

**ANALYSIS OF ROAD AND WATERWAY SAFETY LAWS, POLICY AND
REGULATIONS IN UGANDA**

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LAWS APPLICABLE

The 1995 constitution of the Republic of Uganda

The ferries Act cap 350

Uganda railways corporation Act cap 331.

Moto vehicle(third-party risky) insurance Act cap.214

Rivers Act cap 350

Value Added Tax Act,cap 349

Local Government Act Cap

Uganda National Road Authority Act No.15 of 2006

Uganda Wildlife Act Cap. 200

Law Reform (Miscellaneous Provisions) Act, Cap 79

The Inland Water Transport (Safety of Navigation) Rules 1959

Traffic and Road Safety (Vehicle Registration) Regulations 1998

Traffic and Road Safety (Public Service Vehicles) regulations Amendments 1998

Traffic and Road Safety (Parking of Motor Vehicles) Regulations 2001

Traffic and Road Safety (Use of mobile phones) Regulations 2004

Traffic and Road Safety (Motor Cycle) Regulations 2004

Traffic and Road Safety (Rules of road) Regulations 2004

Traffic and Road Safety (Prescribed Alcohol Limits) Regulations 2004

Traffic and Road Safety (Speed Governors) Regulations 2004

Traffic and Road Safety (Wearing Safety Belts) Regulations 2004

Traffic and Road Safety (Driving Permits) Regulations 2005

Traffic and Road Safety (Weighbridges) Regulations 2009

Traffic and Road Safety (Driving Schools) Regulations 2010

Traffic and Road Safety (Driver Instructors) Regulations 2010

APPROVAL SHEET

I NANTAAYI AMINAH RATIFAH declare that this is an original report and has not been published or submitted anywhere for any degree or diploma to any university before

NANTAAYI AMINAH RATIFAH

SIGNATURE.....

DATE.....23th Oct. 2017.....

APPROVAL SHEET

This is to certify that this report has been written under the guidance and supervision of the university supervisor and it is now ready for submission

UNIVERSITY SUPERVISOR

SIGNATURE.....

MONICA BIRUNGI

DATE.....*27th oct. 2017*

DEDICATION

I dedicate this research study to my dear mother Mukasa Rebecca, my daddy Muhammed, Lutaaya my sisters, Jules, Maya Nisha and then to my dear Mari, . my super visor Monica Birungi and lastly my friends for the encouragement, kindness, time, support they gave me through my education career

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My special thanks to the Almighty God the most gracious the most merciful who has enabled me to accomplish my research with ease

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Further I extend my gratitude to Andrew Bachwa, and all my colleagues who made my research a success.

I pray to Almighty God to reward you accordingly

ACRONYMS

URC	Uganda Railway Corporation
NEMA	National Environmental Management Authority
FRSC	Federal Road Safety Corporation
VIO	Vehicle Inspection of Offices
NURTW	National Union of Road Transport Worker
NIMASA	Nigerian Maritime Administration and Safety Agency
NMA	National Maritime Authority

ABSTRACT

This research assessed the Road and waterway safety laws, policy and regulations in Uganda taking the National Road Safety Council, Transport Licensing Board, Uganda police, Rift Valley Railways (Marine Division), Kampala Metropolitan area, Lake Victoria and river Mpologoma as a case study. The aforementioned bodies are selected as they are the leading road and water way safety regulatory and enforcing agencies in Uganda. The objective of the study was to assess and identify lacunas/gaps in existing road and water way safety laws, policy and regulations in protection of road and waterway users; to assess implication of the gaps in the road and waterway safety laws, policy and regulations in protection of road and waterway users and to recommend ways of improving the Road and Waterway Safety laws, policy and regulations to protect road and waterway users. The research was based on case study approach whereby various reports, literatures and interviews on road and waterway safety were assessed. During literature review it was observed that a lot has been written on road and waterway safety by few studies were done on the assessment of road and waterway safety in the laws, policy and regulations relating to road and waterway safety in Uganda. Findings revealed that there are lacunas/gaps in the existing laws, policy and regulations relating to road and waterway safety which has in turn subjected the lives of road and waterway users to a risk and in the end road and waterway users end up carrying the burden of the gaps left in the laws, policy and regulation. It was concluded and recommended that policies, laws and regulations relating to road and water way safety should not only aim at promoting broad, reliable and efficient provisions of transportation service in the country but also take into account the issue of road and waterway users' protection

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CHAPTER ONE

INTRODUCTION

1.0 General Introduction

The chapter presents the back ground of the research topic and prevailing factors that triggered the researcher to conduct on the particular topic. The chapter guides the researcher to concentrate on the objectives and the significance of the whole study. It commenced with the background of the research problem which explained what the topic was all about so that the reader can be aware of the topic, then the statement of the problem that guided the researcher .Moreover the chapter has the objectives of the study, research questions, and significance of the study, scope of the study.

1.1 Background of the Study

The transport sector is a key to Uganda because the country depends both on import and export trade. Most of the goods imported into the country are transported either by road or rail from ports of Mombasa in Kenya or Dar-es salaam in Tanzania through Mwanza port on Lake Victoria. Similarly, d by key exports such as coffee, tea, cotton and tobacco are transported by road or rail. Lately food exports to the Republic of South Sudan, including potatoes, maize (corn), beef, goat meat, milk and poultry have become important and are transported by road through the northern part of the country. The fish export mainly to Europe and the Middle East are transported by air.

Road safety in Uganda

The road sector is the dominant mode of transport in Uganda as it carries 97% of freight cargoes and 99% of the passenger's traffic. The model offers the great advantage of flexibility, the ability to move many small groups of passengers and goods consignments between many different origins and destinations, and the availability of door- to door collection and deliver over a widely spread network.

The government of the republic of Uganda has over years attempted to put in place the legal frame work and institutions, for setting road safety measures and implementation of the best practices in the promotion of road safety, such efforts include the enactment of the traffic and road safety laws, regulations and policies.

Despite of the entire legal infrastructure and the institutions in place, the roads continue to claim the lives of many road users in Uganda.

As the number of vehicles in Uganda increased from 300,000 to 800,000, along with the number of death due to traffic accidents. Today Uganda has the second height rate of road accidents in Africa and the world after Ethiopia, the number of road accidents has greatly increases from 19,867 accidents in 2007 to 22,272 accidents in 2011 while the deaths from such incidents rose from 2,597 in 2007 to 3,343 in 2011. The total number of vehicles involved I crashes in 2011 was 35,716 cars accidents were mostly in road traffic accidents with 12,095 cars (33%), while there were 8,743 motorcycles (24.5%). According to the World Health Organizations Global Status Report in road safety 2013, Ugandan is named among countries with alarmingly high road accidents rates, if such trend off traffic accidents continues to increase, the health losses from traffic injuries may be of Uganda ranked as the second to HIV/AIDS by 2020.

Water Safety in Uganda

18% Uganda's total areas (241,038km) is under water and swamps is from of lakes and rivers .However the inland waterways of Uganda are currently of minor importance because there are no longer navigable stretches of river in Uganda, nevertheless parts of the Albert Nile that flow out of lake Albert in the north western part of the country are navigable, in additionally several lakes including lake Victoria and Kyoga have substantial traffic, lake Albert is navigable along a 200 km stretch from its northern tip to its southern shores

The most important ports in Uganda are: port Bell-Luzira, Nakiwogo-Entebbe, Jinja municipality, Kalangala-Sseses Islands Masindi

Through port Bell most of the cargo is handled and examined from Dar-es Salaam through Mwanza in Tanzania

The other ports handled mainly passenger's traffic and in respect of Kalangala and Nakiwogo forest products from the Sseses Islands.

Water transport was formerly widespread in Uganda up to the early 1960's steamers operated passenger services on the big lakes and on the navigable sections of the Nile. The heavy rains of 1961 submerged and damaged most of the infrastructure. Most of it has stayed in a state of disrepair; there is also lack of navigable aids. The inland water transport study (IWTS), carried out in 1988, identified over 70 landing sites around Uganda where formal or informal water transport services had been operated,

Water Transport in Uganda suffers from among others hazardous safety and or security ,5000 people are estimated to drown annually In the lake Victoria as a result of maritime accident, major disasters are also frequent on the lakes and rivers for example a boat carrying mostly Congolese refugees capsized in lake Albert near Natoroko South west Uganda's capital Kampala on 26 march 2014 leaving 107 people dead, the passenger vessel M/V Kabalega with a sister vessel M/V Kaawa and sank in 2005 cargo vessel MV Nyamageni sank in 2006 More recently, the following incidents have been reported ; 28 people are feared dead after their ferry capsized in bad weather near Entebbe on July 21, 2011.

All the above waterway safety challenges are happening despite of the existence of all the waterway safety laws, regulations and policies in place. This is a crisis and the need for improved safety standards cannot be over emphasized

1.2 Statement of the Problem

The transport sector has played a great role in the growth of national economies of many countries in the world Uganda being one of them. it has encouraged investment in the country. Due to the rapid growth of the economy and the transport sector, the enactment of laws, policy and regulations is a necessary measure. However has shown in the example above the road and waterway safety laws, policy and regulations lay left some lacuna as far as the protection of the road and waterway users is concerned for example one of the factors contributing to the high frequency of traffic law and regulation violation is weakness of the equipment's and low level of funding has impaired their effectiveness. Since the government points members these regulatory

bodies and licensing board mainly on political consideration rather than merit professionalism, enforcement of the transport licensing Act is weak in Uganda. Financing from government budgetary annual allocations and is based on the set ceiling rather than requirements. This also leads to inadequate funding and inefficient operations. Cases of fake licenses are rampant, while many vehicles operate without valid licenses in contravention of the traffic laws resulting in substantial revenue loss, and yet detection and prosecutions are rare. The road and waterway laws do not address post-crash issues. Throughout Uganda, there are no establish and sustainable emergency facilities to deal with road and water way accidents on the highways and water ways. Furthermore, the use of seat belts is thought to reduce the risk of death by up to 65% Children, however are poorly served. Road Traffic Crashes are leading cause of death for children aged between 4-15 in Uganda. But as yet there are no seat specifically designed for their use current seat are designed to restrain adult just below their center of gravity, at the pelvis, a child's pelvis is unable to provide an anchor point for restrain until about ten years of age and the belt can therefore injuries of abdomen and mid lumbar region.

The situation created a need for a study to assess the existing road and waterway safety laws, policy and regulations, identify the lacunas and access the implications of the said lacunas on the road and waterway safety and recommendation accordingly

1.3 Purpose of the Study

The purpose the study of the research is to examine the existing Road and waterway safety laws, policy and regulations in Uganda

1.4 Research Objective

1.4.1 General Objective

The main objective of the research examined the existing road and waterway safety laws, policy and regulations

1.4.2 Specific Objective

- i. To identify lacunas/gaps in existing road and waterway safety laws, policy and regulations in protection of road and waterway users.
- ii. To assess implication of the gaps in the road and waterway safety laws, policy and regulations in protection of road and waterway users
- iii. Recommend ways of improving the road and waterway safety laws, policy and regulations to protect road and waterway users.

1.5 Research Questions.

- i. To what extent do the existing road and waterway safety laws, policy and regulations protect road and waterway users?
- ii. What are the lacunas/gap in the existing road safety laws, policy and regulations in protection of road and waterway users?
- iii. What are the implications of the shortcomings in the existing road and waterway safety laws, policy and regulations on road and waterway safety in Uganda?

1.6 Significance of the study.

The findings of the study provided policy makers and road users with information to help make consistence policies, laws and regulation to as to curb up with causes of road and water accidents in Uganda. The research also helped the researcher to continue with the dissertation.

1.7 Scope of the study

The study covered analysis of existing road and waterway safety laws, policy and regulations in protection of road and waterway users and waterway users and how the said laws, policy and regulations can be improved to protect road and waterway users. It covered the National Road Safety Council, Transport Licensing Board, Rift Valley Railways' marine division metropolitan area Lake Victoria and river Mpologoma as a case study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter the researcher reviewed the gaps that are existing in road and water way safety laws ,policy, and regulations in protection of road and waterway users,

2.1 Challenges/gaps existing in road and waterway safety laws, policy and regulations in protection of road users,

In the majority of urban areas as well as on major high ways, traffic volumes have increased although that increase is not commensurate with the increase in the in the quantity or quality of road infrastructure. This compounds traffic management problems in urban areas and on high ways in Uganda in addition to poor road signs, poor injunction layouts, lack of marked lanes, inadequate roadside parking spaces, nonfunctional traffic signals and a high volume of pedestrian's activities on the roadside. Poor urban planning has led to the occupation of pavements and even parts of many roads by holders 'hawkers in the urban areas. Traffic laws and regulations become difficult to enforce under this conditions, in the same way difficult to fellow.

The police, who are the main enforcement agencies in Uganda, are handicapped by shortage of basic equipment such as vehicles and breath analyzers for detecting drunken drivers, and by using weigh bridges that are not cabrated. Because of the high rate of noncompliance with traffic laws due to poor or inadequate road infrastructure such as road signs, lack of traffic lights and poor urban planning, enforcement of traffic laws is weak. Even where the cases are taken to court, however, the fines are non-deterrent. For example most vehicle owners are never enjoyed in traffic law suits instituted against their drivers.

In the case of management and road safety, weaknesses exist in the management of national road safety council and among the law enforcement agencies. The road safety council establishes to promote high standard of safety on road and minimize road accidents in Uganda through public

education and increased public awareness was found to be mostly in active. This was due to several factors including poor funding, excessive government involvement in the management and organization of councils with negligible private sector participation, inadequate equipment and lack of road safety research and traffic education.

The East African countries, Kenya, Tanzania and Uganda have interdependent road transport networks and services not only for the promotion of their respective national economic development programs but also in strengthening regional social economic integration under the newly signed East African Community treaty. The signing of the treaty of tripartite agreement on transport in 1998 was a bold step towards effective harmonization of road transport operations in the region. As well as being a member of the EAC, each of the three partner states to other regional groupings. Kenya and Uganda are members of the common market for eastern and southern Africa [COMESA], whereas Tanzania is a member of southern African development community [SADC] this dual membership to regional grouping has occasionally led to situation where the three countries apply different standards. This could have conflicting objectives with the TAORT, whose goals are to standardize road transport laws and regulations in the EAC. moreover, although these countries have similar laws, the enforcement of operating standards of road infrastructure, transport services and traffic controls to ensure safety of East Africa remains weak causing a lot of concern to operator's, and users plus public at large.

The laws and regulations and their enforcement in the mechanisms in the region should be reviewed with the notion to recommend measures for harmonizing them to improve the efficiency of, transit and cross-border road traffic.

The weakness of the licensing and regulatory authorities' .the lack of qualified and competent staff, inadequate equipment and low level of funding has impaired their effectiveness. Since the low level of funding and inefficient operations. Cases of the fake licenses are rampant, while many vehicles operate without valid licenses in contravention of the traffic laws resulting in substantial revenue loss and yet detection and prosecutions are rare.

There are no systematic and sustainable research initiatives on road and waterway safety in Uganda. What is in place is sporadic and isolated incidents of police interventions into specific road and waterway accidents and these investigations are rare for purpose of criminal prosecutions and results of are never made public. Research in this area would include collection, analysis and

interpretation in relation to road safety such as level of motorization in relation to incomes, common causes of various road and waterway accidents and an estimation of impact of poor road and waterway safety on the economy.

Throughout Uganda, there are no established and sustainable emergency facilities to deal with road and water way accident on the highway and waterways. Private facilities and few insurance companies in Uganda such as the AAR are usually not affordable to the majority of Ugandans. In the most cases, ambulance or helicopter services to rush critically injured accidents victims to hospital do not exist. The injured normally depend on the good will of passing good Samaritans for help.

Furthermore, hospitals are inadequately equipped to deal with major accident and the poor telecommunication network compounds the problem in calling for help. Bandits or passersby often take advantage of accidents to rob victims.

Users preferred engine powered boats compared to the oar powered due to the time element involved. Likewise, they preferred ferries to boats, they content that ferries are safer compared to boats and have higher carrying capacity. Water transport is used for various purposes but largely for economic needs, due to under developed infrastructure, porter carry passengers using hands to and from the boats. In other wards water transport heavily involves portage.

The current institution framework with in Uganda is inadequate to effectively handle the issues regarding rural water transport services, this because the ministry is largely geared towards formal rural water transport services.

Coordination between the ministry of transport, works and communications and other departments like fisheries and local authorities in matters of rural water transport they not clear. There is no clear structure linking the ministry and the rural water transport services providers.

The adoption and enforcement of traffic laws appears inadequate in parts of Uganda development and effective enforcement of legislation is critical I reducing drink driving and excessive speed and increasing the use of helmets, seatbelts and child restraints.

(Rodriguez, 2005). In addition to loss of life or reduced quality of life, road accidents carry many other consequences to the survivors such as legal implications, economic burden, home and vehicle adaptations as well as psychological consequences.

When discussing the effects or outcome of injuries it is also appropriate to consider the definitions given by WHO regarding impairment, disability and handicap. Impairment is defined as a demonstrable anatomical loss or damage (e.g. restricted movement of a joint). Disability is the functional limitation caused by this impairment, interfering with something the person wishes to achieve. Handicap depends on the environment, where different adjustments or adjuncts can reduce or overcome the disability (WHO, 1986).

Different injuries may cause similar impairments. Restriction of movement may result from injuries to the musculoskeletal system, but neurological injuries may cause exactly the same result. Persistent pain or psychological squeal may cause various difficulties in living a normal life, which are not easily quantified.

The same injury can have a very different outcome depending on the patient's work and social status. For example, a severely sprained ankle can result in long-term problems so that if a person's job requires considerable walking throughout the day, continuation in that job may not be possible. The same injury for a person spending most of his or her working hours sitting behind an office desk will not have the same impact. Socially, the injury is much more severe for the first person than for the second.

A proportion of persons being involved in transport-related incidents develop psychological symptoms. In its most severe form this is described as PTSD (post-traumatic stress disorder) and can cause a high grade of impairment in everyday life for those affected. The incidence does not seem to be correlated with the severity of the actual injury, but rather with the perceived subjective threat to life.

Post-traumatic stress disorder (PTSD), described in DSM-IV (Diagnostic and statistical manual of mental disorders), is characterized by intrusive thoughts and memories, avoidance and hyper arousal after exposure to a life-threatening situation or a severe life event. Several studies have shown that traffic accidents are a common cause of post-traumatic stress disorder (PTSD). Jrsine et al, (1999) and Bryant et al (2004) found a prevalence of 25% PTSD three months and

18% six months after the traffic accident. PTSD seems to be an important psychological consequence of accidents with motorized vehicle.

Richmond et al (2000) identified four variables that were important in the prediction of psychological distress after a serious injury, namely increased levels of psychological distress during hospitalization, a positive screen for drugs and alcohol at the time of the injury, young age and the lack of anticipation of possible problems that can occur with when resuming normal activities. Zatzick et al (2002) examined 101 surgical inpatients and found that 73% perceived a high level of psychological stress and/or were positive for intoxication with stimulants. One, four and twelve months after the injury, 30 to 40% of the patients reported symptoms of PTSD. Matthews (2005) followed 46 individuals eight months after a traffic accident. The participants with PTSD had significantly more problems to return to work than those without PTSD, including higher levels of depression, reduced time-management ability and an excessive concern or anxiety related to physical injuries. The individuals with PTSD reported also a significantly higher extrinsic motivation to work than those without PTSD. , this can indicate a need for financial stability and therefore a potential for therapeutic value in return to work post-trauma.

In summary, the majority of studies on psychosocial residual states following traffic accidents are retrospective. Most studies concern individuals who have sought treatment following traffic accidents. As a result of this, knowledge regarding the incidence and severity of psychosocial residual states is scarce when it comes to individuals with mild somatic injuries or no injuries.

Brain injuries can cause many kinds of physical, cognitive and behavioral/emotional impairments that may be either temporary or permanent. Impairment may range from subtle to severe. Brain injury may also result in seizure disorders. According to the International Brain Injury Association, in the European Union brain injury accounts for one million hospital admissions per year. Motor vehicle crashes account for 50% of all traumatic brain injury and are the leading cause of this type of injury among persons under the age of 65 years (IBIA, 2006).

Recovery from a head injury may require long periods of time, and in some instance full recovery is never achieved. According to a survey of victims and their relatives conducted in 1995 by the European Federation of Road Traffic Victims, only 37% of the victims who had suffered head injuries thought that they had fully recovered within the first 3 years and only a

further 19% recovered after that period (Haegi and Chaudhry, 1995). The other 44% suffered from permanent neurological or brain damage. This is particularly striking as head injuries represent about half of all road crash injuries. The European Federation of Road Traffic Victims points out that the effects of head injury are often not recognized because they are not always apparent, yet they may cost victims their jobs or educational qualifications, with serious economic consequences for society as a whole.

According to the Parliamentary Assembly of the Council of Europe, advances in health care have resulted in increasing numbers of people with spinal cord injury surviving and living relatively successfully in the community with their disability, often in a wheelchair and for a near normal lifespan. About half of these injuries are the result of road accidents and, even more relevant, occur at a young age (Parliamentary Assembly, 2002). The International Campaign for Cures of Spinal Cord Injury Paralysis - ICCP, an organization working to fund research into cures for paralysis caused by spinal cord injury estimated the average annual incidence of spinal cord injuries to be 22 persons per million inhabitants in the western and developing world (ICCP, 2005).the fact that life expectancy is reduced by an average of less than 10%, it is clear that the population of victims living with spinal cord injuries is steadily increasing around the world.

Road crashes are frequent and can cause permanent disability (Kuppaet at, 2001; MacKenzie et al, 1993). In side impacts, lower extremities are the most frequent site of moderate to serious injuries to survivors (Thomas and Frampton, 1999) and the second most common site of moderate to fatal injuries for belted occupants (Morgan et al, 1991). Foot and ankle injuries accounted for 8-12% of all moderate to serious injuries sustained by motor vehicle occupants involved in frontal crashes (Crandall et al, 1998). In economic terms, lower extremity trauma is associated with high costs (MacKenzie et al, 1988) and the frequency and economic impact is ncreasing (Martin et al, 1997).

Epidemiological data indicate the seriousness of this problem. Data from the National Automotive limb injuries (Luchter, 1995). The societal costs associated with these injuries were second only to head and brain trauma (Miller et al, 1995). Using the Functional Capacity Index (FCI) to gauge the loss of productivity and quality of life, Luchter found that injuries to this egion accounted for 41% of all "life-years" lost (Luchter, 1995). AIS 2+ lower limb injuries ach represent an average loss of 11.8 years of perfect health. Ore et al (1993) found that injuries

to the lower limbs accounted for 41% of work days lost, with 15% attributed to the ankle alone. By comparison, the head/brain represented 23% and the chest region 24% of lost workdays.

In a European study, Morris et al found that lower extremity injuries are by far the most costly injuries and account for some 43% of injury costs in front and side impacts (Morris et al, 2006).

In terms of injury frequency, pelvis and lower extremity injuries account for 26% of AIS 2+ (moderate to fatal) injuries in frontal crashes in vehicles manufactured after 1998 and 21% of injuries in side impacts for the same type of vehicle

Road accidents induce costs in terms of both human costs and socio-economic costs. Socioeconomic costs include, for example, hospitalization, long-term care, material damage, police and rescue service, production loss, and welfare loss. From a welfare point of view, investigating loss in disposable income due to road injuries is of interest.

The Danish Institute of Local Government Studies investigated whether traffic injuries are associated with a permanent reduction in disposable income and employment (MøllerDanø, 2004). The data were taken from a random 10% sample of the adult population of Denmark for the years 1981-

2000. For this large representative panel full records on demographics, work status, income, and detailed information on traffic injuries were available.

The overall result is that traffic injuries are associated with significant differences in the labour-market outcomes between injured persons and matched controls. Further investigation shows that the effect of traffic injuries on disposable income varies by age. In the long run, after 6 years, young injured persons do not seem to have a lower disposable income than non-injured persons.

This is in contrast to older persons who have significantly lower earnings than older non-injured persons.

The average employment rate declines sharply for men in the year of the road accident and it does not approach the level of the matched controls within a 6-year period, indicating a clear effect in the long run. The employment rate is around 10 per cent lower for the injured men. With respect to women, the picture is a bit different, as significant effects were found only 3-6 years after the injury. The difference between the injured and their matched controls is around 8

percent 6 years after the injury. This difference seems to be due the fact that some disabled women exit the labour Force and receive disability pensions.

Average earnings are reduced for both men and women, but at the 10% significance level, only effects for men were found. Six years after the accidents, earnings were 10 per cent lower for men than they would have been had they not been involved in the accident.

The burden of crashes is borne not only by those directly involved in traffic accidents but also by their families. A study conducted by the European Federation of Road Victims in 1993 found that 90% of the families of dead victims and 85% of the families of disabled victims declared

a significant, and in half the cases even dramatic, permanent decline in quality of life and/or standard of living (Federation of European Road Traffic Victims, 1993).

study found that a large proportion of the relatives of dead and disabled victims, as well as the disabled themselves, suffer psychological disorders, including anxiety attacks (46%) and suicidal feelings (37%). Even after 3 years, these symptoms continued in most of the cases, indicating long-term and in certain cases even permanent suffering. With the exception of suicidal feelings, the relatives of disabled victims present a similar pattern to that of the relatives of dead victims.

In fact, the traditional view that it is normal to recover rapidly from the sudden, unexpected loss of a spouse or child was refuted as early as in 1987 based on interviews of 39 individuals who had lost a spouse and 41 parents who had lost a child 4 to 7 years before in road accidents (Lehman et al, 1987).

The nature of the injuries of the victim determines the level of perceived stress by the relatives, not the severity of the injury. The personal problems of the victim, behavioral problems, emotional and intellectual problems strongly correlate with perceived pressure, anxiety and depression of the relatives. Partners experience more stress than parents and children. Young families with little social support, financial, psychiatric and/or medical problems are the most vulnerable. Yet some can't afford Support from professionals which reduces the stress being experienced.

Drivers who are involved in accidents may suffer a number of adverse consequences even if they are not injured. For example, a driver may be prosecuted for negligence or even manslaughter as

a result of an accident. Although very limited attention has been devoted to this topic, some authors have recently reported studies on it.

A recently published Swedish study examined the consequences of road crashes on drivers charged with involuntary manslaughter, based upon a retrospective study of 14 trials held in Swedish appeal courts and district courts (Lundälv, 2005). During the 1994-2004 period, 1,290 persons pleaded guilty to the charge of involuntary manslaughter in Sweden (this crime is defined as a killing resulting from the commission of a traffic violation, or as the result of negligence, such as reckless or careless driving, in which there is no intention to kill). At the EU level, there may be several thousands of drivers who are prosecuted every year. many individuals complained of having reactions such as negative stress, a sense of guilt, victim blaming and having to take sick-leave after the accident. Imprisonment and other penalties as a result of road traffic crimes, also represent an additional burden to the society as a whole, often neglected when considering the impact of road accidents.

In manual book entailed Advocating for road safety; guidance manual for national societies page 5, it stated that a strong road safety, policies coupled with effective enforcement and appropriate penalties are critical to protecting road users from road crash death and injury. Many low and middle income countries have weakness or gaps in their road safety policies, legislation and enforcement, resulting in a major public health and humanitarian problem-road traffic injuries that have enormous impact on quality of life and daily living for many millions of families, globally.

2.3 Ways of improving the road and waterway safety laws, policy and regulations

Reducing the volume of traffic roads on the roads being used by vulnerable road users can also reduce on exposure to the risk of crashing occurring, provided that low speeds can be the viability of affordable and safe public transport and seek ways of improving and reducing dependency on the use of private cars.

Professor John Adams, an expert on risk compensation suggested that traditional traffic engineering measures assumed that motorists were self, stupid, obedient automatons who had to be protected from their own stupidity; a non-motorist are to be treated vulnerable, stupid,

obedient who have to be protected from cars and their own stupidity; Adams reported results indicate that the shared approach leads to significantly reduced traffic speed, the virtual elimination of road casualties and reduction in congestion.

In Brighton (Uk) the pedestrians Association was suggesting that many of the safety features being introduced (speed limits, traffic calming, road signs and markings, traffic lights cycle lines and others) were potentially self-defeating because every nonrestrictive safety measure, however admirable in its self is treated by the drivers as an opportunity for more speeding so that any amount of danger is increased and the latter state is worse than the first one; during the 1990s a new approach known as shared space was developed which removed many of these features in some places has attracted the attention of authorities around the world. The approach was developed by Hans Monderman who believed that if you treat drivers like idiots act as idiots and proposed that trusting drivers to behave was more successful than enforcing them to behave.

Pero Vidan and Josip Kasim expressed that human negligence is the most frequent reason for accidents on inland waterways. They occur due to improper handling of technical aids fatigue, and lack of knowledge. Negligence can be decreased by use of safety management systems and international safety management.

Adequate protection of ports and inland waterways requires new approaches as well as implementation of new measures and technologies. It is therefore necessary to revise existing legislation and to invest in specific technology for controlling ports and waterways.

According to the American waterway operation 2012 a large increase of inland waterway traffic is expected with increase in time. Waterway vessels could pose an important danger in the case of terrorism alert, especially due the fact that they not protected and that they sail through large remote areas. Both the policies and laws of Uganda doesn't cover the issue of security of the users of waterways; this is a great brander which must be looked in to with great conscious

An independent national road safety authority and national waterway safety authority must be established with all mandates to manage road and waterway safety issues respectively because this is working in developed countries.

To minimize overloading, the axle load controls need strengthening through modernization and standardization of weigh bridges this along with increased public awareness campaigns targeting

drivers and operator's and involvement of transport operators in road management will ensure that imported vehicles conform to set vehicle dimensions and axle load limits.

Road safety infrastructure improvements can also reduce on the risk of road traffic fatalities and injuries by 25-40% for all road users, including car occupants, motorcyclecyclists, bicyclists, and pedestrian's, such improvements include; widening shoulder lanes, improving intersections, and installing medians, sides barriers, cross walks and lane markings

Improvements in vehicle design, occupant protection and vehicles maintenance could make a significant contribution to crash reduction in Uganda. Occupants can be protected by safety features such as seat belts, headrests, airbags and special seats for children. Safety related components must be maintained. This can only be achieved by periodic vehicle inspections with frequent random checking of vehicles on road.

Road and waterway safety campaigns should be conducted on quarterly basis. The campaign programs should cover the main road safety key points as espoused by the world global status report on road safety 2013 and it should also envisage the following.

Public enlightenment workshops and seminars on driver's improvement course.

Moto park rallies involving the drivers association and passengers.

Use of drama sketches

Literacy campaign emphasizing high way code and road signs literacy

Participant's observation method involving the development of regular marshals in parks to board public transport and monitor activities of road users.

Massive large scale campaign during festive seasons, etc.

Creation of enabling environment, the government should promote private sector participation in the industry by improving the investment climate. expanding climate and developing the country's water infrastructure, widening and deepening more river channels and building new roads to link agriculture and mining areas to the river ports. Government also needs to create an enabling environment for private sector participation. This could be achieved by the

development of innovative action plans as well as policy consistency they could deliver profitable inland transport operations in the country

Review of operational strategies, to overcome the current problems facing the water way sector and try to lay foundation for accelerated programs in the future, government and the private sector need to thoroughly review their policies and investigate strategies, In doing so they must take in to account many factors, including how to evenly spread water transport facilities, reduce robbery and criminality along the waterways, review taxes and levies paid by water transport operators and introduce new strategies which can make water transport compete with favorably with road transport.

There is need to improve on technology like that of Asian, the Asian boats are powered by diesel engines, which are more robust and less expensive in terms of fuel prices. Steps must be taken and persuade the water transport operators to form associations in order to help them to work towards the development of the services

There must be encouraged collaboration by the government between the different sectors involved in collecting and reporting data on road traffic and water way traffic injuries, this involves improving data linkages between police, transport and health service as well as increasing human capacity to undertake data collection.

Modernize the river ports; the government of Uganda needs to further more strengthen IWP by deepening and modernizing the inland river ports so that they can be put in to fruitful economic users.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter entailed the methods that the researcher used during data collection.

This includes research design, research population, validity and liability of instruments and ethical considerations.

3.1 Research Design

The research used a descriptive research design that involved the use of both qualitative and quantitative research design to the whole study. Qualitative research design seeks to locate the study scholar debates on Road and water safety laws, policy and regulations.

Quantitative research design used because the findings of the study reboot numerical respondents options and views about the study variables and have to be quantified for easy interpretation and description accompanied

3.2 Area of the Study

The research chose the National Road Safety Council, Transport Licensing Board, Rift Valley Railways Marine Division, Kampala Metropolitan area, Lake Victoria and Lake Kyoga as a case study for the research for the following reasons

National Road Safety Council established by the traffic and road safety Act 1998 as the lead and coordinating council for road safety management in Uganda

Transport Licensing Board. It regulates the use of public services vehicles, private omnibuses and goods vehicles other than owner transport and producer seller's vehicles through Uganda

3.3 Research Data

All kind of data primary secondary and tertiary data was collected in order to get good composition for research.

3.3.1 Primary data

Primary data was obtained largely from baseline surveys conducted in the National Road Safety Coucil, Transport Licensing Board, Rift Valley Railway Marine Division Kampala metropolitan area, lake Victoria, A series of discussions were held key stakeholders in the transport sector including the permanent secretary and chief officers of the ministry of transport the traffic police commandants officials of the transport licensing board, motor vehicle inspection unit, driving test unit and local leader's drivers and conductors association and bodaboda and cyclists associations key actors in the insurance industry as well as tax and lorry drivers and commuters among others

3.3.2 Secondary data

Secondary data on the other hand obtained from scholarly publication and relevant government documents. The data obtained both from primary and secondary sources have been analyzed largely qualitatively and presented in a descriptive manner. Statistical data used to the extent that they demonstrate the magnitude of the problem of road crashes

3.4 Data Gathering Methods and Technique's

Various methods of data collection were deployed so as to get the best information which enabled the researcher to analyze the data those methods included structured questionnaires, formal interview and documentary review Also through observation and informal discussion which may have impact on the reliability of the data fed on the questionnaires.

3.4.1 Questionnaires Administration

This technique used based on the nature of respondent and considering the time factor at work place. Structured questionnaire guided the respondent on the necessary information required in the preparation of the research paper, the questionnaires had closed ended questions and

3.4.2 Interview

The interview schedule was used by the researcher in some specific situation, the researcher used the used on interviewing various respondents, interview with some heads of department, local leader's stake holders and officers from various road and water way safety agencies

3.4.3 Documentary Review

This included detailed review of already existing literature the tool will be selected because it will give accurate, correct and historical data based for future aspects

3.4.4 Observation and Informal Discussions

The researcher also used the observation technique in the case study in order to get data and this will help the research to compare data collected via observation with that obtained from the respondents via the use of questionnaires interview and documentary review

3.5 Sampling

Sampling is selection of a number of study units from a defined population to be studied

Sample

Sample is definite plan for obtaining sample from a given population it is a segment of population in which researcher will be interested in gaining information and drawing conclusion total of 70 people will be used

Respondents	Expected respondents	percentage
Respondents provided with questionnaires	50	71
Respondents that will interviewed	20	29
Total	70	100

3.6 Validity and Reliability

A combination of different methods such as interview, questionnaires, documentary review and observation in collecting information were employed to back up and complement on each other to bridge the weakness of each method

3.7 Data Analysis procedure

Data analysis is systematic process involving working with data, organization them and dividing them into small manageable parts both qualitative and quantitative data analysis technique was used to analyze data collected.

The IGP is charged with the duty of preparing annual traffic/Road Safety reports containing information on traffic matters in Uganda.

4.3 Transport Licensing Board.

The transport and Road safety Act 1998 established a Transport Licensing Board consisting of a chairperson appointed by the Minister; the IGP or his or her representative; the chairperson of the National Road Safety Council; the Solicitor General or his representative; two representatives appointed by the Minister to represent the travel industry; two other numbers appointed by the Minister one of whom shall be from the motor industry; the director of transport in the Ministry responsible for transport.

The board is charged with the duties of regulating the use of public service vehicles, private omnibuses and goods vehicles other than owner 's transport and producer sellers' vehicles throughout Uganda; and discharges such other functions as other functions as the Minister may from time to time by statutory order, direct

4.4 Overview of concepts

4.4.1 Road user protection

Road users refer to any person who uses the road. Road users can be grouped into the following categories: Pedestrians, Drivers, passengers, cyclists, etc.

These are number of legislation in place with provisions addressing traffic issues in Uganda.

Starting with the 1995 Constitution of the Republic of Uganda the mother law of the country, Article 39 (1)(a) and (b) of the constitution gives a right to every Ugandan to move freely throughout Uganda and to reside and settle in any part of Uganda; to enter , leave and return to Uganda .

The same constitution under Article 12(2) mandates Parliament to enact laws to provide for the right of persons to work under satisfactory, safe and health conditions.

Turning to the traffic and Road Safety Act 1998, there are a number of measures put forward to promote road safety and among these include:-

The Act prohibits the use of goods vehicle on a road with a load greater than the load specified by the manufacturer of the chassis of the goods vehicle. Furthermore, no goods vehicle is to be used on a road if it is loaded in such a manner as to make it a danger to other persons using the road or to persons travelling on the goods vehicle; and if any load or part of a load falls from any such goods vehicle, that the fact is prima facie evidence that the goods vehicle was loaded in a dangerous manner, until the contrary is proved to the satisfaction of the court.

No motor vehicle, trailer or engineering plant shall be used on a road unless the motor vehicle, trailer or engineering plant and all its parts and equipment, including tires and lights, are in good repair and in efficient working order and are in such condition that the driving of the vehicle on the road either in the daytime or at night is not likely to be a danger to the persons travelling on the motor vehicle, trailer or engineering plant or to other users of the road.

Every person who causes bodily injury to or the death of any person by carelessly or recklessly or at a speed or in a manner which, having regard to all the circumstances of the case is dangerous to the public or to any person; commits an offence.

Every person who while drives under the influence of drink or a drug to such an extent as to be incapable of having proper control of the motor vehicle, trailer or engineering plant, drives or attempts to drive a motor, trailer or engineering plant on any road commits an offence and is liable on conviction to a fine of not less than sixty currency points or imprisonment of not less than six months and not exceeding two years or both.

Every person who drives a motor vehicle, trailer or engineering plant of any class or description on a road at a greater speed than the prescribed maximum speed limit in respect of that road, or aids, abets, counsels or procures any other person to drive a motor vehicle, trailer or engineering plant at a speed in excess of a speed limit lawfully imposed, commits an offence and is liable on conviction to a fine of not less than fifteen currency points and not exceeding sixty or imprisonment of not exceeding two years or both.

A person who drives a motor vehicle, or engineering plant on a road while he or she is disqualified from driving, or while he or she is not in possession of a valid driving permit or is in

possession of a learners permit and is driving unaccompanied by a licensed instructor, in an unauthorized motor vehicle, trailer or engineering plant ; or disqualified from driving because his or her permit has been cancelled by a court, commits an offence and is liable on conviction to a fine of not less than thirty currency points and exceeding one hundred and fifty or imprisonment of not less than one year and not exceeding five years or both.

Not more than one person in addition to the driver shall be carried on any two-wheeled motorcycle; and no person shall be so carried otherwise than on a proper seat securely fixed to the cycle.

The liability for damages to passengers in road transport is covered by the Motor Vehicle (Third Party) Insurance Act.133. The Act is mandatory and regulates the liability for traffic accidents where private as well as public motor vehicles are involved. By section 2(1) of the Motor Vehicle Insurance Act, every vehicle registered the traffic and road safety Act 134 has to be covered by third-party insurance covering third-party risks.

The use of seat belts is thought to reduce the risk of the death by up to 65%. Children, however, are poorly served. Road Traffic Crashes are leading cause of the death for children aged between 4-15 in Uganda, but as yet there are no seat belts specifically designed for their use. Current seat belts are designed to restrain adults just below their center of gravity, at the pelvis. A child's pelvis is unable to provide an anchor point for restraint until about ten years of age the belt can therefore injure the abdomen and mid lumber region.

Nevertheless, seat belts still confer a 2-10 times advantage in the event of crash and it is disturbing that some 40% of older children do not wear them travelling in motor vehicle.

5% risk of death while those at 85mph results in an 85% risk of death the traffic and road safety [speed Limit] Regulations imposes an urban speed limit of 50Km/h. However 50Km/h cannot apply in Uganda, urban centers which are poorly planned for with poor road infrastructure and high population. It must be stated that for most parts of the country , road conditions are such that speeding is not even realistic. There are far too many potholes; roads are poorly designed roads' with sharp curves and often unnecessary, illegal and unauthorized road bumps. It should be noted that the greater your speed, the more distance is covered while you make decisions and take action to avoid a collision, so your reaction will

come very late. Also, the faster you are going, the longer it takes for the vehicle to stop when you do brake. This means that the chances of avoiding a collision become smaller as your speed increases. It is also worth to note that a vehicle travelling at 50km/h is equivalent to a fired bullet of a gun. And if that vehicle has passengers, each passenger is equivalent to 2 fired bullets.

There is need to introduce speed cameras and this has worked in UK as it reduced casualties in the immediate vicinity by 47% and in surrounding areas by 18% to combat speed local authorities must be involved in introducing traffic calming measures. Use of mobile phones while driving seems to be increasing rather than decreasing especially by drivers on high way roads. It should also be noted that on motorways, sleepiness is a particular hazard, believed to account for 15-20% of accidents. Since transport to hospital usually takes 30-45 minutes, the golden hour in which 48% of death occurs is spent mainly in the pre hospital environment. In Uganda about 65% of deaths occur at the site of an accident or during transportation. Those who argue for better emergency management say that 40% due to Road traffic crashes could be prevented if the victims received appropriate treatment either before arriving at hospital or subsequently in well-coordinated departments 47.

Helmets and reflectors jackets

The proliferation of boda-boda demands that helmet use was a major piece of legislation as amended in traffic (Amendment) Act, 2012. The law (Cap 405 Section 103B (1)) states that a person, including a passenger, shall not ride on a motor cycle of any kind, class or description without wearing a helmet and or a jacket that has reflectors. The penalty for violating this law is stiff (Sh.10, 000). Unfortunately a non- scientific investigation with the boda-boda shows that very few (<20%) riders use helmets and almost none a helmet(s) for their passengers. The few who use a helmet do so to shelter themselves from weather elements especially rain and wind, and from bugs interfering with their vision. A much smaller number of those who wear helmets do so for safety and legal reason

Road safety cannot be the responsibility of government alone. The commercial sector, service organization and non-governmental organizations (NGO) play an important input at grass roots levels 48

The pace of legislative change needs to rapidly accelerate if the number of deaths from road traffic crashes is to be substantially reduced, according to the global status report on road safety 2013”Political will is needed at a highest level of government to ensure road safety legislation and communities will continue to grieve and health systems will continue to bear the brunt of injury and disability due to road traffic crashes 49

4.4.2 Waterway safety in Uganda

The inland water transport mode is little used in Africa despite the fact that it is in an excellent way of opening up remote areas. Africa has this cheap energy and environment friendly mode of transport but its importance in other regions of the world has increased. This is because Africa has only a few navigable inland waterways in the Congo, the Nile, and Zambezi basins while the greater part of its rivers have remained undeveloped with depth that is very seasonally and unpredictable. Lakes offer the best options of inland water transport, particularly in the east and central Africa.

The major problems of inland water transport are; poor safety and security due to lack of communications, poor infrastructure at terminals; difficulties from seasonal blockages caused by waterweed that often close inland waterways routes terminals ;and lack of modern fleet to provide reliable transport services.

The government of Uganda is aware of the benefit in improving water transport services for not only providing services to the poor but also exploitation of the rich agriculture and fishery resources for increased development. It sees water transport as an essential component of the national road network through the provision of road bridges between individual road systems severed by water. Unfortunately there are numerous islands that don't have required infrastructure to handle such vessels. In addition to this, government ferries that would easily act as the water bridges to connect people more often break down due to the ageing fleet.

In order to streamline water transport services, in the country, the government with assistance of donors in 1997 initiated a study called Uganda inland water transport study. Some of the objectives were to assess how to integrate road, rail and water transport for an integrated transport system and to review the effectiveness of the current inland water transport legislation.

The study came up with a number of recommendations that are summed up into 20-year water transport master plan costing up to \$484 million. Unfortunately; these funds are not readily available to implement the master plan.

The study's emphasis was largely on formal water transport involving large vessels like ships and related infrastructure issues. This covered little on informal rural water transport in Uganda.

In Uganda there is the transport licensing Board, a statutory body established under the traffic and Road Safety Act 1998 and within the ministry works and transport which is mandated to license and inspect all vessels including passengers and cargo boats used in for inland water transport. This division of the ministry of works and transport has been designated as the Maritime Administrative Unit. it should be noted that the traffic and road safety Act 1998 only applies to vehicles as defined therein, machine of any kind drawn or propelled along roads. Consequently the registration procedures under the Act do not apply to vessels governed by the inland water transport (control) Act and the Uganda

Railways Corporation Act, nevertheless it is compulsory to register vessels employed in navigation in any water in Uganda.

There is also the Rift valley Railways (Marine Division) which has been entrusted with the management of the inland water transport services on Lake Victoria and the vessels formerly operated by URC

It is also worthy to note that Uganda is a party to the United Nations Convention on Conditions for Registration of Ships. 55 Consequently, and it is required to provide in its laws and regulations for the ownership of ships flying its flag.⁵⁶ These laws have yet to be passed apart from the inland water transport (control) Act ⁵⁷ and the vessels (Registration) Act,⁵⁸ which predate the water convention

In Uganda there are several pieces of legislation, regulations and policies governing waterways, these include: the inland Water Transport (control) Act ⁵⁹ the Ferries Act Cap 350, the vessels (Registration) Act Cap 349 and Uganda Railways Corporation Act ⁶⁰ deal in some detail with vessels, owners, personnel, collision, liabilities and special institutions like salvage. The inland Water Transport Act sets the regulations for licensing of ships. The Ferries Act provides for the rules for the use of a special flag, forfeiture of license, fees, and auctioning of rights to run a

ferry while the vessel (Registration) Act establishes the obligation to register all classes of vessels, However, these laws have been described as disjointed and under the responsibility of numerous institutions, not harmonized and contradictory as well as archaic and dormant. Therefore it has been recommended that these laws should be repealed.⁶¹

Furthermore, there exist rules concerning speed limits anchoring and other matter relating to public order may be provided for by local councils. The effect of such rules are exhibited along waterways and invariably come into force following publication as ordinances in the gazette.

The government or a local government or a local government as determined by parliament by law shall hold in trust for the people and protect natural lakes, rivers, wetlands, forest reserves, game reserves, national park and land to be reserved for ecological and touristic purposes for the common good of all citizen's.

They may declare state owned areas to be wildlife conservation areas and special limitation of movement may be declared there .for the protection of wildlife, the Ugandan wildlife Authority may provide restrictions of the right of free travel and sojourn in particular areas of the country permanently or during and passage as well as protection of wild plants and animals.

Concrete obstacles created by shore owners or authorities and by natural incursions such as silting may affect the freedom of inland water traffic. These are regulated under the national environment Act.

The national Environment Act prohibits the deport of any substance in a lake or rivers in, on or under its bed, if that substance would or is likely to have adverse effects on the environment. The same regulation applies to the discharges of any hazardous substance, chemical, oil or mixture containing oil in any waters or other segment of the environment expect in accordance with guidance prescribed by NEMA in consultation with the lead agency.

A person commits an offence by contravening the above provision and may in addition to any sentence imposed by the court pay the cost of the removal including any costs which May be ncurred by any government agency or organ in the restoration of the environment damped or estroyed as result of the discharge; and the costs of third parties in the form of reparation, estoration, restitution or compensation determined by NEMA.

Furthermore, the owner or operator of a production or storages' facility, motor vehicle or vessel from which the discharge; and the occurs should mitigate by up methods;;notifying NEMA and government officers; immediately beginning the clean-up using available clean-up methods; complying with relevant NEMA directions; failing with NEMA may seize the production facility, vehicle or vessel. Where necessary they said assert may be disposed of following a court order to meet the cost of the mitigation measures.

Special rules apply to electricity supply lines, which require concession by the electricity regulatory authority. For this purpose where electricity supply line is placed over water .course, harbor, and lake is shall be done in such away as not to hinder, obstruct or interfere with the passage along such watercourse harbor and lake.

A general right of clearing waterways to maintain depth and extension without special permit exists in all kinds of water.

It is important that lake Victoria Act enacted by the east Africa community and safety regulations on the operation of open boats of open boats are weak and they lack enforcement of measures such that water life-jackets has made travelling in waters a perilous journey.

A matter not treated under legislation related to waterway and seldom noted in maritime realties concerns the water in which vessels sail. Question concerning such waters have both international law impact. Furthermore in despite rush to make profits, operators overload their boats leading to accidents.

The stats for road traffic crashes in Uganda

Table 2: Annual Road Traffic Accidents 2007-2011

Year	Mild Year Human Population	Vehicles involved	Road Accidents	Road Deaths	Road Casualties	Deaths pe 10,000 vehicles
2007	28581300	28517	19,867	2,597	13,576	71.4
2008	29592600	31065	20,729	2,488	13,753	52.9
2009	30661300	33931	22,699	2,734	15,829	52.3
2010	31784000	34412	22461	2954	15,854	46.5

2011	32939800	35716	22272	3343	16,619	40.5
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Source; Uganda Police Force Report 2011

Table 3: Nature Of Road Traffic crashes 2012 and 2013

Nature	Year		Percent change
	2012	2013	
Fatal	2611	2616	0.2
Serious	9030	8874	-1.7
Minor	8220	6878	-16.3
Total	19870	18368	-7.6

ROAD TRAFFIC CRASHES (JAN-DEC 2013)

During the period under review, 18,368 crashes were reported out of which, 616 were fatal, 8,874 were serious and 6878 were minor. There was 7.6% decrease in the number of accidents reported in 2013 from 19870 in 2012 to 18368 in 2013. fatal accidents increased slightly by 0.2% serious accidents reduced by 1.7% and minor accidents by 16%.

Statistics of waterway safety in Uganda,

According to the 2013 annual crime report, cases of drowning in Uganda's water bodies including rivers and lakes arose by 27% in 2013. Reported deaths grew from 28 cases in 2012 to 47 in 2013. Rescue emergencies also rose from 56 cases to 81 over the same period, the report shows.

COMPARATIVE PERSPECTIVE

It is important to compare experience on road and water way user's affairs in different jurisdiction in order to improve individual performance in this area by learning from strategies that have been taken by other countries.

A comparison of road safety in Nigeria

In this part a comparison of road safety in Nigeria is discussed. The reason for choosing Nigeria is because for it and Uganda use the common law legal system.

Road safety in Nigeria is not a current issue. There are various institutions and policies protecting road users in Nigeria, these include the central government, local government, government agencies, government sponsored bodies, trade associations, ombudsmen and even some international institutions and policies.

The process of establishing a Lead Agency for road safety matters in Nigeria is a chequered one spanning over a period of almost a century. The federal road safety corps is the leading and coordinating agency for road safety management in Nigeria. This status has conferred on the FRSC the responsibility of playing its role as the key driver of all road safety efforts in Nigeria.

Nigeria set up its Federal Road Safety Corps 25yrs ago in an attempt to reduce carnage on the roads. At the time, there were about 25000 crashes per year in the country, says Osita Chidoka, head of the corps. By 2012, the figure had dropped by 75%. The Nigerian agency, which reports to the president's office, won a major international road safety award in 2008. The World Bank's Sub-Saharan Africa Transport Policy Programme has described it as "an inspiration to other countries in several ways", singling it out for its professional management and use of modern technology, among other things. Chidoka says the FRSC uses a state of the art biometric driver's license and vehicle number plate identification system as well as a satellite based vehicle tracking system that enables real-time location of patrol teams and ambulances nationwide. It has also implemented a penalty point electronic ticketing system for traffic offenders." He adds that the achievements of the corps, which has run campaigns promoting seatbelt use and pedestrian safety, were a result of "committed staff that has a career in road safety"

There are 20,000 people working for the FRSC, which has funding from the national budget. About 20 African countries have dedicated road safety authorities, but fewer than five of those nations have fully functioning agencies. Nigeria's FRSC is ahead of its time. "Most other countries still have to create the legislative framework that gives them the mandate to act as a lead road safety agency, and this is the process that takes time. Many agencies lack the funding they need to be effective. Many African governments are co-operating in their efforts to curb road deaths. A Ugandan team visited Ghana in 2009 to learn from the experience of National Road Safety Commission. And Sierra Leon recently announced it would adopt Nigeria's FRSC's approach to road safety management after Nigerian experts visited the country last year.

The Nigeria police force is constitutionally empowered to act as the primary enforcement agency of all traffic laws and regulations of the federal, state and local governments in the country. This function it performs through its Motor Traffic Division. Thus like the FRSC, the police carries out road patrols, vehicle checks, and prosecute traffic offenders. The vehicle inspection Officers (VIO) is constitutionally mandated to issue such permits as Hackney Carriages, stage Carriages, and Goods Carriages. They also regulate fares and register of such in all states of the Federation.

There are also other Federal Ministries e.g. Works and Transport; Transport Regulatory Authorities; Local Government Councils; and Trade Unions e.g. National Union Of Road Transport Workers (NURTW) who are empowered to pay either persuasive, preventive or punitive safety rules in the country.

Publicity and awareness

The FRSC has in the last few years accorded due recognition to public awareness in its safety efforts. It has embarked on aggressive campaigns targeted at various groups (drivers, market women, students and pupils, and fleet operators) among others. They also sponsor TV and radio adverts and jingles, and organize other public relation programs. They are also partnering with stakeholder organizations such as Arrive Alive Road Safety Initiative to pursue and prosecute safety campaigns. In Oct 2012, the FRSC declared an enforcement Patrol Free week to carry out massive campaigns distributing handbills, safety pamphlets and posters to road users across the country.

Post-crash response

Prior to 1995, report of hospital rejection of road crash victims were rife and patrol men and rescue marshals were compelled by both government and private hospitals to pay money up front or produce staff identity card prior to the commencement of treatment of victims. This led to FRSC's decision to establish Road-Side Accident Clinics. The clinics were established to provide first aid post-crash care towards reducing trauma, stabilize the victims, promote recovery and refer those with serious injuries to hospitals. In a bid to care for road crash victims and reduce road traffic fatalities, a pilot Programme was conducted in the FCT Abuja whereby an Emergency Ambulance Service Scheme was launched in 2009. Expansion of this programmes gradually spreading to other parts of the country in order to ensure full coverage along the critical corridors. Reports of road crashes are channeled mainly through several informal and unstructured media. Currently, only one toll-free emergency line is designated for crash/incident reporting. The call is directed to a call Centre, manned by FRSC staffs who then locate an FRSC patrol vehicle nearest to the crash scene via the use of vehicle tracking suit.

FRSC has also introduced and commenced implementation of the six Fatality Threshold Investigation plan in which inquiries are made into all road traffic crashes which result in six or more death.

Compared to Uganda, although the laws and regulations gives obligations to the National Road Safety Council, Transport Licensing Board, Uganda police, Rift Valley Railways (Marine Division), to monitor and promote road and waterway safety in Uganda, there is no clear mechanism to ensure that every agency enjoys it's autonomy and that is facilitated to carry out its obligation effectively.

One of the factors contributing to the high frequency of traffic law and regulation violations in Uganda is the weakness of the licensing and regulatory authorities. The lack of qualified and competent staff, inadequate equipment, and low level of funding has impaired their effectiveness. Since the government appoints members of these regulatory bodies and low level funding has impaired their effectiveness. Since the government appoints members of these regulatory bodies and licensing board mainly on political considerations rather than merit or professionalism, enforcement of the Transport Licensing Act is weak in Uganda. Financing of

these bodies is mostly from government budgetary annual allocations and is based on set ceiling rather than requirements.

This also leads to inadequate funding and inefficient operations. Cases of fake licenses are rampant, while many vehicles operate without valid licenses in contravention of the Traffic laws resulting in substantial revenue loss, and yet detection and prosecutions are rare

Also the implementation of road and water way safety laws and regulations in Uganda is very low, this is because of the weakness and challenges faced by the regulatory and enforcing agency.

A comparison of waterway safety in Nigeria

Nigeria has the second longest length of waterways in Africa. It has 8,600km of inland waterways and an extensive coastland of about 852lm. Nigeria's waterways center on its longest rivers, Rivers Niger and Benue, which dissect the country into east, west, and north sections. The two rivers run into each other at Lokoja and flow into the Atlantic Ocean. The coastal waterways extend from Badagry through Warri to Calabar.

Most of the activity on the country's waterways, especially by larger powered boats and for commerce, is in the Niger Delta and all along the coast from Lagos Lagoon to Cross River.

National Inland Waterways Authority (NIWA)

The National inland Waterways Authority was established by Decree No. 13 of 1997 with a clear mandate to manage Nigeria's vast inland waterway resources. The Decree vests in NIWA the power of exclusive management, direction and control on the Nigeria inland waterways. This power is exercised on Nigeria's 3000km navigable waterways from the Nigeria/Niger and Nigeria/Cameroon. Nigeria is blessed with a river configuration very suitable for North-South movement of people and goods. NIWA issue licenses for sand dredging, pipeline construction, dredging of slot and approve designs and construction of Inland River crafts. As part of its transport service, NIWA is equipped with a number of vessels, enabling it to operate ferry services (for economic good and passengers) and run cruise boats (for tourism and leisure). Many of the boats and ferries such as Mf Oron, MF Onitsha and W.B. Jebba have been fully refurbished and deployed on their respective routes. With these exercise, NIWA has full filled

one of full filled one of its key functions of operating safe and efficient water transportation. NIWA's wide range of engineering services includes construction of inland river-ports and jetties. NIWA also undertakes capital and maintain ace dredging, and engineering, design of river ports etc.

As part of NIWA's marine services, they remove and receive derelicts, wrecks and other obstructions from inland waterways; clear water hyacinth and other harmful weeds and NIWA has embarked on aggressive clearing of water hyacinth in Epe, Igbokoda and other northern waterways, boat construction, repairs and dockyard services. NIWA is responsible for hydrological and hydrographic surveys, river chart routes such as calabar-oron and Lokoja were successfully. Preliminary survey. Come ferry River Niger has also been conducted in preparation for the dredging of the river. NIWA provides hydraulic structures for river dams, beds and bank stabilization, barrages, and maintain lights, buoys and all navigational aids along all water channels and banks.

Nigerian Maritime Administration and safety Agency

The NIMASA, formerly the National Maritime Authority (NMA) is responsible for regulations related to Nigerian shipping maritime labor and coastal workers. The agency also undertakes inspections search and rescue services. The governing body includes representatives of the Ministry of labor, Transport and the Navy borders to the Atlantic Ocean.

CHAPTER FIVE

PRESENTATION, ANALYSIS, DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Road and water way safety under the law policy and relating to road and water way safety of identifying lacunas and implications of lacunas. This facilitated devising of recommendation of project road and water way users. Questionnaires out interview guide were designed to contain questions on road and water way user protection in relation to the road and water way safety law, policy and regulations.

Gender of respondents

Showing gender respondents

Respondents	Frequency	Percentage (%)
Male	30	42.8
Female	40	57.1
Total	70	100

From the table above, it can be seen that the majority of the respondents were female presenting 42.8% of the total respondents men were representing 30 representing 57.1%. This is an indication that gender sensitivity was taken care off so the findings will not be doubted on gender grounds.

Age of the respondents

This section presents the age of the respondents in frequencies and % as their responses in the study analysis of road and water way safety.

Age (yrs)	Frequency	percentage
0-24	10	14.2
6-30	19	27.1
1-35	31	44.2
6-40	10	14.2
total	70	100

From the findings in the table it shows that many of the respondents were 44.2% were aged 31-35 indicating that many research respondents were youth followed by 27.1% age 26-30.

Respondent's level of education

This presents the respondents level of education in frequency and percentage.

Table showing respondents' level of education

Level of education	Frequency	percentage
Primary	18	25.7
Secondary	25	35.7
University	15	21.4
Others	12	17.1
Total	70	100

Primary source

Findings in table shows that majority of respondents conducted in research reached a senior level 35% and followed by 25.7% primary and university 21.4% plus 17.1%. This indicates that most of the respondents could read interpret the questionnaire as well as giving response to questionnaires.

Respondent's awareness on road and water way safety in the transportation matters.

The respondents were to state if they know of anything about road and water way safety in transportation sector for instance that every vehicle registered traffic and road-safety Act 1998 has to be covered by third party insurance.

This helped the researcher to know any awareness existed whether any awareness existed about road and water safety in transportation sector.

The table below indicates the number of respondents who know about road and water way safety in the transportation

Respondent's knowledge of road and water way safety.

Do you know anything about road and water way safety in transportation sector?

Do you know anything about road and water way safety	Agree	Not sure	Disagree	Total
Frequency	40	18	12	70
Percentage	57.1	25.7	17.1	100

Level of knowledge on road and water way safety in the transportation section.

Respondents were asked their level of understanding on road and water way safety in the transportation. The researcher's purpose for this question was to know how much the respondents knew about road and water way on three criteria in knowing everything, average knowing and little knowing.

Below indicates the level of knowledge of respondents on road and water way safety.

Level of respondent's knowledge on road and water way safety.

Level of respondents knowledge on road and water way safety	Knowing every thing	Average knowing	Little knowing	Total
Frequency	15	25	30	70
Percentage	21.4	35.7	42.8	100

Primary source

From the finding it shows very few respondents about 21.4% knew everything about road and water safety 35.7% knew average while 42.8% had little knowledge on road and water way safety in the transportation sector.

Respondents were asked to state why they had heard about laws and regulation relating to road and waterway safety in Uganda

The respondents were asked to state if they knew anything about road and waterway safety in Uganda..

Table below shows the respondents response to this question.

Question	Response			
	Agree	percentage	Not Agree	percentage
Have you heard of laws and regulations of Uganda relating to road and waterway safety				
Frequency	60	85.7	10	14.2
Total	70	0	0	100

Primary source

85.7 percentage of the respondents in the chosen sample response positively to the question as of them have heard about laws and regulations of Uganda relating to read and waterway safety.

The road and waterway safety laws and regulations known by the respondents

The respondents were asked to mention the road and waterway safety laws and regulation they know.

The table below shows the respondents response to this question

No	Mention the road and water way safety, laws and regulations you know	Res pon den s	Do you think it's good law	Do you think this law can work	Do you think this law is being applied	Do people observe this law in this area

			Yes	No	Yes	No	Yes	No	Yes	No
1	Use of seat belts/traffic and road safety (wearing belts). Regulations 2004	70	70	0	70	0	20	50	2	68
2	Helmet laws for motorcyclist	20	20	0	15	5	1	19	0	20
3	Drinking under the influence of alcohol/traffic and road safety(prescribed alcohol limits regulations 2004	70	70	0	68	2	10	57	0	57
	Obeying traffic signals/signs	70	70	0	68	0	0	70	2	65
	Vehicle road worthiness	15	15	0	15	0	4	11	0	15
	Traffic and road safety (vehicles	1	1	0	1	0	1	0	1	0

	registration) regulations 1998									
7	Traffic and Road Safety Act, 1998 Cap. 361	10	7	3	10	0	6	4	3	7
8	Traffic and Road Safety (parking of motor vehicles) Regulations 2001,	1	1	0	1	0	0	1	0	1
	Motor Vehicle insurance/Mo tor Vehicle (Third Party Risks) Insurance Act Cap.214	5	5	0	5	0	5	0	5	0
9	Inland Water Transport (control) Act Cap 348	2	1	1	1	1	0	1	0	2
10	High Way Code of Uganda	5	5	0	5	0	3	2	3	2

11	The Ferries Act Cap 350	2	1	1	1	1	1	1	1	1
12	Speed limit on motorways/Traffic and Road Safety (Speed Limits) Regulations 2004	40	40	0	35	5	10	30	10	30
13	Use of telephone while driving/Traffic and Road Safety (use of mobile phones) Regulations 2004	4	4	0	4	0	0	4	0	4
14	The lake Victoria Transport Act 2007	2	2	0	2	0	1	1	1	1
15	Traffic and Road Safety (Motor cycle)	1	1	0	1	0	0	1	0	1

	Regulations 2004									
16	Traffic and Road Safety (Speed Governors) Regulations 2004	15	15	0	15	0	0	15	0	5
17	Traffic and Road Safety (Rules of road) Regulations 2004	4	4	0	4	0	2	2	2	2
18	Driver requirements/ Traffic and Road Safety (Driving Permits) Regulations 2005	20	20	0	20	0	15	5	7	13
9	Traffic and Road Safety (Driving Schools) Regulations 2010	1	1	0	1	0	0	1	0	1

Source: Research findings 2017

Satisfaction of existing laws and regulations of Uganda relating to road and water way safety in protecting road and water way users.

The respondents were asked question to see if the existing law regulation Uganda relating to road waterway satisfy the requirement of road and waterway safety in Uganda.

Below the table shows the respondents response to this question.

	Response		
Satisfaction of existing laws and policy regulations	Satisfy	Partially satisfy	Doest satisfy
Frequency	12	50	8
Percentage (%)	17.1	71.4	11.4

Majority of respondents about 71.4% and regulation partly satisfy the requirement of road and waterway users respectively while about 17.1% and 11.4% said the existing laws and regulations satisfy the requirements if road and waterway users respectively because the provision in are sufficient for protection of road and waterway users respectively.

Reasons for the existing laws and regulations in Uganda relating to road and waterway safety to satisfy or partial sales the requirements of road and water way safety.

The researcher further asked the respondents for the risk in support of their answers as to why they think the existing road waterway safety laws and regulation satisfy or partly satisfy the requirement off road and water way users' protection. The respondents were given reason to choose.

Because they contain some provisions of law which are sufficient to protect road and waterway users respectively.

Because they meet all requirements of road and waterway safety

Because the provisions of law which protect road and water way users are very few and have hortcomings

Because they do not contain provisions of law which protect road and water way users

Below is the reason as illustrated under the table.

	Frequency	Percentage (%)
Because they contain same.....	12	17.1
Because they meet all.....	8	11.4
Because the provision of the law.....	45	64.2
Because they do not contain....	5	7.1
Total	70	100

Primary source

From the findings it shows that majority about 70% out of the chosen sample who answered the existing road and waterway safety laws and regulation partly satisfies the requirements of road and waterway users protection said it is because the provision of law which protects the road and waterway users are very few and have short coming.

The increased traffic flow volume.

The respondents were asked if the increased traffic volume is a result if the short comings in the existing road and waterway laws, policy and regulations.

The table indicates the respondent's opinions.

Response	Frequency	Percentage
Yes	52	74.2
No	12	17.1
Not sure	6	8.5
Total	70	100

Primary source

The findings show that majority said the reason for the increased traffic flow volume is as a result of loopholes in the laws policy on regulations which road water way laws and regulations offenders take advantage of.

Findings

The researcher came up with a number of finds which helped him to come up with recommendations. These are discussed as below.

Traffic management systems.

In the majority of urban areas as well as on major highways, traffic volumes have increased although that increase is not commensurate with the increase in the quality or quality of road infrastructure. The compounds traffic management problems in urban areas and on highways in Uganda in addition to poor road signs, poor junction layouts, lack of market lanes, inadequate roadside parking spaces, nonfunctional traffic signals and a high volume of pedestrian activities on the roadside. Poor urban planning has led to the occupation of pavements and even parts of many roads by hordes of hawkers in the urban areas. Traffic laws and regulations become difficult to enforce under these conditions. In the same way, they become difficult to follow.

The police, who are the main enforcement agencies in Uganda, are handicapped by shortage of basic equipment such as vehicles and breath analyzers for detecting drunken drivers, and by using weighbridges that are not calibrated. Because of the high rate of non compliance with traffic laws due to poor or inadequate road infrastructure such as road signs, lack of traffic lights and poor urban planning, enforcement of traffic laws is weak. Even where cases are taken to court, however, the fines are non deterrent. The study found that in most cases, vehicle owners are never enjoined in traffic lawsuits instituted against their drivers.

In the case of management and road safety, weaknesses exist in the management of national road safety council and among the law enforcement agencies. The road safety council, established to promote high standards of safety on the roads and minimize road accidents in Uganda through public education and increased public awareness, was found to be mostly inactive. This was due to several factors including poor funding, excessive government involvement in the management and organization of the council with negligible private sector participation, inadequate equipment and lack of road safety research and traffic education.

The East African (EA) countries, Kenya, Tanzania and Uganda, have interdependent road transport networks and services not only for the promotion of their respective national economic development programs but also in strengthening regional socioeconomic integration under the

newly signed East African Community (EAC) Treaty. The signing of the Tripartite Agreement on Road Transport (TAORT) in 1998 was a bold step towards effective harmonization of road transport operations in the region. As well as being a member of the EAC, each of the three partner states belongs to other regional groupings. Kenya and Uganda are members of the Common Market for Eastern and Southern Africa (COMESA), whereas Tanzania is a member of the Southern African Development Community (SADC). This dual membership to regional groupings has occasionally led to situation where the three countries apply different standards. This could have conflicting objectives with the TAORT, whose goals are to standardize road transport laws and regulations in the EAC. Moreover, although these countries have similar laws, the enforcement of operating standards of road infrastructure, transport services and traffic controls to ensure safety in East Africa, remains weak, causing a lot of concern to operators, road users and the public at large.

The laws and regulations and their enforcement mechanisms in the region should be reviewed with the notion to recommend measures for harmonizing them to improve the efficiency of domestic, transit and cross road traffic.

Regulatory and Licensing Authorities

One of the factors contributing to the high frequency of traffic law and regulation violations is the weakness of the licensing and regulatory authorities. The lack of qualified and competent staff, inadequate equipment and low level of funding has impaired their effectiveness. Since the government appoints members of these regulatory bodies and licensing board mainly on political considerations rather than merit or professionalism, enforcement of the transport

Licensing Act is weak in Uganda. Financing of these bodies is mostly from government budgetary annual allocations and is based on set ceilings rather than requirements. This also leads to inadequate funding and inefficient operations. Cases of fake licenses are rampant, while many vehicles operate without valid licenses in contravention of the Traffic laws resulting in substantial revenue loss, and detection and prosecutions are rare.

Road and water way safety research

There are no systematic and sustainable research initiatives on road and water safety in Uganda. What is in place is sporadic and isolated incidents of police investigations into specific road and water way accidents and these investigations are for purposes of criminal prosecutions and the results of are never made public. Research in this area would include collection, analysis, and interpretation of data on various elements relating to road safety such as levels of motorization in relation to incomes, common causes of various road and water way accidents, and an estimation of the impact of poor road and water way safety on the economy.

Emergency medical services

Throughout Uganda, there are no established and sustainable emergency facilities to deal with road and water way accidents on the highways and water ways. Private facilities and a few insurance companies in Uganda such as the AAR are usually not affordable to the majority of Ugandans. In the most cases, ambulance or helicopter services to rush critically injured accident victims to hospitals do not exist. The injured normally depend on the goodwill of passing "Good Samaritans" for help.

Furthermore, hospitals are inadequately equipped to deal with major accidents and the poor telecommunication network compounds the problem in calling for help. Bandits or passersby often take advantage of accidents to rob helpless accident victims.

Users preferred engine powered boats compared to the oar powered due to the time element involved. Likewise, they preferred ferries to boats. They contend that ferries are safer compared to boats and have a higher carrying capacity. Water transport is used for various purposes but largely for economic needs. Due to under developed infrastructure, porters carry passengers using hands to load and from the boats. In other words water transport heavily involves porter age.

The research found out that the current institutional framework within Uganda is inadequate to effectively handle the issues regarding rural water transport services. This is because the ministry is largely geared towards formal rural water transport services.

Coordination between the Ministry of Transport, Works and Communication and other departments like fisheries and Local Authorities matters of rural water transport matters was

not clear. There is no clear structure linking the ministry and rural water transport service providers.

The adaptation and enforcement of Traffic laws appears inadequate in many parts of Uganda. The development and effective enforcement of legislation is critical in reducing drink driving and excessive speed and in increasing the use of helmets, seat belts and child restraints.

Overcrowded and unsafe modes of public transport contribute to road and waterway traffic injuries and deaths. Choices of transport modes are frequently related to socioeconomic status, with those who can afford it avoiding these unregulated and unsafe vehicles.

Safety regulations on the operations of open boats are weak and the lack of enforcement of measures such as wearing life jackets has made travelling on waters a perilous journey. In a desperate rush to make profit, operators overload their boats, leading to accidents.

Safety regulations on the operations of open boats are weak and the lack of enforcement of measures such as wearing life jackets has made travelling on waters a perilous journey. In a desperate rush to make profit, operators overload their boats, leading to accidents.

5.5 Conclusion

The findings reveal that the existing laws, policy and regulations have loopholes for example there are no seat belts specifically designed for children use. Current seat belts are designed to restrain adults just below their center of gravity, at the pelvis. A child's pelvis is unable to provide an anchor point for restraint until about ten years of age and the belt can therefore injure of abdomen and mid lumbar region. The Road and Waterway safety do not provide independent enforcing and regulatory bodies, the licensing Board and National Road Safety Council are not independent, they are under the ministry of Transport, Works and Communication so in most cases the execution of their duties is let down since they operate under the control of the ministry both financial and morally etc. all these loopholes have a great impact on the Road and waterway Safety in Uganda as discussed as above.

5.6 Recommendation

The study assessed road and waterway safety in the laws, policy and regulations relating to road and waterway safety in Uganda, the shortcomings in the said laws policy and regulations and the implication of the shortcomings in the said laws, policy and regulations. Generally the findings indicate that there are shortcomings in the existing laws, policy and regulations as far as the issue of road and waterway safety in the transportation sector is concerned. The economic, social and health losses resulting from road traffic and waterway injuries are not inevitable. There is substantial evidence conforming that road traffic and waterway injuries can be prevented. After a thorough analysis of the findings.

Below are the recommendations from the researcher

5.6.1 Specific Recommendations

Governments need to enact appropriate laws that require all road users to be protected through enforcement of the major risk factors including non helmet wearing, drink-driving, speeding and seat belt and child restraint usage and post crash care.

The use of seat belts is thought to reduce the risk of death by up to 65%. The legislature should frame laws and policies addressing children restraints such as seat belts specifically designed for children.

Enforcement of comprehensive and clear legislation with appropriate penalties needs to be both sustainable and improved. Existing road safety laws should be reviewed and amended to conform to good practice that is based on sound evidence of effectiveness.

Government need to enact policies that ensure the relevant road safety institutions have the necessary financial and human resources to act effectively.

Local authorities need to be given the authority; resources and political support to implement measures to reduce speed limits to levels that may be lower than national limits where vulnerable road users are particularly at risk.

There is need to expand the laws and policies such that they cover post crash stage as this will save the lives of those who may be involved in road and waterway crash.

An independent National Road Safety Authority and National Waterway safety Authority should be established with all mandates to manage road and waterway safety issues respectively. This has worked in Nigeria.

5.6.2 General Recommendations

Improvement in vehicle design, occupant protection and vehicles maintenance could make a significant contribution to crash reduction in Uganda. Occupants can be protected by safety features such as seat belts, headrests, airbags and special seats for children. Safety related components should be maintained. This can be achieved by periodic vehicle inspections combined with frequent random checking of vehicles on the road.

Research and development is an important part of safety work and should be incorporated into road and water way safety programs. Road and water way safety research aims to improve knowledge about factors contributing to road and water way crashes, effects of different countermeasures and development of new and more effective safety measures. It forms the framework of knowledge against which better policy and resource allocation decisions can be made to ensure most effective use of available resources. The establishment of a road and water way safety research center would help to develop a data bank on road safety and undertake research in this area, among other functions.

To minimize overloading the axle load controls need strengthening through modernization and standardization of weighbridges. This, along with increased public awareness campaigns targeting drivers and operators and involvement of transport operators in road management, will ensure that imported vehicles conform to set vehicle dimensions and axle load limits.

Road safety infrastructure improvements can reduce the risk of road traffic fatalities and injuries by 25-40% for all road users, including car occupants, motorcyclists, bicyclists and pedestrians, such improvements include: widening shoulder lanes, improving intersections and installing medians, side barriers, crosswalks and lane markings.

Uganda should conduct a public awareness campaign on corruption, targeting drivers, police and vehicle operators, in addition to the reforms being pursued to strengthen governance. In the long run, however, it is recommended the country hasten the implementation of policy reforms aimed at strengthening broad socioeconomic and political governance to further strengthen institutional capacity in the roads, water way and other sector. This would go a long way in minimizing corruption.

Road and waterway safety campaigns should be conducted on a quarterly basis. The campaign programme should cover the main road safety key points as espoused by the World Global status report on Road Safety 2013 and it should also envisage the following programme.

Public enlightenment workshops and seminars on driver's improvement course

Motor park rallies involving the drivers' association and passengers

Use of drama sketches

Literacy campaign emphasizing Highway Code and road signs literacy.

Participant's observation method involving the deployment of regular marshals in parks to board public transport and monitor activities of road users.

Massive large scale campaigns during festive periods

Special campaigns for selected targets such as ministries, institutions, banks, media houses, truck drivers and road related industries.

Focusing attention on passengers who tend to be unaware that accidents claim more passengers than driver's lives.

There is need to establishment of microcomputer based accident data collection storage and analysis system which permit the road safety situation to be thoroughly analyzed and accident black spots and their characteristics to be identified for potential improvement.

The Government need to encourage collaboration between the different sectors involved in collecting and reporting data on road traffic injuries. This involves improving data linkages between police, transport and health services as well as increasing human capacity to undertake data collection.

Governments used to enact comprehensive laws that require all road users to be protected through enforcement of speed limits that are appropriate to the type and function of the road, through the stipulation of blood alcohol concentration limits to reduce drink driving and through the use of appropriate occupant protection measures. Existing legislation should be reviewed and amended to conform to good practices that are based on sound evidence of effectiveness.

Timely and proper treatment of road casualties is essential for reducing the severity of injury to crash victims.

Driver Education on first aid procedures and correct transportation of crash victims is important.

A single emergency telephone number can facilitate the simultaneous alerting of police, ambulance and other rescue services and help to reduce response times.

It is suggested that further studies should be commissioned to look at a number of aspects regarding water transport. More important is the need for a national baseline rural water transport study to cover all water bodies in order to have a true national perspective of the water transport characteristics.

There is need to transfer technology from Asia. Asian boats are powered by diesel engines, which are more robust and less expensive in terms of fuel prices. Steps should be fund out; steps should be taken to persuade the water transport operators to form associations in order to help them to work towards the development of the service.

Creation of enabling environment, the government should promote private sector participation in the industry by improving the investment climate, expanding and developing the country's water infrastructure, widening and deepening more river channels and building new roads to link agricultural and mining areas to the river ports. Government also needs to create an enabling environment for private sector participation. This could be achieved through the development of innovative action plans as well as policy consistency that could deliver profitable inland water transport operations in the country.

Private sector participation. The private sector, on other, should co-operate maximally with the government agencies that supervise inland water transport and in addition purchase new jetties, comfortable and fast boats and contribute in the development of the country's water

infrastructure either in partnership with the government or independently attainment of sustainable and profitable IWT operations in Uganda requires these practical, innovative and collaborative efforts by all the stakeholders' especially by the private sector.

Review of operational strategies. To overcome the current problems facing the sector and to lay the foundation for accelerated progress in the future, government and the private sector need to thoroughly review their policies and investment strategies. In doing this, they must take into account many factors, including how to evenly spread water transport facilities, reduce robbery and criminality along the waterways, review taxes and levies paid by water transport operators and introduce new strategies which can make water transport compete favorably with road transport in Uganda.

Modernize the river ports. The Ugandan government should further strengthen IWT by deepening and modernizing the inland river ports so that they can be put into fruitful economic uses.

REFERENCES

Advocating for road safety; guidance manual for national societies compiled by the Red Cross and Red Crescent national societies. 23 Aug.2014

Abdalla, I. M., Barker, D., Raeside, R. (1997) Road accident characteristics and socio-economic deprivation. *Traffic Engineering and Control*, December, 672-676.

AESLEME (2000) Accidentes de Tráfico. Guía práctica de prevención. Asociación para el Estudio de la Lesión Medular Espinal. Madrid, Editorial Santillana Profesional.

Alfaro, J. L., Chapuis, M. and Fabre, F. (1994) Socio-economic cost of road accidents: final report of action COST 313. Brussels, Commission of the European Community.

Amoros, E., Martin, J. L., Laumon, B. (2006) Under-reporting of road crash casualties in France. *Accident Analysis and Prevention*, 38, 627-635.

Auerbach, P. S., Morris, J. A., Phillips, J. B., Redlinger, S. R., Vaughn, W. K. (1987) An analysis of ambulance accidents in Tennessee. *Journal of the American Medical Association*, 258: 1487-1490

Bagley, C. (1992) The urban setting of juvenile pedestrian injuries: a study of behavioural ecology and social disadvantage. *Accident Analysis and Prevention*, 24, 673-678.

Baker, S. P., O'Neill, B., Haddon, W., Long, W. B. (1971) The Injury Severity Score: A method for describing patients with multiple injuries and evaluating emergency care. *Journal of Trauma* 14:187-196.

Baker, S. P., O'Neill, B., Ginsburg, M. J., Li, G. (1992) The injury fact book. Second edition. New York, Oxford University Press.

Bergner, M. et al (1976) The Sickness Impact Profile: Conceptual form and methodology for the development of health status measurement. *International Journal of Health Sciences*, 6, 393.

Biggers, W. A. Jr, Zachariah, B. S., Pepe, P. E. (1996) Emergency medical vehicle collisions in an urban system. *Prehospital Disaster Medicine* 11: 195-201

Binderup Larsen, L., Schultz Larsen, M., Lauritsen, J. M. (2004) Ulykker 2003. Tilskadekomne

Registrars Etpåskadestuen, Odense Universitets hospital. Ulykkes Analyse Gruppen, Odense.

World health organization's global status report on road safety 2013.

Uganda police force report 2-011

Edwin's mulatukabanah 2013.transport reforms justification for a road transport act

Krupka, E. &weber.R.2008.identifying social norms using coordination games; why does dictator game sharing vary? Discussion paper no.386.Bonn; the institute for the study of labour (IZA).

Enforcement of laws and regulations governing road transport industry in east Africa may 2001.

National inland waterways authority 1998

Enforcement of laws and regulations governing road transport in east Africa may 2011

An overview of transport sector activities at the EAC 2008 page 23

Pero vidan and Josip kasum. security of hazmat transport.page7

Traffic and road safety Act 1998, sec 63

Kothari CR,(2004) research methodology ;methods and technique

United Nations Economic and social council Economic Commission For Africa. Sixth session of the committee on trade, regional, cooperation and integration13-15 October 2009.Addis Ababa, Ethiopia, the transport situation in Africa page

Blaeij, A. de.,Koetse, M., Tseng, Y-Y., Rietveld, P., Verhoef, E. (2004) Valuation of safety, time, air pollution, climate change and noise; methods and estimates for various countries. Report prepared for ROSEBUD. Department of Spatial Economics, VrijeUniversiteit, Amsterdam.

Braver, E. R. (2003) Rice, Hispanic origin, and socioeconomic status in relation to motor vehicle occupant death rates and risk factors among adults. Accident Analysis and Prevention, 35, 295-309.

Brewin, C. R. (2001) Cognitive and emotional reactions to traumatic events: implications for short-term intervention. *Advances in Mind-Body Medicine*, 17 (3), 163.

Broughton, J., Baughan, C., Pearce, L., Smith, L., and Buckle, G. (2003) Work-related road accidents.

TRL Report TRL582. Crowthorne: TRL Limited.

Bryant, R. A., Marossek, J. E., Crooks, J., Gurka, J. A. (2000) Posttraumatic stress disorder after severe traumatic brain injury. *American Journal of Psychiatry*, 157, 629-631.

Bryant, B., Mayou, R., Wiggs, L., Ehlers, A., Stores, G. (2004) Psychological consequences of road traffic accidents for children and their mothers. *Psychological Medicine*, 34, 335-346.

Calle P., Fonck, K., Buylaert, W. (1999) Collisions involving mobile intensive care unit vehicles in Flanders, Belgium. *European Journal of Emergency Medicine*, 6: 349-353

42

Crandall, J. R., Martin, P. G., Sieveka, E. M., Pilkey, W. D., Dischinger, P. C., Burgess, A. R., O'Quinn,

T. D. and Schmidhauser, C. B. (1998) Lower limb response and injury in frontal crashes. *Accident*

Analysis and Prevention, 30, 667-677.

Cryer, P. C., Westrup, S., Cook, A. C., Ashwell, V., Bridger, P. and Clarke, C. (2001) *Investigation*

APPENDICES

Appendix 1; QUESTIONNAIRE

A.INTRODUCTION

Dear Respondents,

May I introduce myself to u?

My name is **NANTAAYI AMINAH RATIFAH** .am a student at Kampala international university, pursuing a diploma in law. Part of the requirement is to conduct a research and write a report there on a selected topic and in my case the topic is an analysis of the laws, policy and regulations relating to and waterway safety in Uganda

This research involves collection of data or information from the right people hence my approach to you' will be grateful if you assist me by answering questions here in below, please feel free to answer the questions saying what u think and know for the good of the study. All information will be strictly confidential, your names won't appear on any of my report it's for my study purpose only

B.RESPONDENTS IDENTIFICATION

1. Name of the respondent

.....

2. What is your sex?

a) Male ()

b) Female ()

3. In which age bracket do you fall?

a) 20-25()

b) 26-30()

- c) 31-35()
- d) 36-40()
- e) Above 40()

4. What is your marital status?

- a) Married ()
- b) Separated ()
- c) Divorced ()
- d) Single ()
- e) Widowed ()
- f) Cohabiting ()

5. What is your level of education?

- a) Primary ()
- b) Secondary ()
- c) College ()
- d) Others ()

6. Employment status

- a) Employed()
- b) Not employed()
- c) Searching()

SECTION B

QUESTIONS

(Tick in the bracket to indicate your answer)

a) Do you know anything about Road and waterway safety in the transport sector

Yes () No ()

1b) If the answer to the question is yes. How much do you know road and waterway safety in the transportation sector?

- i) Know very thing about road and waterway safety in the transportation sector ()
- ii) Have average knowledge about road and waterway safety in the transportation sector ()
- iii) Have little knowledge about road and waterway safety in the transportation sector ()
- iv) Know nothing about the road and waterway safety in the transportation sector ()

2 Have you heard of any laws and regulations relating to road and waterway safety in Uganda?

Yes() No ()

3. Mention the road and waterway safety laws policies and regulations you know

Mention the road and waterway safety laws and regulations you know	a) Do you think it's a good law?	b) Do you think the law can work?	c) Do you think the law is being applied?	e) Do people observe this law in this area?

Codes for a) 1=good 2=bad

Codes for b) 1=strongly agree 2=agree 3=strongly disagree

Codes for d) 1=always 2=sometimes 3rarely 4=never

4 a) Do the existing laws, policies and regulations of Uganda relating to road and waterway safety satisfy the requirements of road and waterway safety in Uganda

Satisfies () No () partly satisfies ()

1 b) (If the answer to question above is yes answer question below then move on to others)

Why do you think the existing laws policy and regulations of Uganda relating to road and waterway safety or partial satisfy the requirements of road and waterway safety

i) Because they meet all the requirements for road and waterway safety()

ii) Because they contain some provisions of laws which are sufficient to protect the road and waterway users ()

5. Why do u think the laws policy and regulations relating to road policy and regulations relating to road and waterway safety do not or partially satisfies the road and waterway safety in Uganda

i) Because they don't contain the provisions of law which protect road and waterway users ()

ii) Because the provisions of law which protect the road and waterway users are very few and have short comings ()

6 a) Does the existing national safety policy of 2012 satisfy the requirement of road safety

Yes () No () Partially ()

6b) If yes, why

i) Because it contains few elements which are sufficient to protect road users()

ii) Because it meets all the requirements for road users ()

6c) If no or partially why

i) Because it does not have any element of road user protection ()

ii) Because elements of road safety are not sufficient to protect road users ()

iii) Because the policy is just guideline and frame work for the sector it does not have to contain requirements of road user protection ()

7. Do u think the increased traffic flow volume is a result of the short coming in the existing road and waterway safety laws, policy and regulations?

Yes () No ()

SECTION C

PEOPLES PERCEPTION ON ROAD AND WATERWAY SAFETY, POLICIES, RULES AND REGULATIONS

1. What are the major causes of road accidents in Uganda...?

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2. What are the impacts of road accidents on the road users...?

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3. Who are most affected among the road users, pedestrian's, motorist, cyclist, or drivers...?

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4. Why water transport is not commonly used compared to road transport...?

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5. Are there any laws, policies or regulations protecting road and waterway users that u know? If yes what are they?

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6 a). Are the laws, policy or regulations protecting road and water way users being enforced...?

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6b) If no or partially why.....?

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7. What do you recommend that should be done to ensure the enforcement of road and waterway, laws, policy and regulations?

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8. What must be done in order to control the causes of road and water accidents in Uganda...?

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“Thank you for your cooperation”