems are some of the contributing factors to laxity in enforcement of traffic laws. In order to address these challenges, it is proposed that the Government should urgently review all traffic laws with a view of enhancing penalties. Additionally, the Government should further introduce instant fining and ticketing with a view to ensuring that all minor traffic offences don't go to courts. The Government should also consider increasing the number of traffic courts. This will help in speeding hearing and determination of traffic cases.

²⁹⁵ Supra fn 270

²⁹⁶ Instant ticketing has been used in many countries with success.

4.1.3 Corruption

Even though several challenges have made it difficult for the traffic police to effectively enforce traffic laws, as discussed in the foregoing paragraphs, the main challenge that has frustrated efforts to effectively enforce traffic laws is corruption. Corruption has been defined as ‘‘an act or omission perpetrated by an individual or group of individuals which goes against the legitimate expectations and hence the interest of the society’’.²⁹⁷ According to Robert Tilman, corruption involves a shift from a mandatory model to a free market model.²⁹⁸ Justice A Ringera once said that corruption is the brazen subversion of the social contract theory.²⁹⁹ Corruption (i) undermines the foundation of the modern social state (ii) is a deviation from the rational moderation of modern society, where each member earns according to his talents, efforts and opportunities, (iii) is an illegal unjust and immoral appropriation to safeguard services, benefits and advantages not otherwise, due to an individual, and the tyranny of the majority by a very small majority.³⁰⁰

Corruption is one of the leading causes of laxity in enforcement of traffic laws in Kenya. Two institutions have been identified to be contributing to this practice. These are the traffic police and the judiciary. Several reports including Transparency International Corruption Index reports have over the years listed the judiciary and the police among the most corrupt institutions in Kenya.³⁰¹

The Report of the task force of Judicial Reforms listed corruption as one of the key challenges to reform within the judiciary.³⁰² The report indicates that whereas there has been measures to address corruption within the judiciary, the results have been suboptimal as borne out by the number of judicial officers and staff who have been disciplined by the judicial service commission (JSC) on corruption claims or otherwise faced corruption charges in courts of law.

²⁹⁷Pius Kidombo: The Faces of Corruption, Nairobi, Sino Printers and publishers 2004 cited .in Alice Ondieki- Critical analysis of the legal and institutional framework in the fight against corruption in Kenya (2005)

²⁹⁸Emergence of Black Market Bureaucracy, Administration, Development and Corruption in the new states in public Administration; Review No. 28 September, October 1998. P 440-442 in Kivutha Kibwana et al .The Anatomy of Corruption in Kenya

²⁹⁹ A. Ringera. Corruption in the Judiciary; Paper presented to the World Bank Washington DC on 25.4.2007 available http://www.eacc.go.ke/archives/Speeches/Justice_Ringera_Presentation200407.pdf accessed on 18/09/ 2011

³⁰⁰ Ibid.

³⁰¹ See Transparency International Kenya corruption Index Report for the last five years.available at http://www.transparency.org/news/pressrelease/the_east_african_bribery_index_2012_bribery_levels_remain_high_in_kenya accessed on 18/09/ 2011

³⁰²Final Report of the Task Force on Judicial Reforms chaired by Justice William Ouko (Republic of Kenya- Government Printer) 2010

As a result, corruption remains a major contributor to judiciary's institutional decline and low public confidence in the judicial process.

Corruption within the judiciary manifests itself in bribery, fraud, abuse of judicial office and receiving favors among others. In terms of impact on enforcement of traffic laws, corruption in the judiciary takes the form of colluding with traffic offenders to charge minimal fees, or colluding with traffic offenders to release the offenders at agreed fees. The result of such practices has been that such offenders once released or charged minimal fines proceed to commit traffic offences with impunity leading to more road traffic accidents.

The traffic police department is the other institution where corruption has led to inability to effectively enforce traffic laws. Over the years, Kenya Police has been listed as one of the most corrupt institutions.³⁰³ A recent report that appreciates the magnitude of corruption in the department is the Report of the National Task Force on Police Reforms chaired by the Justice (Rtd) Phillip Ransley.³⁰⁴ The report indicates that one of the complaints they obtained regarding the traffic police is corruption.

Corruption within the traffic police is manifested in taking of bribes from vehicle operators who have not complied with the law. Kenya is one of the countries with many police road blocks within the East African Region.³⁰⁵ While road blocks are supposed to be erected to perform specific duties, in Kenya, road blocks are used by traffic officers as toll stations for collecting money from motorists. This has resulted in existence of many unroadworthy vehicles along Kenya's roads leading to road traffic accidents. Cases abound where vehicles that were either overloaded or over speeding or in pathetic mechanical conditions got involved in road accidents even when such vehicles had just passed a police road block. This can only be interpreted to mean that the police who stopped the vehicle collected bribes and then allowed the vehicles to proceed.

³⁰³ For example a survey carried out in Kenya reported in Transparency International's 2010 Global Corruption Barometer Report, indicated that 92% of Kenyans believe that the police force is the most corrupt institution in Kenya. The index which had similar ratings from around the globe put the Kenya Police at 4.6 on a scale of 1 to 5 with 5 being the most corrupt. Source : Transparency international website. Available at <http://www.transparency.org/research/gcb/overview> accessed on 18/09/ 2011

³⁰⁴Supra fn 260

³⁰⁵Source: Records of the National Road Safety Council. Infrastructure Committee audit of black spot areas carried in July to August 2011. National Road Safety Council Secretariat .Ministry of Transport Nairobi.

The other aspect of police operations that has led to continued increase in accidents is deployment of officers with no knowledge of traffic duties to perform such duties. The Ransley report found that a majority of police officers manning road blocks and many others performing traffic duties knew nothing about traffic management and operations, while those who have trained with the objective of taking up traffic duties are deployed elsewhere to perform duties that are completely irrelevant to their trainings. This has led to increase of corruption, as officers are not deployed to perform traffic duties due to their trainings and qualifications to perform the duties but due to their ability to collect bribes. The situation is aggravated by the fact that under the current decentralized arrangement, the traffic commandant has no full operational command.³⁰⁶

Traffic police officers in the stations fall under the supervision of the PPOs and OCPDs. This has undermined accountability and effective control and management of traffic matters. It doesn't guarantee professionalism in work.³⁰⁷

It is evident from this discussion that corruption is one of the factors that is currently contributing to laxity in the enforcement of traffic laws. Corruption is two way traffic. It involves Police and court officers who takes bribes and vehicle owners who give bribes.

In order to address this challenge, the government should consider introducing use of information technology as a means of enforcing traffic laws. This should include use of speed cameras. This will help in removing physical enforcement that is currently done through use of road blocks which have turned out to be toll stations for collecting money. Speed cameras have been effective in enhancing enforcement of traffic laws. They have the advantage of accuracy and eliminate human bias.

One of the places where speed cameras have been used with success is in Victoria, Australia.³⁰⁸ In 1989, in response to a rising road toll, the Government of Victoria implemented a number of new enforcement based road safety initiatives.

³⁰⁶ Source: Kenya Police. Traffic Department.

³⁰⁷ Ibid.

³⁰⁸ Dominic Zaal. Traffic Law Enforcement. A Review of the Literature, Federal Office of the Road Safety. MonashUniversity.Report No 53 of 1994

The two main initiatives targeted key problem areas of alcohol (Random Breath Testing –RBT Programme) and speed (speed camera programme) and were based upon the principle of deterring motorists through increased detector rates and high levels of associated publicity. The speed camera programme involved sustained long term enforcement operations and high level of associated publicity with the objective of being able to discourage speeding behavior by substantially increase both the actual and perceived risk of apprehension.

During the two year period from July 1991 to July 1992, the speed cameras were used to carry out almost 46 million vehicle speed checks. This equates to about 64,000 vehicles speed checks per day over the two year period. In the same two year period, there were 1.05 million speed infringement notices issued. The impact of the Victorian speed cameras programme on speeding behavior was very impressive. In December 1989 when the programme began, 23.9 % of vehicles checked were above the enforcement threshold speed.

This steadily declined to 13% in December 1990, 9.4 % in December 1991, 5.0% in December 1992 and eventually to 4.0 % in July 1993. The proportion of drivers exceeding the posted speed limit by more than 30 km/h also sharply declined from 1.6% in December 1989 to 0.5% by mid-1993.

In terms of accident reduction, the programme resulted in the reduction of 18% in the number of casualty accidents and statewide reduction of between 28% and 40% in the severity of injuries resulting from casualty accidents. It is clear from the case study that the use of speed cameras can effectively enhance enforcement of traffic laws.

The Government should first make traffic department a semi autonomous body and computerize the activities of the department. It should ensure that only officers trained and qualified to perform traffic duties are deployed to perform these duties.

Finally, in order to effectively address corruption, both in the judiciary and traffic police department, there is need to conduct sustained awareness campaigns aimed at educating members of the public on their rights to reject corruption and expose corrupt activities.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the findings of this study and makes recommendations. The conclusions and recommendations are therefore based on what the study has been able to bring out. The bulk of the study looked at the weaknesses inherent in legal and institutional framework for road safety in Kenya. The study also looked at other contributing factors. The recommendations are therefore intended to guide policy makers in Kenya in addressing the identified weaknesses.

5.1 Conclusion

This study has been able to bring out several issues relating to road safety challenges in Kenya. The following paragraphs summarize and conclude the discussion and revelations.

Road traffic accidents are some of the major challenges that many developing countries are currently grappling with. Globally, an estimated 1.2 million people are killed through road traffic crashes and millions more are injured or disabled as a result of road traffic crashes annually.³⁰⁹ Africa takes the highest share of road traffic accidents relative to its low road network and level of motorization.³¹⁰ Kenya has continued to remain as one of the countries with the highest road accident rates in spite of its low level of motorization with an average of 8 deaths from the 35 crashes that occur daily.³¹¹ An average of 3,000 people are killed through road traffic crashes in Kenya annually.³¹² This translates to approximately 60 deaths per 10,000 registered vehicles, which is 30 times greater than highly motorized countries.³¹³ This is a trend that should not be allowed to continue.

³⁰⁹ James Habyarimana and William Jack Heckle and Chide; Results of a randomized road safety interventions in Kenya Centre for Global Development. Working Paper Number 169 of April 2009 available at www.cged.org.lastaccessed on 3rd March 2012 p. 3

³¹⁰ Ibid.

³¹¹ Moraa Gladys M, Road Safety in Kenya; A Study of Knowledge, Attitudes and Practices of Drivers of Passenger Service Vehicles(A Thesis for Master of Sociology- University of Nairobi) 2005.

³¹² Ibid.

³¹³ Ibid.

Kenya has a myriad of legal and institutional frameworks intended to enhance safety along its roads and safeguard lives of people using the roads. Unfortunately, people have continued to die through road traffic crashes. This study has been able to discuss the weaknesses inherent in the legal and institutional framework for road safety in Kenya. It has also managed to bring out other contributing factors to continued road traffic crashes in Kenya. One of the weaknesses that this study has revealed related to legal and institutional framework for road safety in Kenya is that currently, there exist a myriad of laws and institutions dealing with road safety. The institutions are disjointed and poorly coordinated, hence cannot effectively address road safety challenges in Kenya. Similarly, the legal framework is also disjointed with some laws outdated and not relevant to modern ways of transport management.³¹⁴

One of the keys to safety is adequate and well developed road infrastructure. Kenya currently has a road network of about 160,886 kms comprising of 11,189 km of paved roads and 149,689 kms of improved roads.³¹⁵ Development and maintenance of road network in Kenya is currently a responsibility of several institutions including the three Authorities under the Ministry of Roads, Local Authorities, Kenya Wildlife Service, Kenya Forest Services, National Youth Service, Kenya Roads Board and the private sector. Allowing several institutions to perform the functions of road construction and maintenance has several disadvantages which include duplication of duties leading to wastage of resources. The other key challenge related to road infrastructure design, construction and maintenance is failure to incorporate road safety components. The study revealed that currently, many roads built in Kenya do not incorporate road safety features which include pedestrian pathways, lanes for non-motorized and intermediate modes of transport, traffic signs among other things. This currently contributes to increase of road traffic crashes with pedestrians forming the highest percentage of the victims.

³¹⁴ Supra fn 69

³¹⁵ Ibid.

The study provided the example of Thika superhighway as an example of one of the roads that has been constructed without incorporating safety features. This is in spite of the fact that the Ministry of Roads has manuals that are expected to guide road constructors in incorporating road safety features into their construction and maintenance. The other determinant of road safety is human behavior. This study has indicated that human behavior accounts for 85% of road traffic crashes. Aspects of human behavior discussed included driver training, testing and licensing, vehicle inspection and certification, transport licensing and general behavior of road users.

In terms of driver training, testing and licensing, the study has been able to look at legal and institutional frameworks. The study has been able to demonstrate that currently, there are several weaknesses inherent in the process of training, testing and licensing of drivers that currently contribute to increase in road traffic crashes. Training is mainly done by the private sector whose main interest is to make profits, testing is done by traffic police who are not keen on ensuring that only competent candidates are passed, licensing is done by the Register of Motor Vehicles who relies on reports from police. There is no standard syllabus developed by the Government and the entire process is open to corruption.³¹⁶ The result has been existence of incompetent and unqualified drivers entrusted with lives of people transported along Kenya's roads. Lack of adequate training is not restricted to motor vehicle drivers but also covers motorcycle and bicycle riders. The study revealed that many riders and cyclists in Kenya currently do not undergo any training and have no knowledge of the Highway Code.

Drunk driving is another big challenge related to driving. This study has been able to reveal that drunk driving has been one of the main causes of road traffic crashes in Kenya over the years. The first attempt by the Government to introduce alcoblow as a gadget for checking alcohol content in drivers' blood failed as the court halted the use of the gadget because it was not anchored in any law. The Government recently reintroduced use of alcometer through a gazette notice.

³¹⁶ There have been attempts by the Ministry of Transport to develop curriculum for driver training, testing and licensing. The first attempt was made through the Kenya Institute of Education. This was not concluded. A recent attempt was made by contracting a consultant to develop a curriculum. This is yet to be concluded. Source: National Road Safety Council Secretariat. Ministry of Transport.

The traffic police are yet to begin using the gadget. The explanation has been that they lack funds to purchase alcometers. An opinion has been provided in this study regarding the newly gazetted breathalyzers. The study also revealed that generally, there is over speeding, dangerous driving and disregard of traffic laws by many drivers in Kenya. Similarly, there is general disregard of road safety laws by road users.

In terms of vehicle inspection and certification, the study revealed that currently, the institution entrusted with this important function lacks the capacity to effectively inspect and certify mechanical suitability of a vehicle before it is licensed. The unit currently does not inspect personal vehicles, yet this category of vehicles also contribute to road traffic crashes. The unit also suffers from the challenge of corruption which has led to many uninspected public service and commercial service vehicles operating along Kenya's roads leading to persistence of traffic crashes. The study has also shown that currently, there are no guidelines on licensing of vehicle body builders and inspection of the process of body building. This has resulted in compromise of quality of vehicles built in Kenya.

The study further looked at the function of transport licensing. The study demonstrated that currently, The Transport Licensing Board which is the body entrusted with this function lacks the capacity to effectively perform this important function. Additionally, the legal framework that provides for licensing of public transport in Kenya is outdated and is not in line with modern ways of doing business. This has resulted in many unlicensed and therefore unroadworthy vehicles operating in Kenya.

The study outlined regional and global instruments and treaties that have been put in place to address road traffic accident challenges. Kenya has not effectively addressed the challenge of loss of lives through road accidents in spite of the fact that it is party to some of the international instruments on road safety.

The study further revealed that Kenya has not developed comprehensive legal and institutional frameworks to regulate the operation of intermediate and non motorized modes of transport such as bicycles and motorcycle. These modes of transport are currently some of the leading causes of road traffic accidents in Kenya.

Finally, this study has looked at the process of traffic law enforcement in Kenya. Currently, this function is mainly performed by the Traffic Police. Traffic law enforcement is a very important function with regard to enhancing safety along Kenya's roads. The study has revealed that in Kenya, there has been serious laxity in enforcement of traffic laws. Corruption has been identified as one of the key contributing factors to laxity in enforcement of traffic laws.

Kenya is one of the countries with the highest presence of traffic police on its roads yet it is also one of the countries with the highest rate of road traffic crashes. Other factors identified as affecting traffic law enforcement in Kenya include, poor training of traffic police, lack of funds and lack of adequate modern equipment.

This study has been able to identify and discuss factors that contribute to continued loss of lives along Kenya's roads through road traffic crashes. The following limb of this chapter discusses proposed interventions.

5.2 Recommendations

From the findings and conclusions of this study, the following recommendations are proposed. Though the recommendations may not completely eradicate road traffic crashes, it is hoped that their implementation by the Kenya Government will help in reducing road traffic crashes by a considerable margin and safeguard lives of people transported along Kenya roads.

The recommendations are divided into two categories. (i) Critical recommendations that if implemented will enable the government to get quick wins and (ii) general recommendations some of which will be treated as long term interventions.

5.2.1 Critical Interventions

In order to address road safety challenges discussed in this work, the following critical interventions are recommended.

One of the key revelations of this study is that currently, there exist several institutions that deal directly or indirectly with road transport matters and whose functions have impact on road safety. The functions of these institutions with regard to road safety are disjointed and therefore not able to effectively deal with road safety matters. Most of these institutions have their core functions and therefore road safety is a secondary function. The National Road Safety Council that was revived in the year 2010 has not been able to effectively handle road safety challenges as its core function is advisory. It is therefore recommended that the Government should consider forming a single semi-autonomous body mandated to perform road safety functions. The body will perform the functions of vehicle registration, vehicle inspection and certification, transport licensing and regulation, driver training, testing and licensing, and road safety. This will help address road safety challenges from a centralized point.

The Kenya Government should review the current institutional set up for road infrastructure design, construction and maintenance. These functions are currently scattered among several institutions. This is currently causing duplication and strain on available resources.

The Government should therefore consider amalgamating the roles of the various bodies and coming up with one body that will be entrusted with the responsibility of performing these important functions. This will help in ensuring that the functions are performed effectively and that funds set aside for road design, construction and maintenance are consolidated and well accounted for.

The Government should urgently develop a curriculum that will give guidance on driver training and testing. This important document is currently lacking .Driving institutions therefore currently conduct the function of training without a standard curriculum.

The Government should develop laws and guidelines to regulate training and licensing of motorcycle riders and bicycle cyclists. It should encourage driving schools to incorporate the component of training cyclists and riders into their programmes. It should further compel local authorities to develop bylaws governing licensing and regulation of operations of motorcycles and bicycles currently operating in their area of jurisdiction.

There is need to urgently and seriously address the problem of corruption in the Traffic Police department. This should involve introducing very severe penalties for traffic police officers found to be involved in corruption. The other measure that should be put in place to address corruption within the department is the need to remove all roadblocks currently mounted by police in different parts of the country. The roadblocks are currently used as major avenues for corruption.

In terms of legal framework, there is need to review the existing laws dealing with road transport, with a view of making them relevant to current realities. The Government should consider developing guidelines for training, testing and licensing of drivers and motor cycle riders.

Finally, the Government should consider providing adequate funds to be used in carrying out of road safety programmes and enforcement of traffic laws.

5.2.2 Other Recommendations

In addition to the priority recommendations discussed in the foregoing, the government should further consider the following recommendations.

The Government should review its legal framework such as the Roads Act and translate into law the current guidelines developed by the Ministry of Roads to guide road constructors. It should ensure that requirement to incorporate road safety features into design and construction of roads is incorporated into law and put severe penalties on constructors who fail to do this. The consequences should include failure to make full payment to such a constructor unless/until they provide safety features

The Government should set aside funds to be used in erecting important features like road signs to guide motorists. It should also identify key black spot areas and find a way of ensuring that motorists are aware of location of these spots.

One of the challenges to infrastructure development in Kenya is funding. In order to effectively address this challenge, the Government should consider partnering with the private sector. Broadly speaking, measures to encourage immediate private sector participation in Kenya's transport sector are important. Although many transport and road concessions across the world show mixed results, the government ought to identify road segments for concessioning and then commission a study on their market and traffic viability. The study would, inter alia, evaluate existing traffic flow and forecast future traffic volumes in the earmarked road segments.³¹⁷

The Government should review the Kenya Roads Board Act and the Fuel Levy Act with a view to donating at least 10% of fuel levy fund to road safety activities.³¹⁸ Currently, the bulk of the fund is allocated to road construction with no fund spared for road safety activities. This is in spite of the fact that construction and use of roads should be treated as two sides of one coin.

³¹⁷Supra fn 69

³¹⁸Under the Global Plan for the Decade of Action for Road Safety 2011-2020, it was recommended that in order to ensure that funding is sufficient for activities to be implemented to help in realizing the goals of the decade for action, 10% of infrastructure investment funds is to be used in road safety activities. Supra fn 25p 13

Roads are constructed to be used by people assuming that the safety of the people using the roads constructed should be guaranteed. It follows that the Government should not only spend funds on road construction, but also set aside funds to be used in road safety programmes.

The Government should provide clear conditions on licensing of driving schools. This will help in ensuring that only well equipped schools are licensed to provide this important function. It should also give clear guidelines on qualification of driver training institutions. Additionally, there is need to provide special or additional training for drivers who train to drive public service and commercial service vehicles. Currently, there is no specialized training for this category of drivers.

In order to address the problem of drunk driving, the Government should urgently reintroduce use of alcometers. Enforcement of use of this gadget should involve strategies that include use of sustained and highly intensive random breath testing (RBT) operators. The purpose of random breath testing is to deter drivers from drunk driving because they know that it is possible for any driver to be tested, and that the risk of detections and apprehensions is present³¹⁹. One of the advantages of RBT is that motorists know they may be tested whether or not they appear to have been drinking and that when the threat of detection is potent and credible, fewer drivers will risk driving when their BAC may be over the legal limit.³²⁰

In order make random breath testing effective, there will be need to create a sense of unease amongst potential offenders about drinking and driving.³²¹ This can be achieved through (i) highly visible police enforcement which give the impression the RBT is unpredictable, unavoidable and ubiquitous, (ii) sustain high level of publicity focusing on RBT enforcement activities and their deterrent impact, especially at the onset at the RBT operations, (iii) creating awareness among drivers that RBT check points may be encountered at any time and in any location (iv) certainty of punishment which reflects the severity of crimes committed and (v) the stopping of a large proportion of drivers and ensuring that all are breadth tested for alcohol impairment.

³¹⁹Supra fn 308

³²⁰Homel RJ, Drinking and Driving. A Global Perspective Australia. In Effective Strategies to combat drinking and driving, an edited paper presented at the International Congress on drinking and driving, Edmonton, Alberto Canada, 1990 p 3-19

³²¹Homel RJ, Random Breath Testing the Australia Way: A Model for the United States; Alcohol Health and Research World, 14(1) cited in Zaal Dominic, Traffic Law Enforcement; a review of literature p 38-39

The Government should also consider lowering legal blood alcohol concentration (BAC) limits from the current 0.8% to 0.5%. Studies have confirmed that lowering of BAC level have positive impact on reducing road traffic crashes. For example, the study carried out on impact of lowering BAC limits in New South Wales Australia from 0.8% to 0.5% found a significant 12% reduction in fatalities³²². The Government should further consider fitting of alcohol ignition interlocks on public service and commercial service vehicles.³²³The gadgets can also be fitted on the private vehicles of recidivist drink drivers.

Other measures that should be put into law to address the problem of drunk driving and speeding should include points demerit system , withdrawal/ suspension of license and imprisonment in case it is proved that a driver who caused death of people through road traffic crash was under the influence of alcohol. Point demerit scheme involve the allocation of points and removal of a certain number of points every time a driver is found committing a speeding offence. When a driver has accumulated within a specified time more point than the maximum number permitted, then some type of sanction of license are imposed.

Point demerit system can affect speeding behavior in several ways including³²⁴ (i) for those drivers who rarely speed the existence of such a scheme provides positive feedback and may become an influencing factor in maintaining a good driving record. (ii) for those drivers who occasionally commit some form of minor speeding offences, the existence of such a scheme may provide them with the necessary incentives to modify their driving behavior in order to avoid losing further points and risking the chance of receiving the chance of a more severe penalty and (iii) the point demerit scheme has the greatest effect on the behavior of those drivers who constantly speed.

³²²Hamel RJ, Drink Driving Law Enforcement and the Legal Blood Alcohol Limits in New South Wales, Accident Analysis and Prevention 1994, in Zaal Dominic, Traffic Law Enforcement; a review of literature p 38-39

³²³ The Alcohol Ignition Interlock, is a technical device which is attached to a vehicles ignition system ,and prevents from starting the vehicle if the operator BAC level exceeds a pre-determined threshold it has been used on recidivist drivers in many jurisdiction with success.

³²⁴Dingle V, Determining Traffic Offenders through license action and license administration Procedures. Proceeding of the International Conference on the Prevention of Traffic crimes, Riath Kingdom of Saudi Arabia 1985, p 72-86

Drivers in this category quickly approach and in many cases exceed the number of point allowable. They modify their speeding behavior only when they have lost sufficient points to the extent that the likelihood of more severe penalties is a reality.

The Government should review traffic fines with a view to raising and making the fines more punitive. This will deter and forbid any intending traffic offenders. The Government should also implement the use of instant fines for minor traffic offences. This will help in minimizing the current frustrations from the courts. The Government should ensure that speeds of public and commercial service vehicles are regulated at authorized speeds. This will help to address over speeding which is currently one of the causes of road traffic accidents.

The Government should privatize and contract the functions of the Motor Vehicle Inspection Unit to private companies. This will help in addressing lack of capacity which is currently a big challenge in the department.

The Government should make it a requirement that all vehicles in the country, whether private or public, be subjected to mandatory inspections. Currently, all personal vehicles do not undergo annual inspection yet they too are involved in accidents and pollute the environment.

The Government should develop clear guidelines on licensing of body builders in Kenya. It should also provide clear guidelines on building of vehicle bodies in Kenya and mandate an institution to be inspecting and certifying vehicle bodies built.

This study revealed that attitude of commuters, drivers and other road users is another contributing factor to road traffic crashes in Kenya. In order to address this challenge, the Government should set aside adequate funds to be used in conducting sustained road safety awareness campaigns.

The campaigns should be done through the media, public forums, in religious institutions and in schools.

The Government should consider moving away from traditional traffic law enforcement and embrace use of technologies. This should include use of speed cameras and speed guns amongst others. These gadgets have been used in other jurisdictions with success. Use of automated enforcement device have the potential to reduce the requirement for traffic policing resources whilst providing on efficient and effective means of detecting and deterring speeding drivers. There are several advantages associated to use of automated enforcement devices³²⁵. Firstly, such devices increase the possibility of detection when committing speeding offences without the necessity for substantial increase in police resources. Secondly, such devices can significantly increase the level of deterrence because drivers soon learn through direct observations and associated publicity that there is an increased probability of being detected when speeding.

Thirdly, such devices can increase the amount and relevance of information on feedback provided to the road user, and thus results in a decrease in the likelihood of an offence being committed. Finally, such devices are able to provide definite evidence that a speeding offence has been committed.

The Government should professionalize traffic law enforcement and train traffic law enforcement officers on modern methods of enforcing traffic laws. The current syllabus for training traffic police officers should be reviewed to capture this desire. The police should be trained in many areas including traffic management, accident investigation, highway patrolling, motor cycle riding and car driving and management skills. Traffic police should be trained in both the technical task of policing and in how to set a good example to the public.³²⁶The Government should further ensure that only police officers trained to perform traffic duties are deployed to perform the duties.

The Government should make the Traffic Police department an autonomous department. This will help in addressing the current interference experienced by the department from other departments, particularly in the regions.

³²⁵Rothengatter T and De Bryan R, Road User Behaviour Theory and Research, The Netherlands 1990

³²⁶Road Safety Guidelines for the Asian and Pacific Region; Traffic Police Enforcement (Asian Development Bank) p 4.11-1 to 4.11-2

The study revealed that many Government departments currently dealing with road safety matters are disjointed and are not computerized. This has resulted in lack of accurate data on road safety matters. In order to address this challenge, the Government should urgently automate the activities of the departments currently dealing with road safety matters. It should also integrate, through computerization, data available in these departments. This will not only help in enforcement of traffic laws but also in development of policies on road safety. The Government should also come up with clear guidelines and policies to address handling of post crash challenges

Finally, I wish to indicate that all the proposals made in this study will only be implemented if the government develops political commitment to addressing road safety challenges. Over the years, the Kenya government has not been able to demonstrate sustained commitment to address the challenges of continued loss of lives through road traffic crashes. This is illustrated by among other things, failure to set aside adequate funds to be used in running road safety programmes.³²⁷ This study therefore recommends that the government should make political commitment to fund and support road safety programmes.

It is my hope that this study will enable the Government to review its policy on road safety and address road safety challenges in a more decisive and determined manner. I also hope that this study will add to existing knowledge on road safety and address shortage of road safety research in Kenya as academia, particularly from a legal perspective.

³²⁷ Road Transport Safety has been described as the orphan child of global policy today, often falling through the crack of development agenda. This is reflected in the minimal development assistance allocated to RTI prevention and the omission of transport and road safety from key development priorities. Kenya is no exception. There is need to reverse this trend and set aside adequate funds for road safety. See [Making Roads Safe in Europe and Central Asia](#) ;Establishing Multisectoral Partnerships to address a silent epidemic. Study Sponsored by Europe and Central Asia Region Human Development (ECSDH) Global Road Safety Facility (GRSF) and the World Bank.

5.3 Suggestions for further research

This study made a global look at the main causes of road traffic crashes in Kenya, with emphasis on examining weaknesses inherent in existing legal and institutional framework. As indicated in the study, minimal research particularly by legal scholars has been done on the subject of road safety.

There is therefore ground for legal scholars to conduct further research in this area. Specifically, additional research should be carried out to:

- I. Examine institutional and legal framework for non- motorized and intermediate mode of transport.
- II. Examine the extent to which attitude and awareness of pedestrians lead to road traffic accidents in Kenya
- III. Examine the extent to which Kenya has addressed the right of vulnerable groups with regard to road safety
- IV. Examine the extent to which road infrastructure design development and use contribute to road traffic accidents in Kenya and make recommendations to address the identified problems.
- V. Examine the extent to which Human Behavior is impacting on road safety in Kenya.
- VI. Examine the relationship between gender and the road accident causation.
- VII. Examine legal and institutional framework for child and school transport in Kenya.

These are just some of the areas that should attract further study. The field of road safety is green and wide.

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