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LL.M. Program

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TITLE

Road safety and accident prevention in the Republic of Armenia

The Necessity of the Demerit system in the RA.

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Abstract

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A “human catastrophe” is the description frequently made of the global traffic safety situation. The World Health Organization (WHO) projects that by 2030, the fifth most common reason for loss of health will be an injury generated within the road transport system. This forecast is not only catastrophic, but also tragic since most of these deaths can be avoided or, at the very least, dramatically decreased. According to ISO (International Organization for Standardization) studies, over 90 % of the deaths in road accidents occur in low-income and middle-income

countries. Does this mean that developing countries have poor traffic rules, or poor and bad roads, or wicked and corrupt State officials, or disadvantageous or drunk drivers? The answer is not simple, since it is important to look at all components of the system as a whole, for the reason that every part matters. Nonetheless, most importantly is to realize the sense: «what could have been done to prevent road traffic deaths and injuries”? It is essential to realize that so called “human catastrophe” can be preventable and avoidable.

“Road traffic deaths are both predictable and preventable.

For this reason, we should no longer call them accidents.”

Mark Rosenberg

Introduction

Road transportation means such as motor vehicles, buses, cabs, motorcycles, bicycles and other transportation vehicles are used and operated daily by the people of our country. People rely on these means to go to work, school, hospitals, stores, restaurants, recreation centers, parks and many other places. They are a necessary tool to get from destination A to destination B or C. Therefore, the mere importance of the state to ensure safe road transportation cannot be overlooked. According to World Health Organization (WHO) Global Status Report on Road Safety, 2013, nearly 1.3 million people die each year, and between 20 and 50 million more are injured as a result of accidents involving vehicles.

Road traffic accidents, injuries and damages have a huge socio-economic effect for any society. They cause major civil, economic and health problems and are becoming the leading cause of death, injury and disability around the world. Road safety depends on how societies choose to manage transport systems, set and enforce proper rules and regulations and understand the severity of each road accident. One of the most essential aspects of road safety is the proper enforcement of the set traffic rules. Accidents which occur during road collisions are among the major causes of death over the world, and in the Republic of Armenia, although most injuries and deaths are preventable. The main objective of traffic rules and regulations has to be focused on creation of a system that is driven to decrease the number of road accidents. The Government must safeguard all of the lives of the people in its county, by setting proper enforcement of adequate traffic rules and regulations which will prevent road traffic accidents and ensure safety.

Currently, Republic of Armenia is not known for having a safe road transportation system, and undeniably death rates in roads of RA are high. People tend to feel unsafe not only as motorists but as pedestrians as well, since Armenia has one of the highest pedestrian death ratio.¹ Accordingly, this paper will introduce actual life threatening issues that the people face in RA, due to improper and neglected traffic system.

¹ World Health Organization (WHO) Global Status Report on Road Safety, 2013, Armenia

Republic of Armenia became the 42nd member state of the Council of Europe on 25 January 2001, by doing so they acknowledged **Article 2** of the European Convention on Human Rights, which guarantees the right of life. It is listed first since it is the most basic human right of all; everyone has a right of life. This Article, also lists the Positive obligations of State officials in regard to ensuring safety and protecting lives. However, in the Republic of Armenia, pedestrians find themselves the targets of bad drivers, who most of the time, are not qualified to drive. Today, like never before it is important to understand that right policies and legislation, if strictly passed and enforced over a determined period, can help prevent road traffic injuries.

Developed nations are taking various measures to prevent car accidents on their roads; they have more regulations in their legislation regarding traffic enforcement. One of those measures is the use of the Demerit point based driving system, which is currently being used by countries such as, France, Germany, Ireland, Canada, Hong Kong, Australia, England, Italy, mostly all of US states, and many other nations. The demerit point based driving system is used to calculate the amount of fines or driving errors done by an individual. This system is one in which a driver's licensing authority, police force, or other organization issues cumulative demerits, or points to drivers on conviction for road traffic offenses. Accordingly, points may either be added or subtracted, depending on the particular system in use. This system is used to keep repeated violators of Traffic Laws from driving for a period of time, depending on the severity of the offense committed or until they take additional classes in traffic school to decrease their points.

The benefits of the demerit point system and how it ensures a safe traffic system:

- identifies, deters, and penalizes repeat offenders of traffic laws, while streamlining the legal process;

- makes sure that continues offenders will not have a driver license, for some time or will lose their license for a long duration, depending on the offense;
- keeps track of violations and by doing this have a previous and current driving history record of an individual;
- enables drivers to be more cautious and aware of consequences of bad driving;
- enables drivers to re take classes at traffic school for a chance to subtract points;
- makes roads safer for everyone, including pedestrians, cyclists and fellow motorists, by punishing bad drivers or frequent offenders;

Introducing the demerit point system in the Armenian legislation, would be a major and necessary solution for a safer traffic system. This method is essential and this edition possibly will be what has been missing in the Armenian Legislation, in preventing accidents and saving human lives. Drivers in RA get enabled to make unlimited mistakes due to the absence of the point system and continue to operate a motor vehicle with only having a consequence of out of pocket financial loss. Protection of people's lives should be an ultimate goal of every Government. This would include protection of human lives by setting standards, traffic rules and regulations that ensure a safe system approach. To ensure this approach the State must not only enforce traffic rules and regulations but also be accountable for road constructions, regular inspections of exciting road infrastructure, and policies encouraging investment in public transport system.

Government officials in RA must take the loss of a human life serious; in doing so, they must hold reckless drivers accountable for their actions. The main objective of a safe road transportation system should be decreasing the number of accidents, deaths and injuries by instant punishment of violators who endanger the lives of others on roads. Although this in not the only but necessary condition to ensure and implement safe system approach in RA.

Chapter 1. The Importance of Road Safety

Road traffic safety used to be referred to as the methods and measures used to prevent road users from being killed or seriously injured. Today many scientists argue that road safety has to be referred to as the notion that all accidents are predictable and preventable. For example Dr. Rosenberg, who is a Director of the Global Road Safety Forum, a program of the Task Force for Global Health, believes that: «Road traffic deaths are both predictable and preventable. For this reason, we should no longer call them accidents; we try never to use the word accident, because accident implies that a collision or injury was completely unpredictable...”² Others argue that despite of the fact that road traffic injuries are preventable; not all accidents can be prevented but can be significantly decreased.

However, everyone would agree that the ultimate goal of road safety is to save lives. As previously mentioned, today 90 % of the fatalities are in poor and middle income nations. This is very tragic, especially since RA is considered a low income country, and since poor nations have limited resources to invest in road safety. The other misfortune, is that developing countries have limited financial resources to spend on health care as well. The World Health Organization projects that by 2030 the fifth most common reason for loss of health will be an injury generated within the road transport system, and regrettably low- and middle-income countries with fatalities increasing by 80% compared to a decrease in fatalities by 30% in high-income countries³.

In developing countries, road traffic death and accordingly estimated road traffic death rates are much higher per 100000 population. In Thailand, for example estimated death rate per 100000 population is 38.1 while in Sweden is only 3.⁴ In developed countries, road users are less vulnerable since they drive fully equipped cars with front air bags, side air bags, seat belts, side-impact protection and rollover protection. They have better roads and better post-crash care system.

²Mark L Rosenberg., On the Road of Safety, pp.4-5

³NZ Transport Agency WakaKotahi, Introducing the Safe System Approach to Road Safety, pp. 3-4

⁴World Health Organization (WHO) Global Status Report on Road Safety, 2013, p. 250

In developing countries, by contrary road users are more vulnerable. Sometimes they operate decrepit cars, on bad roads and when they need health or road services they might wait hours to receive them. Moreover, it might take hours to receive medical assistance as well during the accident, which also affects death rates figures in rising countries. Therefore, the importance of good post-crash care, both in terms of providing quick access for road traffic victims to health care is also important in developing countries.

Major Causes of Road Accidents can be summarized as:

- poor roads and their structure;
- reckless and unsafe drivers;
- poor enforcement of traffic rules & regulations;
- over speeding, drunk driving;
- prominent errors done by the driver;
- driving at night, especially in streets which don't have not enough lighting.

In the Republic of Armenia, traffic rules and regulations have a poor enforcement mechanism and the following causes of road accidents, make it harder for the State to prevent accidents. In many Post-Soviet countries, which are corrupt, some drivers who are more privileged financially than others, usually drive drunk, pass red lights and even escape jail terms, from a really bad car accident, and Armenia is not an exception. After 26 years of independence RA authorities and public are still fighting against heritage of the command economic system that was considered corrupt and inefficient. Problems of bribing, disobedience of the law and unlawful activities of police officers; still exist in RA.

What's more is the fact that most traffic rules of RA, are in comparability with international standards, and its due to the poor enforcement system of those rules, that RA is far behind from the traffic standards of European countries. Russian drivers equally can ignore traffic lights, road signs and traffic regulations since they have one of the most corrupt public

services in the world. In 2016, Transparency International gave this country a score of 29 (out of 100) when calculating its corruption perception indexes, while Armenia has a score of 33.

It highlighted, that “the lower-ranked countries are plagued by untrustworthy and badly functioning public institutions like the police and judiciary.”⁵ Furthermore, Anton Oleinik, a professor of St. Petersburg State University documented that: “the perceived extent of corruption in the operations of Russia's traffic police exceeds what is considered to be a “norm” in a country with one of the highest levels of corruption in the world.”⁶

The existing literature on corruption and road safety emphasizes the importance of uniformity in the enforcement of traffic laws and regulations. Corruption undermines road safety in many ways, since it undermines uniformity in the enforcement of the traffic laws and regulations. According to study, conducted by Holand, Hau and Evans: “reduction of corruption is a necessary condition to effectively tackle road safety problems”.⁷ Moreover, bribery and fraud jeopardize the road safety, accidents and death prevention.

As assumed from the following information, corruption affects road safety. Furthermore, if police officials do not obey the Law, then other motorists will tend to consider safe driving as optional rather than mandatory. The traffic police in many countries may also enforce the traffic laws and regulations differently, depending on the lawbreaker's social status. In some countries, including Russia, particular license plates serve to signal the privileged status of the car's user. For example, high-ranked state officials and individuals who are financially advantaged, have such plates. According to Leon Aron, director of Russian studies at the American Enterprise Institute: “The creation of distinctive license plates often may cause irritation and eventual protests on the part of motorists with no such privileges.”⁸ Regrettably, this problem exists in RA as well. You may often see cars with so called “gold plates” illegally parked on the roads of RA. Therefore, the government of each country has the duty to address this issue.

The government of Russia Declared the 'Moscow Declaration' which was the first Global Ministerial conference on road safety held in Russia on November 19-20, 2009. There were as many as 1500 participants, including senior ministers of several countries and representatives of

⁵ http://www.transparency.org/news/feature/corruption_perceptions_index_2016

⁶ Anton Oleinik, Corruption on the road: A case study of Russian traffic police, p.1

⁷ L.T. Hua, R.B. Noland, A.W. Evans, The direct and indirect effects of corruption on motor vehicle crash deaths, *Accid.Anal. Prev.*, 42 (2010)

⁸ L. Aron, Russia's New Protesters, American Enterprise Institute, *Russian Outlook*, p.6 Accessed from <http://www.aei.org/wp-content/uploads/2011/10/RO-Spring-2010-g.pdf> (2010)

UN agencies. The participants declared 2011 to 2020 as the decade of action for road safety. During the conference it became clear that the statistics for road traffic crashes are much worse than initially thought. Indeed it further confirmed the much higher incidence of deaths and injuries from road traffic accidents are in developing and poor countries. The Declaration was convinced that by the year 2020, without special attention and actions being taken, the road traffic deaths will become one of the leading causes of deaths in poor countries.

Documenting the number of people who incur a non-fatal injury or disability as a result of road accidents is important. In many countries statistics on road traffic fatalities remain inconsistent. The Police of each country, are the source of official road traffic fatality data in many countries, and unfortunately data from police sources tend to have higher levels of underreporting than health sector data, particularly in low- and middle-income countries.

Road traffic accidents, injuries and damages have huge socio-economic effect for any society. They cause a major civil, economic and health problems and are becoming a leading cause of death, injury and disability around the world. Thus, they are one of the world's largest public health problems; and these problems are more severe since generally most of the victims of road accidents, were healthy before their crashes. Unlike deaths which occur due to illnesses or diseases, in this case, healthy people are dying or being injured.

Drivers and especially pedestrians find themselves filling unsafe and vulnerable in RA, due to a poor enforcement of traffic rules and regulations. The State officials of RA must acknowledge that while driving is a necessity and a privilege it should not in any way be a tool for murder, and that perpetrators must be held accountable for their reckless behavior which could endanger lives. Why are road traffic deaths in RA not being prevented as they should, even signs of attempts of prevention are absent. In neglecting the issue of a lost life, The State officials must know that every single collision could be fatal and every single life of a human matters. Every lost day, every hour or even minute, that our government is not enforcing change, a person, somewhere in Armenia, is fighting for or losing their life.

Chapter2. Republic of Armenian Legal Framework

Republic of Armenia got independence from the Soviet Union in September 1991. Armenian people, recognizing this as a basis, the fundamental principles of the Armenian statehood and national aspirations engraved in the Declaration of Independence of Armenia . Having fulfilled the sacred message of its freedom loving ancestors for the restoration of the sovereign state, committed to the strengthening and prosperity of the fatherland, to ensure the freedom, general well-being and civic harmony of future generations, declaring their faithfulness to universal values, hereby adopts the Constitution of the Republic of Armenia.

Article 3 of the Armenian Constitution stipulates that, *the human being, his/her dignity and the fundamental human rights and freedom are an ultimate value, The State shall ensure the protection of fundamental human and civil rights in conformity with the principles and norms of the international law.*⁹

THE LAW OF THE REPUBLIC OF ARMENIA ON POLICE, Article 2 States.

According to the law, the objectives of the Police are to ensure:

1. protection of the life and health, honor, rights, freedoms and legal interests of individuals against criminal and other illegal assaults/actions;
2. protection of the interests of the society and the state;
3. restraint, prevention and precaution on of crimes and administrative offences;
4. discovery and disclosure of crimes;
5. ensuring of the public order and public safety;
6. protection of all types of ownership.

Other objectives of the Police should only be set by this Law.

Article 24 of The Law of The Republic of Armenia on POLICE, Lists the Rights of the Police while Ensuring Traffic Safety in the events of traffic safety or violations of traffic rules, as well as for search of transportation means, in cases of availability of information or grounded

⁹RA Constitution. Art 3

suspicious about transportation of illegal cargo, property, objects obtained illegally, instruments of crime and other objects bearing traces of crime, as well as persons being in search, the Police shall have the right to:

1. stop the transportation means, check the documents reserving the right for driving and the documents of the cargo being transported;
2. prohibit exploitation of transportation means, which are technically out of order and threatening to the safety of traffic;
3. in the presence of drivers or citizens inspect the transportation means, as well as the cargo being transported in the cases when there are facts or strong suspicions on transportation of the objects, materials and items taken off the public circulation, the property, objects having been criminally acquired, the crime tools and other crime-tracing objects;
4. isolate from driving the transportation means the persons in respect of whom there are sufficient grounds to suspect that they have used alcoholic drinks, as well the persons not possessing documents verifying their right of driving or using transportation means, take in custody the transportation means and thus ensure the transportation of the passengers and maintenance of cargo;
5. keep in custody the auto-transportation means in search;
6. restrict or prohibit the construction, repair and other activities, as well as the traffic in case if the requirements of traffic safety are not observed;
7. organize examination and issue national and international driving licenses;
8. control, within the limits of its jurisdiction, over the implementation of the requirements foreseen by the organization of traffic, installation and exploitation of technical means.

Article 24 gives to the Police of RA authority to fully and adequately conduct checks, and to further prevent most dangerous situations that would potentially lead to road collisions.. As mentioned earlier, in RA many motorists with privileged plate's numbers or other state

officials in high positions, might neglect police power. This could also be a factor which jeopardizes the road safety approach, and causes high road accidents rates in RA.

The Government of RA, in implementing change for safety, made additions such as speed cameras to the legislation. According to RA traffic police, there are currently 179 traffic enforcement (speed) cameras operating throughout the country; 70 in the capital of Armenia - Yerevan alone.¹⁰ Many argue that these cameras were set to be not a means of safety driving but for additional income for the local Government. The amount of fines that are due for speeding caught by the cameras and how to appeal these fines are all specified further in The Law of the Republic of Armenia on administrative infringements.

In RA many offenders may go unpunished for their road accidents and road rage fights. Moreover, instead of using the demerit point based system and suspending the driver licenses of reckless drivers, to prevent additional fatal car accidents, the RA government punishes these drivers only by financial means. It is not uncommon to see and it is prescribed by the Armenian legislation to allow the motorist to have an unlimited amount of fines by speed and other cameras. Also other forms of fines issued by the Traffic Police of RA.

The Government of RA, in cases where an individual has used the unrestricted fines method but does not have means to pay for his offenses, uses compulsory military services along with the courts, to seize and deprive an individual of their property for the unpaid fines. Although **Article 58** of the Armenian Constitution, stipulates the Right of Property, this right is not peacefully enjoyed in RA. How can the State take something they did not issue, which does not belong to them, what relevance does someone's house or other belonging have to do with their ability to be a safe driver, and to follow the rules. Moreover instead of revocation of driver licenses which are issued by the State, government officials may take hold of people's personal properties, this means and rules set by the State not only enable violators to continue to driver but also create a door for further consequences for the people of RA.

In the Republic of Armenia, it is not uncommon to come across many road accidents during the day, some of which involving minor crashes in the city, drunk drivers who drive

¹⁰<http://hetq.am/eng/news/68435/more-traffic-enforcement-cameras-installed-in-armenia.html>

personal vehicles and drunk drivers of public transportation vehicles, who are responsible in transporting passengers. Reckless driving, over speeding, hitting a pedestrian with a moving vehicle, failing to stop and ensuring pedestrian safety, drivers who do not follow road signs and laws and many road rage fights that happen between motorists are also common.

Ordinarily it is also uncommon to see actual road accidents documented and shown on television, although the above mentioned can be seen on television in RA. All of the severe, life threatening or death related, road accidents are presented and broadcasted by Gagik Shamshtyan¹¹, who is a famous photo journalist. He has his own website and television series, where he talks about road accidents. He shows actual footage of the crash, the damaged vehicles and victims involved in the crash. Later he discusses why these accidents happened; some due to prominent errors of the driver, existence of alcohol level, others due to poor conditions of roads of RA. His show is viewed by many people in all of Armenia and in a way brings public awareness of the existence and seriousness of road accidents.

In the Republic of Armenia there are several national government agencies which are responsible for planning and regulations of transportation systems. Ministry of Transport, Communication and Information technologies of RA(MOTC) is the main national government agency responsible for formulating transport programs, projects, and regulatory measures and planning of transport systems.¹² The Armenian Roads Directorate (ARD) is the national government agency responsible for maintaining the major highways and roads.

Despite of the fact that as of the recent year, in RA, the state provides formal audits required for new road construction, regular inspections of existing road infrastructure and policies to encourage investment in public transport, they however, do not have policies to promote walking or cycling. In RA policies to separate road users are needed, in order to protect Vulnerable Road Users (VRU) that are " non-motorized road users, such as pedestrians and cyclists as well as motor-cyclists and persons with disabilities or reduced mobility and orientation". Even slight improvements across roads, speeds, vehicles and users will lead to proportionally greater safety outcomes.

¹¹Shamshtyan.com

¹²MOTC. mtcit.am

In 2009, with help and funding from World Bank, the RA government, implemented changes towards the roads in all over Armenia. The project was called the Lifeline Road improvement project and its aim was to bring roads back. After 7 weeks of negotiation, in a couple of years many roads were re-built and over 30,000 new jobs were created for citizens of RA. This project was focused on fixing roads across all parts of Armenia.

Despite of visible improvements since 2009, today about 50 percent of lifeline roads in Armenia remain in poor condition and there is still an important investment backlog for rehabilitation and maintenance. Today Armenian road infrastructure is far behind of international standards. It will take a wide-ranging arrangement approach to implement the safe system approach in RA. Safe roads and roadsides must be predictable and forgiving of mistakes. Their design should encourage proper road user behavior and safe speeds. Safe speeds should suit the function and level of safety of the road. Safe vehicles need to help prevent crashes and protect road users from crash forces that cause death and serious injury. Safe road use must ensure road consumers to be more skilled and competent, alert and unimpaired.

Moreover, when state has responsibility for the road safety but it is limited to developing polices and not enforcing them due to the absence of merit point system, drivers may have unlimited number of fines and continue operating motor vehicles. Road safety depends on how the government sets proper regulations, manages transport systems, and enforces proper rules and regulations. Therefore, if the Republic of Armenia state officials deny to introduce the point based system, they will continue not to know who is a danger not only for themselves but also for other members of society.

The main reason for road accidents involving vehicles is a lack of adequate driving skills and tolerant, educated drivers. It is evident that enforcing these laws and policies does not translate into compliance. Reduction of road accidents and fatalities, however, can be achieved if road-user compliance progresses.

International Best Practice

UN Secretary-General Kofi Annan has strongly supported the UN's commitment to addressing global road safety. He stated that, The UN has to acquire governments of all countries to acknowledge that road traffic injuries are a real problem. The UN has a voice and this is an area where we should do much more. European countries similarly are concerned and taking actions to prevent road traffic deaths; they are continuing to make changes toward prevention of road accidents.

Despite of the fact that strategies that reduce road traffic injuries are existing, and many nations successfully using them to reduce their road traffic deaths, they are not always implemented by all countries. According WHO report, eighty-eight countries – in which almost 1.6 billion people live – reduced the number of deaths on their roads between 2007 and 2010, although conversely, 87 countries saw increases in the numbers of road traffic deaths over the same period of time. Only 28 countries, representing 449 million people (7% of the world's population), have adequate laws that address all five risk factors (speed, drink– driving, helmets, seat-belts and child restraints)¹³.

In order to standardize the uniform traffic rules and regulations, the Vienna Convention on Road Traffic have been engaged and approved by numerous member states of the United Nations with the objective of promoting safety in international road traffic. Vienna convention is an international treaty designed to facilitate international road traffic and to increase road safety by establishing standard traffic rules among the contracting parties. The convention was agreed

¹³World Health Organization, Global Status Report on Road Safety, 2013.

upon at the United Nations Economic and Social Council's Conference on Road Traffic (7 October – 8 November 1968) and concluded in Vienna on 8 November 1968.

One of the benefits of the convention for motorists is that all signatory countries have an obligation to recognize the legality of the vehicles among the contracting parties. The Vienna Convention on Road Traffic came into force on May 21, 1977, while the Convention on Traffic Signs and Signals entered into force on June 6, 1978. Both conventions have been ratified by 74 countries. Their maintenance has been assigned to the UN Economic Commission for Europe (UN/ECE) Transport Division in Geneva, Switzerland. International standards are contributing to spreading safe driving approach and know how, and facilitating its entry into new markets, resulting in significant social and economic returns.

Today governments of many European countries, including France, Canada, Netherlands, United States, Spain, Germany, Great Britain, Ireland, Poland and many more, are accepting and encouraging safe system approach. They are trying to increase road safety by standardizing the uniform traffic rules and regulations. The safe system approach is a proven way to save lives and reduce serious injuries. Originally developed in Sweden, it has been applied in many countries, since 2010 and is helping to drive down the rate of death and injury in many other countries as well.

The Government of Sweden introduced Vision Zero, which is a multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries in road traffic. It started in Sweden and was approved by their parliament in October 1997. A core principle of the vision is that "Life and health can never be exchanged for other benefits within the society". By using these principle authorities in Sweden have reached tremendous results and have had high levels of success in decreasing numbers of car accidents and saving lives.

Western Australia's proposed road safety strategy for 2008-2020, Towards Zero: sets out such an approach as follows. "Towards Zero means that we do not accept that any human being should die or be seriously injured on our roads. Realistically we understand that it is not practical to achieve zero serious injuries on our roads by the year 2020, but we do not accept any death or serious injury as inevitable. This vision can be achieved if the community as a whole makes a

fundamental change in the way it thinks about road safety and what it is prepared to accept.”¹⁴ The targeted reduction in deaths and injuries is derived from modeling the results to be expected from packages of specific interventions

While Vision Zero recognizes the need to control inappropriate motorist’s behaviors, then the Netherlands describes the road user as the “weakest link in the transport chain, who are unpredictable and not to be relied upon to behave safely despite of education and information efforts. What was initially seen as fundamental and unachievable has increasingly become the benchmark for acceptable road safety results”¹⁵. But despite of differences both approaches argue that as long as inappropriate behaviors are likely, state authorities must protect all road users from the impact of those behaviors.

In Canada, on the other hand safe system approach is “a shared responsibility”. Partnership is the key to road safety management in Canada. Unlike many other countries, the ability to regulate road safety is a responsibility shared by federal, provincial and municipal levels of government. Canada has nearly 900 000 kilometers of roads – enough to circle the globe 22 times. These roads cover 10 provinces and three territories and range from small rural back roads that are not travelled frequently, to multi-lane highways that are in constant use.

However, due to this collaborative approach, fatalities in Canada have been cut by more than half from their 1973 peak, while the number of registered motor vehicles has increased by almost 80 % during the same period. According to Dr. Kash Ram, Director General of the Road Safety and Motor Vehicle Regulation Directorate of Transport Canada: “Transport Canada conducts research programs to continue and enhance its regulations with mission that a collaborative approach is imperative to improving safety”.¹⁶ Today, estimated road traffic death rate per 100, 000 population in Canada is 6.8, compared with 18.6 of Russian Federation (see Appendix n, m).

Great Britain also successfully implemented safe system approach during the last decade. Despite of having an increase in road traffic, the number of deaths has come down from 5,500 in the 1980s to 2,000 in 2011. The injuries due to road traffic accidents have come down from

¹⁴Eric Howard, “Towards Zero: Ambitious Road Safety Targets and the Safe System Approach”, 2008

¹⁵Towards Zero: Ambitious Targets and the Safe System Approach, OECD/ITF, (2008).

¹⁶Kash Ram, Building the World’s Safest Roads, Road Safety Vision 2010, p.21

240,000 to 200,000 over the same period. The central London congestion charging scheme was introduced on February 17, 2003, with the primary aim of reducing traffic congestion in and around the charging zone. Today, estimated road traffic death rate per 100 000 population in UK is 3, which is one of lowest in the world.¹⁷

US is not a member of Vienna Convention although driving in US very similar to driving in Canada, Australia, and the United Kingdom, yet a little different from Europe. The US has the keep-your-lane system, where as in Europe you are expected to keep to the right (left for UK) as long as possible. Despite of the fact that each state sets its own traffic laws, all states recognize each other's driver's licenses, and Canada recognizes an American driver's license.

The other main difference is that in US pedestrians have the legal rights of way once they've stepped onto a crossing without traffic lights and drivers must stop; motorists who don't stop are liable to heavy penalties. When crossing a public footpath, e.g. when entering or emerging from property or a car park, motorists must give way to pedestrians. That's why when analyzing deaths by road user category, one can see that US has the lowest pedestrians death rate, which is 12 %, compared with 33% of Russian Federation and 44 % of RA.

The most surprising rule in the US driving system is that unless otherwise indicated, in all states of US, drivers may make a right turn at a red stop light. They must, however, treat a red light as a stop sign and stop before making a right turn. They must also give way to pedestrians crossing at the lights. In some states drivers can also make a left turn on a red light from a one-way street into another one-way street, where indicated.

In US, all states have a different set of driving rules & regulations. In most states, it is illegal to be seen drinking alcohol in public, and especially as a passenger in a car. In CA for example you can only carry an alcohol at the trunk of your car. However, there are some states in which it is legal for car passengers to drink alcohol. In Mississippi, it is still legal for drivers to consume alcohol while driving, as long as their blood alcohol content is below 0.08%.

Regardless of the above mentioned differences motorists are entitled to drive in the United States for one year with a foreign license as a visitor, provided that their license is from a

¹⁷World Health Organization, Global Status Report on Road Safety, 2013., UK

country that is part of the UN Convention on road traffic and is written in English. Although it will be worth to mention that unlike in most of Europe, the signage in the US is predominantly bad, especially for foreign drivers. For example, in Europe there are often signs in the countryside pointing to the direction for the nearest cities. In the US, such signs usually only point to the closest highway, so unless driver knows specifically which highway to use he might be lost.

Many Europeans believe that despite of the fact that Americans pay a great deal of money for their roads, they do not acquire a necessary safety in return. In 2013 WHO reported 33808 deaths on the roads of US, and estimated road traffic death rate per 100 000 population in US is very high - 11.4, compared with many European countries (see appendix). Despite of recent major improvements in road safety in the U.S. (Sivak and Schoettle, 2011), the current safety level is far below the level of the best-performing countries (OECD/ITF, 2012).

A Study conducted by the University of Michigan Transportation Research Institute, showed that the main differences concerned structural and cultural factors- such as vehicle distance driven, and procedural factors: such as road-safety strategies and targets, alcohol-impaired driving, exceeding speed limits, and use of seat belts. The results of the study show that the greater distance driven per licensed driver in the U.S. is the main factor affecting the difference in road safety between the two countries: The effect of distance driven (additional 12,345 fatalities) is higher than the total effect of all other factors combined¹⁸.

As we can see despite of the fact that national road-safety strategies are named different in many countries : Swedish road-safety management is based on Vision Zero, The Dutch road-safety strategy is primarily based on a safe-system approach called Sustainable Safety, Strategic Framework for Road Safety for Great Britain, Road Safety Strategy to 2020 for Northern Ireland; or Collaborative Approach of Canada, they all have one major goal: saving lives and turning around an epidemic that threatens to kill 75 million people by 2050.

¹⁸Juha Luoma, Michael Sivak. WHY IS ROAD SAFETY IN THE U.S. NOT ON PAR WITH SWEDEN, THE U.K., AND THE NETHERLANDS? The University of Michigan Transportation Research Institute, pp.7-8

What all of the mentioned countries have in common is the willingness of their State officials to implement change and recognize the importance of road safety.

Recommendations and Implementation Reforms

Road accident rates in RA are significantly high, for a country with a population as small as 3 million; there exists a high rate of road deaths. By examining the road accident data and the comparative data analysis' conducted for this paper (see Appendix I), it is evident and clear that road traffic accidents in the Republic of Armenia are on the rise and unfortunately pedestrian death ration is one of the highest in Armenia, compared with the rest of the world.

As a starting point for Armenia, a country with low income and poor development, we suggest a plan of action with: First, introducing the penalty point or otherwise called demerit point system, and adding it in our legislation. Drivers in our country must be held accountable for their poor driving. Local authorities must be aware of the inability of drivers to be safe and descent drivers, they must keep truck of repeated violators. This addition is essential, since we are certain that otherwise, drivers will continue to make the same mistakes and have no way to

understand and learn from their mistakes. Reckless, uneducated, and drunk drivers will continue to jeopardize life of innocent civilians unless they will be alleged accountable for their actions.

Demerit Point System is one in which drivers licensing authority, police force or other organization issues cumulative demerits, or *points* to drivers on conviction for road traffic offenses. Points may either be added or subtracted, depending on the particular system in use. Points are typically applied after driving offenses are committed, and are cancelled after a defined time period, typically a few years, or after all conditions appointed by judges are met (traffic school for example). If the total number of points exceeds a specified limit the offender may be disqualified from driving for a definite time period, or the driving license may be revoked. A major offense may lead to more than the maximum allowed points introduced and offender may be suspended from his driving privilege.

Second, we must understand that proper enforcement of rules and regulations is essential, it will not solve all of the problems we face but without enforcement the legislation our regulations will not have the desired effect. Thus, we should strengthen the enforcement of these Laws.

Third, MOTC must invest in road safety and strengthen the road safety management system. Although it would be almost impossible to introduce policies to promote walking or cycling in a fast duration of time, nevertheless MOTC, when fixing roads, should make them in accordance with new standards. Today, we need to give more attention to protecting vulnerable road users, in order to significantly decrease pedestrians' death ratio. Kids, mothers and fathers have to feel safe by walking on the streets of their country.

Forth, the State should create a better post-accident and post-trauma care system. Today, in Armenia we do not have an emergency room based injury surveillance system. Injury surveillance systems have a number of important qualities. They monitor injury incidence, identify risk factors, and assist in the planning and evaluation of injury prevention programs.

Fifth, we should create uniform requirements for driver's license acquisition. Our road signs, signals and markings have to be placed with accordance of international standards. We

should accept and adopt road design and network management intended to enhance road safety, adopt policy platform to share information and good practices on road safety.

Sixth, we should reduce or eliminated drink-driving., which is only possible by extensive publicity and tough fines and sanctions. Point system is essential in this case since it will eliminate constantly drunk and wealthy drivers from the roads of our country.

Seventh, we should set interim targets to move systematically towards the vision zero. As did Sweden, their State officials understood the mere importance of a safe and adequate traffic system, and they now have promising results. By introducing Vision Zero, which was discussed in the previous chapter, they decreased the death rate in their country by half. This change and success they have is due to the actions of the their Government, who did not overlook the importance of a human life, and did everything in their power to implement necessary change.

Hereof all above mentioned actions are important and essential, the people of Republic of Armenia should believe that road traffic deaths are both predictable and preventable. The State must stop enabling reckless drivers, stop making excuses and start making change. Regardless of the fact that RA is not considered a developed country, and the State does not have an unlimited budget to implement a better road infrastructure, it has capacity to address an existing issue and start implementing changes . The above mentioned proposals are the first step in the building road of safety. The purposed methods in ensuring a safe traffic system, mentioned in the paper, are not only important but also are realistically doable, results are achievable.

The people of RA, who have been in a road accidents due to a poor road condition or a missing sign in the roads of RA, must know that the state, does have a positive obligation to secure their life and must answer to each death that occurs in their country. The people must know that if the state does not do their obligations in ensuring their safety, then they can lunch a complaint with the European Court of Human Rights, under **Article 2**, of the convention. The RA government cannot ignore the seriousness of road accidents, the fatal consequences it brings for the people, and the ultimate importance of the human life.

Conclusion

In conclusion, despite of the quantity of road collisions in the Republic of Armenia, certainly there are possibilities of change. Today the Government of RA has to accept and adopt the necessary changes to decrease death rates, and save the lives of its Citizens. There is a solution to today's crisis, and the first stage toward a safe traffic system and the most important step toward change is the introduction of demerit point system in the Republic of Armenia Legislation. The Point system will be used as a key tool to identify reckless drivers and repeated offenders. Introducing this system will have many benefits and the people will see a positive change.

This system is needed in the legislation, to locate, fine and punish repeated offenders, to have their records, and suspend their licenses. This process will help eliminated reckless, brutal, drunk drivers that cause major danger for innocent motorists and pedestrians, including innocent children. Next step toward a safe traffic system will be increasing public awareness and encouraging government officials and the State of RA to recognize the necessity of drastic and radical changes in our road regulations policies. As Said by Shakespeare [Hamlet, Act 1, scene 3], Be wary, then. Best safety lies in fear. We must fear the loss of life and by doing so strive for safety.

RA state officials must start making changes and taking action immediately. Every day that is lost is another day an innocent life is endangered and is another day where we could lose a loved one. As we increase public awareness, draw the attention of the government to the road safety, and then they must strengthen the enforcement of these laws. In contrast to the developed nations of the world, RA lacks an effective traffic rules enforcement system, which is necessary in preventing road accidents. Without enforcing rules of discipline, reckless drivers and offenders will continue to kill and take innocent lives. These offenders must be stopped from driving and should be held responsible for their actions.

All above mentioned suggestions and additions should be considered and implemented in order to start building safe system approach in our country, and most importantly they are both rational and achievable. Lastly the state must make additional changes to our roads info

structure, to make them more secure and make sure that the roads are safe in all over Armenia, and not just in the capital -Yerevan. They must add more preventive and warning signs in villages and mountains to ensure that motorists are aware of the upcoming road difficulties.

Many accidents which occur in RA are due to missing signs in villages of Armenia or roads which connect these villages. Road accidents in RA can be preventable only if State officials do not disregard the importance of every single life we lose today or could lose tomorrow. They must start making changes in the existing Legislation and most importantly, straighten the enforcement of traffic rules and regulations. Today, the addition of the point based driving system in RA is a necessity. If the RA government would make this addition to our legislation, their action would bring down road traffic accidents drastically.

Furthermore, in implementing change and ensuring safety the State must also show that **Article 2** of the European Convention is admissible in the Republic of Armenia. The Government officials, must not undermine the severity of the road traffic accidents and how they endanger human lives. They must take a plan of action by accepting the seriousness of the road traffic collisions not only for this generation but also for the future.

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Appendix I

Comparative Data Analyses for Road Safety Measurements¹⁹

| | Armenia | Russian Federation | UK | USA |
|-----------------------------------------------|------------|--------------------|-------------|-------------|
| <i>Population:</i> | 3 092 072 | 142 958 156 | 62 035 568 | 310 383 968 |
| <i>Income group:</i> | Middle | Middle | High | High |
| <i>GNP per capita:</i> | US\$ 3 200 | US\$ 9 880 | US\$ 38 140 | 47 350 |
| <i>Reported number of road traffic deaths</i> | 294 | 26567 | 1 905 | 33808 |
| <i>ERT* death rate per 100000 population</i> | 18.1 | 18.6 | 3.7 | 11.4 |
| <i>Road user death (%) Pedestrians</i> | 44% | 33% | 22% | 13% |
| safer roads and mobility | | | | |
| Formal audits for new road const. | yes | yes | yes | yes |
| Regular inspections of road infrastructure. | yes | yes | yes | yes |
| Policies to promote walking or cycling | no | no | yes | yes |
| Policies to encourage investment | yes | yes | yes | yes |
| Policies to protect VRUs | no | subnational | yes | yes |
| safer vehicles | | | | |
| Total registered vehicles (2010) | 300 091 | 43 325 312 | 35 170 629 | 258 957 503 |
| Cars and 4-wheeled light vehicles | 247 723 | 34 354 004 | 32 592 276 | 239 212 572 |
| Motorized 2- and 3-wheelers | 28 | 2 663 982 | 1 264 610 | 7 929 724 |
| Heavy trucks | 40 924 | 5 413 513 | 494 350 | 10 973 214 |
| Buses | 11 396 | 893 813 | 177 143 | 841 993 |
| safer road users | | | | |
| Penalty/demerit point system in place | no | no | yes | Subnational |
| National speed limits | yes | yes | yes | Subnational |
| Local authorities can set lower limits | yes | yes | yes | – |
| Maximum limit urban roads | 60 km/h | 60 km/h | 48 km/h | – |
| national drink-driving law | | | | |
| BAC limit – general population | 0.04 g/dl | 0 g/dl | 0.08 g/dl | 0.08 g/dl |

¹⁹World Health Organization, Global Status Report on Road Safety, 2013.

| | | | | |
|-----------------------------------------------------------------------------|-----------|--------|--------------------|------------------|
| BAC limit – young drivers | 0.04 g/dl | 0 g/dl | 0.08 g/dl | 0.0–0.02 g/dlc |
| BAC limit – prof./commercial drivers | 0.04 g/dl | 0 g/dl | 0.08 g/dl | 0.04 g/dl |
| Random breath testing and/or police checkpoints | yes | yes | Yes | No |
| Enforcement — % road traffic deaths involving alcohol 19% ^{f,g} | 6% | 8% | 19% ^{f,g} | 32% ^e |
| post-crash care | | | | |
| Vital registrations system | yes | yes | Yes | Yes |
| Emergency injury surveillance system | no | yes | Yes | Yes |
| Emergency access telephone number(s) | multiple | 3 | 999 | 911 |
| Seriously injured transported by ambulance | 11-49% | 11-49% | | ≥75% |
| Permanently disabled due to road traffic crash | | | 0.6% | |
| Emergency medicine training for doctors | yes | yes | yes | yes |
| Emergency medicine training for nurses | yes | yes | yes | yes |

*ERT – *Estimated Road Traffic*

Appendix II

ARMENIA

Population: 3 092 072
 Income group: Middle
 Gross national income per capita: US\$ 3 200



| INSTITUTIONAL FRAMEWORK | |
|--------------------------------------|------------------------------------|
| Lead agency | National Road Safety Council of RA |
| Funded in national budget | Yes |
| National road safety strategy | Yes |
| Funding to implement strategy | Partially funded |
| Fatality reduction targets set | Yes (2009–2014) |
| Fatality reduction target | 10% |

| SAFER ROADS AND MOBILITY | |
|-------------------------------------------------------------|-----|
| Formal audits required for new road construction | Yes |
| Regular inspections of existing road infrastructure | Yes |
| Policies to promote walking or cycling | No |
| Policies to encourage investment in public transport | Yes |
| Policies to separate road users to protect VRUs | No |

| SAFER VEHICLES | |
|-------------------------------------------------------|---------|
| Total registered vehicles (2010) | 300 091 |
| Cars and 4-wheeled light vehicles | 247 723 |
| Motorized 2- and 3-wheelers | 28 |
| Heavy trucks | 40 924 |
| Buses | 11 396 |
| Other | 20 |
| Vehicle standards applied | |
| UN World forum on harmonization of vehicles standards | No |
| New car assessment programme | No |
| Vehicle regulations | |
| Front and rear seat-belts required in all new cars | → |
| Front and rear seat-belts required all imported cars | No |

^a No car manufacturers/assemblers.

| DATA | |
|-------------------------------------------------------|-------------------------------|
| Reported road traffic fatalities (2010) | 294 ^a ; 79%M, 21%F |
| Estimated GDP lost due to road traffic crashes | 1% ^c |

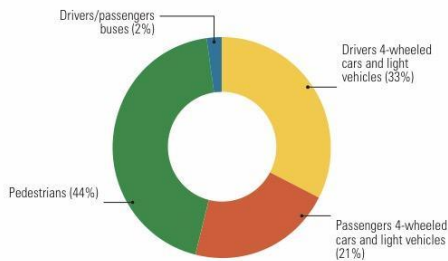
^b Police records. Defined as death caused by a road traffic crash (unlimited time period).
^c 2006, Road Safety Management Capacity and Investment Needs (September 2006) ECSSD, World Bank.

| SAFER ROAD USERS | |
|----------------------------------------------------|------------------------|
| Penalty/demerit point system in place | No |
| National speed limits | Yes |
| Local authorities can set lower limits | Yes |
| Maximum limit urban roads | 60 km/h |
| Enforcement | 0 1 2 3 4 5 6 7 8 9 10 |
| National drink-driving law | Yes |
| BAC limit – general population | 0.04 g/dl |
| BAC limit – young or novice drivers | 0.04 g/dl |
| BAC limit – professional/commercial drivers | 0.04 g/dl |
| Random breath testing and/or police checkpoints | Yes |
| Enforcement | 0 1 2 3 4 5 6 7 8 9 10 |
| % road traffic deaths involving alcohol | 6% ^d |
| National motorcycle helmet law | Yes |
| Applies to drivers and passengers | Yes |
| Helmet standard mandated | No |
| Enforcement | 0 1 2 3 4 5 6 7 8 9 10 |
| Helmet wearing rate | — |
| National seat-belt law | Yes |
| Applies to front and rear seat occupants | Yes |
| Enforcement | 0 1 2 3 4 5 6 7 8 9 10 |
| Seat-belt wearing rate | — |
| National child restraint law | Yes |
| Enforcement | 0 1 2 3 4 5 6 7 8 9 10 |
| National law on mobile phones while driving | Yes |
| Law prohibits hand-held mobile phone use | Yes |
| Law also applies to hands-free mobile phones | No |

^d 2010, Road Accident Registration Cards of Road Police of RA.

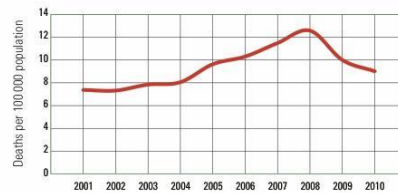
| POST-CRASH CARE | |
|--------------------------------------------------------|------------------|
| Vital registration system | Yes |
| Emergency Room based injury surveillance system | No |
| Emergency access telephone number(s) | Multiple numbers |
| Seriously injured transported by ambulance | 11–49% |
| Permanently disabled due to road traffic crash | — |
| Emergency medicine training for doctors | Yes |
| Emergency medicine training for nurses | Yes |

DEATHS BY ROAD USER CATEGORY



Source: 2010, Road Police of RA.

TRENDS IN ROAD TRAFFIC DEATHS



Source: Road Police of RA.

collected by multistakeholder consensus meeting. Data not cleared.

