"Through the United Nations Decade of Action for Road Safety, I sincerely hope that we can save human lives. It is totally unacceptable more than one million people die on the roads and more than fifty million are injured. The human costs are profound and the economic cost is staggering, more than $100 billion in developing countries. If we lead by example we can save millions of lives. This is what the United Nations is working very hard for - a safer world for all."

Ban Ki-moon

3.1 ROAD SAFETY LAWS IN DEVELOPED NATIONS

In higher-income countries, road traffic crashes are among the top ten leading causes of disease burden as measured in Disability-Adjusted Life Years. In less developed countries, road traffic crashes were the most significant cause of injuries, ranking eleventh among the most important causes of lost years of healthy life. Lower rates of road deaths and road injuries can be found in the developed world while higher numbers can be found in India, China and other developing nations. Close to half of all traffic deaths worldwide take place in the Asia Pacific region and it is estimated that one fatality occurs every 5 minutes in China. According to the WHO, Ethiopia has the highest rate of fatalities per vehicle in the world and Uganda ranks second. In Ghana and South Africa, pedestrians are the most at-risk group of road users. The statistics from developing countries should always be viewed with caution as crashes are under-reported which affects the quality of data. On the other hand, data management is

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1 UN Secretary General
improving as computerised systems are becoming more widely available and this will inevitably lead to better-informed decision-making processes. Rapid development, increased number of vehicles together with population growth, are all contributing to a rise in the number of road crashes, injuries and fatalities. Although, road Safety remains a low priority for most governments in the developing world, there is a growing awareness of the social, economic and public health problems caused by traffic crashes. Efforts from many parts of the world recently succeeded to put road safety on the global political agenda. The UN General Assembly acknowledged (A/60/5) that many low-income countries have limited capabilities to address road safety and highlighted the importance of international cooperation, financial and technical assistance in this context. The WHO, the World Bank and the European Union, have all recently developed comprehensive traffic safety plans. International road death rates allow any country’s road safety performance to be compared with other nations while taking into account the differing levels of population, motorisation and distances traveled.  

In October 1997, the Road Traffic Safety Bill was passed in the Swedish parliament. The Bill is based on Vision Zero which aims that ‘eventually no one will be killed or seriously injured within the road transport system. Zero is not a target to be achieved by a certain date. It is, however, a change from an emphasis on current problems and possible ways of reducing these to being guided by what the optimum state of the road transport system should be. The vision is based on: Ethics (every human being is unique and irreplaceable) and Science (human physical and mental capabilities are known and should form the basis for road design. Knowledge of our limited ability and tolerance in a crash should be premises for chosen solutions and measures). Vision Zero also changes the emphasis in responsibility for road safety from the road user only to a shared responsibility by all those who have an effect on, or participate in, road traffic (politicians, designers, planners, road managers, vehicle manufacturers, transport companies, the police and road users). Safety is considered more important than other issues (such as mobility) in the road transport system. Vision Zero presented  

3 www.who.int/violence_injury_prevention/road_safety_status/2015/en
this paradigm shift which contrasts to the more general principle, where human life, mobility and other benefits and problems are weighted against each other. The Norwegian Government has also established that Vision Zero shall form the basis for traffic safety activities in Norway: “The vision means that the Government, in addition to conducting a policy with the goal of reducing the total number of accidents, will focus strongly on measures that can reduce the most serious accidents”. The Norwegian National Action Plan for Road Safety 2002–2011 strongly promotes cooperation between the Norwegian Public Roads Administration, the National Police Directorate, the Norwegian Council for Road Safety and the Directorate of Health and Social Affairs as well as the importance of developing the strength of each of these actors. It also acknowledges the importance to secure the engagement of local politicians and the population at large. The action plan adopted a number of performance indicators to be measured annually by recording the development of parameters like crash reduction; operating speeds, technical standard of heavy vehicles; seat belt usage; helmet usage; light usage for cyclists; retro-reflector usage for pedestrians and cyclists, proportion of drivers under the influence of alcohol /drugs and hazardous traffic behaviour.

The vision and central theme of the Danish road safety strategy is "Every Accident is One too Many". The vision sets a course towards a future road system without any road crashes and retains a focus on preventive measures. Road safety initiatives are based on five strategies :- Road safety starts with you: acknowledging that if all drivers followed three golden rules by observing the speed limit, fastening their seatbelt, never drink and drive, Denmark would experience an immediate reduction of at least 40% in the number of deaths in road crashes. The Road Safety Commission is allocating more funds to intensive national campaigns to change road user behaviour within these areas. - Four key areas: speeding, alcohol, cyclists, and junctions are the focus of the actions. - A commission for road crashes is to be set up to obtain more detailed and systematic knowledge on the causes and circumstances of various types of road crashes. - Local road safety efforts should be strengthened. - Agreements between private and public enterprises, and transport service suppliers present great potential for
crash prevention and should be fostered. The responsibility of implementing the strategy ‘Tomorrow's roads: safer for everyone 2000–2010 in the UK’ is shared by many stakeholders, led by the Government’s Department for Transport. There are 10 main themes in the Government's framework for improving road safety which acknowledges the need for new thinking and fresh ideas and not be afraid to challenge conventional wisdom. These themes cover actions contributing to safer children, safer drivers (training, testing), safer drivers (drinks and drugs), safer infrastructure, safer speeds, safer vehicles, safer motorcycling, safer pedestrians, cyclists and horse riders, better enforcement and promoting safer road use. The Traffic Safety Policies Law in Japan requires the government to report to the Diet, each year, on the status of traffic crashes, on measures being implemented and on plans for traffic safety measures. This is contained in the ‘White paper on traffic safety in Japan’. Expert panels develop Fundamental Traffic Safety Programs (FTSP) every five years. The Eighth FTSP (2006 to 2010) acknowledges the need to respond to declining birthrates and an aging society; establishing improved pedestrian safety and raising people’s awareness. The common philosophy of the Eighth FTSP includes:

- The aim is a crash-free society. Giving people precedence: a “people first” philosophy giving consideration for those who are weaker than others.
- Dealing with the issue of human error in public transportation: by improving the organisational structures and systems of companies providing transport services.
- Encourage participatory traffic safety activities by enabling citizens to participate in the planning stages of traffic safety measures run by national and local authorities.

### 3.1.1 Transport Act UK

Transport Act 2000 for United Kingdom has a total five parts and 280 Sections. In this Act Part I, deals with air traffic. The part second deals with local transports in this part the law includes Bus services, Making Scheme, Quality contracts schemes, Ticking Scheme, Section 142 Traffic regulation conditions to reduce or limit pollution. Part third of this Act deals with Road user charging and workplace parking levy.

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4 Tomorrow's roads – safer for everyone (Department for Transport, UK, 2000)

Part III of this Act Road user charging Preliminary, Local charging schemes, Joint local charging schemes, Joint local-London charging schemes, Trunk road charging schemes, Making of charging schemes, Charging schemes to be made by order, Confirmation of charging schemes, Charging schemes: consultation and inquiries, Contents of charging schemes, Matters to be dealt with in charging schemes, Charging schemes: exemptions etc., Enforcement of charging schemes, Penalty charges, Examination, entry, search and seizure, Immobilisation, traffic sign etc. 6

Part IV deals with railways.

Part V of this Act is about Miscellaneous and supplementary provisions which includes Charges for street works on highway, Charge for whole duration of works, Charges where works unreasonably prolonged, Driver training and driving instructors, Compulsory driver training courses, Register of approved instructors: destination of appeals, Taking effect of decisions about instructors, Training and instructors: minor and consequential amendments, Licensing of operators of goods vehicle, Increase of fine for breach of obligation to hold operator’s licence, Detention of vehicle used without operator’s licence, Addition of specified vehicles to operator’s licence, Type approvals: exemptions, Type approval: individual exemptions, Licensing of private hire vehicles, Vehicles subject to regulation as private hire vehicles, Enforcement of requirements relating to drivers’ hours, Section 266. Power to prohibit driving of vehicle, Appeals relating to London service permits, London service permits: appeals, Quiet lanes and home zones and rural road speed limits, Quiet lanes and home zones, Report on rural road speed limits.

School crossing patrols, Stands etc. for bicycles or motor cycles, Stands etc. for bicycles or motor cycles, Financial assistance: inland waterway and sea freight, Financial assistance for inland waterway and sea freight.

Offences : General, Repeals and revocations, Commencement, Transitionals and savings, Power to make amendments, Financial provision.

6 http://www.legislation.gov.uk/ukpga/1968/73/contents
3.1.2 Canada Transportation Act 2014

The Canada Transportation Act consist 278 Section the preamble of the Act declares that "An Act to continue the National Transportation Agency as the Canadian Transportation Agency, to consolidate and revise the National Transportation Act, 1987 and the Railway Act and to amend or repeal other Acts as a consequence".  

The important features and provisions of Canadian Transport Act are as follows:

PART I - Administration,
PART II - Air Transportation
PART III - Railway Transportation
PART IV - Arbitrations
PART V - Transportation of Persons with Disabilities
PART VI - General

PART VII- Repeals, Transitional Provisions, Consequential and Conditional Amendments and Coming into Force

3.1.3 USA Transport

Transportation in the United States is facilitated by road, air, rail, and waterways (via boats). The vast majority of passenger travel occurs by automobile for shorter distances, and airplane or railroad for some people, for longer distances. In descending order, most cargoes travel by railroad, truck, pipeline, or boat; air shipping is typically used only for perishables and premium express shipments.

Ownership and jurisdiction: The overwhelming majority of roads in the United States are owned and maintained by state and local governments. Federally maintained roads are generally found only on federal lands (such as national

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parks) and at federal facilities (like military bases). The Interstate Highway System is partly funded by the federal government but owned and maintained by individual state governments. There are a few private highways in the United States, which use tolls to pay for construction and maintenance. There are many local private roads, generally serving remote or insular residences.

Passenger and freight rail systems, bus systems, water ferries, and dams may be under either public or private ownership and operation. Civilian airlines are all privately owned and financed. Most airports are owned and operated by local government authorities, but there are also some private airports. The Transportation Security Administration has provided security at most major airports since 2001.

The United States Department of Transportation and its divisions provide regulation, supervision, and funding for all aspects of transportation, except for customs, immigration, and security, which are the responsibility of the United States Department of Homeland Security. Each state has its own Department of Transportation, which builds and maintains state highways, and depending upon the state, may either directly operate or supervise other modes of transportation.

Aviation law is almost entirely a federal matter, while automobile traffic laws are enacted and enforced by state and local authorities. Economic jurisdiction over tidelands is shared between the state and federal governments, while the United States Coast Guard is the primary enforcer of law and security on U.S. waterways.

In most American cities but not all, the majority of work commutes are made by singly occupied automobiles.

**Passenger**

Passenger transportation is dominated by a network of over 3.9 million miles of highways which is pervasive and highly developed by global standards. Passenger transportation is dominated by passenger vehicles (including cars, trucks, vans, and motorcycles), which account for 86% of passenger-miles traveled. The remaining 14% was handled by planes, trains, and buses.
The world's second largest automobile market, the United States has the highest rate of per-capita vehicle ownership in the world, with 865 vehicles per 1,000 Americans. Bicycle usage is minimal with the American Community Survey reporting that bicycle commuting had a 0.61% mode share in 2012 (representing 856,000 American workers nationwide).

**Cargo**

Freight transportation is carried by a variety of networks. The largest percentage of US freight is carried by trucks (60%), followed by pipelines (18%), rail (10%), ship (8%), and air (0.01%). Other modes of transportation, such as parcels and intermodal freight accounted for about 3% of the remainder. Air freight is commonly used only for perishables and premium express shipments. The difference in percentage of rail's share by ton-miles and by weight (10% vs 38%) is accounted for by the extreme efficiency of trains. A single railroad locomotive may pull fifty boxcars full of freight while a truck only pulls one. Trucks surpass trains in the weight category due their greater numbers, while trains surpass trucks in the ton-miles category due to the vast distances they travel carrying large amounts of freight.

Usually cargo, apart from petroleum and other bulk commodities, is imported in containers through seaports, then distributed by road and rail. The quasi-governmental United States Postal Service has a monopoly on letter delivery (except for express services) but several large private companies such as FedEx and UPS compete in the package and cargo delivery market.

In comparison to some parts of the Western world, both the United States and Canada rely more heavily on its roads both for commercial and personal transit. Car ownership is nearly universal except in the largest cities where extensive mass transit and railroad systems have been built.

With the development of the extensive Eisenhower Interstate Highway System in the 1950s, both long-distance trips and daily the commute were mostly by private automobile. This network was designed to exacting federal standards in order to receive federal funding. The system, as of 2010, has a total length of
47,182 miles (75,932 km), making it the world's second longest after China's, and the largest public works project in US history.

The Interstate system joined an existing National Highway System (a designation created for the legacy highway network in 1995), comprising 160,000 miles (256,000 kilometers) of roadway, a fraction of the total mileage of roads. The Interstate system serves nearly all major U.S. cities, often through the downtown areas (a point which triggered freeway and expressway revolts in the 1960s and 1970s). The distribution of virtually all goods and services involves Interstate highways at some point. Residents of American cities commonly use urban Interstates to travel to their places of work. The vast majority of long-distance travel, whether for vacation or business, is by the national road network; of these trips, about one-third (by the total number of miles driven in the country in 2003) utilize the Interstate system.

In addition to the routes of the Interstate system, there are those of the U.S. highway system, not to be confused with the above-mentioned National Highway System. These networks are further supplemented by State Highways, and the local roads of counties, municipal streets, and federal agencies, such as the Bureau of Indian Affairs. There are approximately 4,071,000 miles (6,552,000 km) of roads in the United States, 2,678,000 miles (4,310,000 km) paved and 1,394,000 miles (2,243,000 km) unpaved. State highways are constructed by each state, but frequently maintained by county governments aided by funding from the state, where such counties exist as governing entities (mostly every state except the Northeastern). Counties construct and maintain all remaining roads outside cities, except in private communities. Local, unnumbered roads are often constructed by private contractors to local standards, then maintenance is assumed by the local government.

All federal highways are maintained by state governments, although they receive federal aid to build and maintain freeways signed as part of the 46,000 mile (75,000 km) nationwide Interstate highway network. Changes by state initiative may be made with federal approval. A large number of expressways are actually government or privately operated toll roads in many East Coast and
Midwestern states. West Coast freeways are generally free to users ("freeways", no toll charged per use), although since the 1990s there have been some small experiments with toll roads operated by private companies.

After the collapse of the I-35W Mississippi River bridge in Minnesota in August 2007, the backlog of road and bridge maintenance across the country became an issue in transportation funding. The collapse prompted a tax increase in Minnesota to speed up bridge repairs, and action in other states, such as the Accelerated Bridge Program in Massachusetts, but after some debate no increase in federal funding. The 2013 I-5 Skagit River Bridge collapse, caused by a collision with an over-height truck, highlighted "fracture critical" bridges in which the failure of only one structural member will lead to complete collapse. According to the National Bridge Inventory, there are at least 600,000 bridges of 20 feet or more in length in the United States, all subject to deterioration in the absence of preventative maintenance. In December 2008, 72,868 bridges in the United States (12.1%) were categorized as "structurally deficient", representing an estimated $48 billion in repairs. President Barack Obama proposed $50 billion of spending on road and bridge repair, plus a national infrastructure bank, but as of 2013 Congress has not acted on these proposals. As of 2010, seat belt use is mandatory in all states except New Hampshire.

Intercity bus

Greyhound Lines is the largest intercity bus company in the United States, with routes in all parts of the contiguous U.S. There are also many smaller regional bus companies, many of which use the terminal and booking facilities provided by Greyhound. Intercity bus is, in most cases, the least expensive way to travel long distances in the United States.

Congestion

A traffic jam on a typical American freeway, the Santa Monica Freeway in Los Angeles. Traffic congestion, especially at rush hour, is a problem in many of the country's larger cities. A 2009 study found that traffic congestion costs the United States almost $87.2 billion. The economic costs of traffic
congestion have increased 63% over the past decade, and despite the declining traffic volumes caused by the economic downturn, Americans still waste more than 2.8 billion US gallons (11,000,000 m$^3$) of fuel each year as a result of traffic congestion. Motorists also waste 4.2 billion hours annually, or one full workweek per traveler. Moreover, it is estimated that drivers are wasting 6.9 billion hours per year or about 42 hours per driver in traffic congestion as a result of aging infrastructure and poor road conditions. 8

The trucking industry (also referred to as the transportation or logistics industry) involves the transport and distribution of commercial and industrial goods using commercial motor vehicles (CMV). In this case, CMVs are most often trucks; usually semi trucks, box trucks, or dump trucks. A truck driver (commonly referred to as a "trucker") is a person who earns a living as the driver of a CMV.

The trucking industry provides an essential service to the American economy by transporting large quantities of raw materials, works in process, and finished goods over land—typically from manufacturing plants to retail distribution centers. Trucks are also important to the construction industry, as dump trucks and portable concrete mixers are necessary to move the large amounts of rocks, dirt, concrete, and other construction material. Trucks in America are responsible for the majority of freight movement over land, and are vital tools in the manufacturing, transportation, and warehousing industries.

Large trucks and buses require a commercial driver's license (CDL) to operate. Obtaining a CDL requires extra education and training dealing with the special knowledge requirements and handling characteristics of such a large vehicle. Drivers of CMVs must adhere to the hours of service, which are regulations governing the driving hours of commercial drivers. These, and all other rules regarding the safety of interstate commercial driving, are issued by the Federal Motor Carrier Safety Administration (FMCSA). The FMCSA is also a division of the United States Department of Transportation (USDOT), which governs all transportation-related industries such as trucking, shipping, railroads, and more.

and airlines. Some other issues are handled by another branch of the USDOT, the Federal Highway Administration (FHWA).

Developments in technology, such as computers, satellite communication, and the internet, have contributed to many improvements within the industry. These developments have increased the productivity of company operations, saved the time and effort of drivers, and provided new, more accessible forms of entertainment to men and women who often spend long periods of time away from home. In 2006, the U.S. Environmental Protection Agency implemented revised emission standards for diesel trucks (reducing airborne pollutants emitted by diesel engines) which promises to improve air quality and public health.

The United States has advanced air transportation infrastructure which utilizes approximately 5,000 paved runways. In terms of passengers, seventeen of the world's thirty busiest airports in 2004 were in the United States, including the world's busiest, Hartsfield-Jackson Atlanta International Airport. In terms of cargo, in the same year, twelve of the world's thirty busiest airports were in the United States, including the world's busiest, Memphis International Airport. Private aircraft are also used for medical emergencies, government agencies, large businesses, and individuals, see general aviation.

There is no single national flag airline; passenger airlines in the United States have always been privately owned. There are over 200 domestic passenger and cargo airlines and a number of international carriers. The major international carriers of the United States are Delta Air Lines, American Airlines, and United Airlines. Low-cost carrier Southwest Airlines operates few international routes, but has grown its domestic operations to a size comparable to the major international carriers. There is currently no government regulation of ticket pricing, although the federal government retains jurisdiction over aircraft safety, pilot training, and accident investigations (through the Federal Aviation Administration and the National Transportation Safety Board). The Transportation Security Administration provides security at airports.

Passenger trains were the dominant mode of transportation until the mid-twentieth century. The introduction of jet airplanes on major U.S. routes and the
completion of the Interstate Highway system accelerated a decline in intercity rail passenger demand during the 1960s, resulting in the sharp curtailment of passenger service by private railroads. This led to the creation of National Railroad Passenger Corporation (branded as Amtrak) by the federal government in 1971 to maintain limited intercity rail passenger service in most parts of the country. Amtrak serves most major cities but, outside of the Northeast, California, and Illinois, often by only few trains per day. Amtrak does not serve several major destinations, including Las Vegas, Nevada, and Phoenix, Arizona. Frequent service is available in regional corridors between certain major cities, particularly the Northeast Corridor between Washington, D.C., Philadelphia, New York City and Boston, between New York City and Albany, around Chicago, and in parts of California and the Pacific Northwest. The Alaska Railroad is the only other intercity passenger railroad still operating, and it has no connections with Amtrak.

**Cargo**

The United States makes extensive use of its rail system for freight. According to the Association of American Railroads: "U.S. freight railroads are the world's busiest, moving more freight than any rail system in any other country. In fact, U.S. railroads move more than four times as much freight as do all of Western Europe's freight railroads combined."

Nearly all railroad corridors (not including local transit rail systems) are owned by private companies that provide freight service. Amtrak pays these companies for the right to use the tracks for passenger service. There are approximately 150,000 mi (240,000 km) of mainline track in the United States—the world's longest national railroad network. See *List of United States railroads*.

Rail freight has a major national bottleneck in Chicago and the Midwest (about one-third of the nation's freight trains pass through the region), which is the subject of a $1.5 billion infrastructure improvement project.

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Legislation

On June 26, 2008, the House passed the Saving Energy Through Public Transportation Act (H.R. 6052), which gives grants to mass transit authorities to lower fares for commuters pinched at the pump and expand transit services. The bill also:

Requires that all Federal agencies offer their employees transit pass transportation fringe benefits. Federal agencies within the National Capital Region have successful transit pass benefits programs.

Increases the federal cost-share of grants for construction of additional parking facilities at the end of subway lines from 80 to 100% to cover an increase in the number of people taking mass transit.

Creates a pilot program for vanpool demonstration projects in urban and rural areas. Increases federal help for local governments to purchase alternative fuel buses, locomotives, and ferries from 90 to 100%.

Water transportation

Water transport is largely used for freight. Fishing and pleasure boats are numerous, and passenger service connects many of the nation's islands and remote coastal areas, crosses lakes, rivers, and harbors, and provides alternative access to Alaska which bypasses Canada. Several major seaports in the United States include New York City on the east coast, New Orleans and Houston on the gulf coast, and Los Angeles on the west coast. The interior of the U.S. also has major shipping channels, via the Great Lakes Waterway, St. Lawrence Seaway and the Mississippi River System. Freight on the Mississippi River system is carried on barges pushed by approximately 8000 "towboats" and largely consists of bulk goods, such as petrochemicals, grain and cement.

Many U.S. ports are served by cruise ships. Popular destinations include the Caribbean, the Mexican Riviera, Hawaii and the Inside Passage to Alaska. Automobile ferries operate in many locations where bridges are impractical and in congested metropolitan areas, including New York City and San Francisco Bay.
Waterways

The United States has 25,482 miles (41,009 km) of navigable inland channels (rivers and canals), exclusive of the Great Lakes. Out of this 12,006 miles (19,322 km) is used in commerce. About 15,000 miles (24,000 km) of the Mississippi River System are presently navigable, although not all is used for commerce. The Saint Lawrence Seaway of 2,342 miles (3,769 km), including the Saint Lawrence River of 1,900 miles (3,100 km), is shared with Canada.

3.1.4 Australia

Australia's Constitution does not provide the federal Parliament legislative power for road transport law. As such, road laws are the responsibility of state and territory parliaments. Historically, there were many differences between the eight sets of traffic rules in force in Australia, for example, the penalties for traffic offences varied and there were differing rules governing the approach to intersections. Calls for a set of uniform road rules for Australia came as early as 1933.

According to Shepherd and Calvert, the first genuine attempt to establish national Road Rules was in 1947 when Australian transport ministers (constituted as the Australian Transport Advisory Council) established the Australian Road Traffic Code Committee. The first version of a National Traffic Code was issued in 1958 and the last in 1988. Shepherd and Calvert reported that it was not applied uniformly across the country: some jurisdictions adopted parts of the Code; others ignored significant parts of it. In 1963 Richard Kingsland, then Secretary of the Department of the Interior, convened the 13th meeting of the Australian Road Traffic Committee and called for states to be flexible and to compromise to achieve a national traffic code. By 1965, the Australian Transport Advisory Council had prepared recommendations for nationwide standards for a national road law, for considerations by the states.

The Australian Road Rules project was established in the early 1990s, aimed at establishing a model set of road rules that states and territories across Australia could adopt in their local laws to create improved national uniformity or
consistency. Responsibility for the project was passed to the National Road Transport Commission in 1995.

In January 1999, the Australian Transport Council (comprising each of Australia's transport ministers) voted by majority to approve the final draft Rules submitted by the National Road Transport Commission, the Commonwealth and all states and territories except Western Australia approved the rules. The first edition of the Rules was published on 19 October 1999 and was available for formal adoption by States and Territories from December 1999.

The broad content of the Australian Road Rules is explained by Shepherd and Calvert as follows -

"The ... Rules contain the basic rules of the road for drivers and riders of motor vehicles, riders of bicycles, pedestrians, passengers and others. In very broad terms, the rules deal with the following sorts of things:

- Speed Limits (for lengths of roads, areas and zones) and how they are set (e.g. by sign)
- Rules about turns (left and right, U-turns and hook turns)
- Changing direction (e.g. indicating) and stopping (e.g. stop signals)
- What to do when faced by traffic lights and arrows
- Giving way in various situations (e.g. when facing stop or give way signs or lines, when not facing any lights, signs or lines, at pedestrian and children’s crossings, etc.)
- What to do when faced by particular traffic signs (e.g. turning signs) or road markings (e.g. traffic lane arrows)
- Roundabouts
- Level Crossings
- Keeping left, overtaking, driving in lanes or lines of traffic and merging, special purpose lanes
- Restrictions on stopping (e.g. in or near intersections) and parking
- Lights and warning devices
• Rules for pedestrians including persons on wheeled recreational devices
• Special rules for bicycle riders (e.g. mandatory helmet wearing)
• Rules for persons travelling in or on vehicles (e.g. seatbelt requirements)
• Miscellaneous road rules (e.g. driving a vehicle in reverse)
• Specification of applicable traffic signs."

Development process

NRTC, its Act and the intergovernmental agreements

The National Road Transport Commission was an independent statutory body established under Commonwealth legislation to give effect to two intergovernmental agreements entered into by the Commonwealth, the States and the Territories in 1991. These were changed by amending agreements entered into by heads of governments in the late 1990s.

The agreements committed each of the nine jurisdictions in Australia (the States, Territories and the Commonwealth) to work together in the interests of reforming road transport for the operation of both heavy and light vehicles. The Act, which arose as a result of those agreements, established the Commission and its objectives. In broad terms, the NRTC sought to develop national laws, policies and procedures to achieve four main things. These were:

• Improved transport productivity
• Improved safety
• A cleaner environment
• Lower administration costs.

Uniformity or consistency

An important part of the Commission’s role, now the responsibility of its successor the National Transport Commission, was to establish a uniform or consistent regulatory environment for road transport across the nation.

As Shepherd and Calvert observed -

"The NRTC was established to help road transport function in a way that allowed it to function unencumbered by differing jurisdictional requirements that
stifle efficiency and productivity and potentially compromise safety and the environment. That is, to overcome the effects of the so-called lines in the sand that represent State and Territory borders."

**Approval and implementation**

The National Road Transport Commission developed proposals in consultation with industry, governments and other stakeholders and then made recommendations on national policies and legislation to Commonwealth, State and Territory Transport Ministers. A formal voting process set out in the intergovernmental agreements determined the outcome with each Minister’s vote having the same value. If approved by a majority of Ministers, governments implemented the approved reforms “on the ground” with the NRTC playing a broad coordination role. By any measure, this was a challenging process as the history of similar schemes to that point had been mixed broadly due to the special problems posed by seeking to satisfy nine governments and their bureaucracies and industry and the public as well.

**Template and model legislation**

Initially, the intergovernmental agreements heavily emphasised the development of template legislation as a prime means of entrenching road transport reform in the laws of States and Territories. This is important background to an understanding of how the Australian Road Rules were developed. With the template legislation scheme mandated in the national road transport intergovernmental agreements, legislation was intended to be enacted or made by the Commonwealth for operation in the Australian Capital Territory. The stated intention then was that that legislation was to be adopted unchanged by each of the States and the Northern Territory thus establishing national uniformity. Then as the template was amended, so the theory went, the law of other jurisdictions would change automatically.

While the Commission sought to deliver some national reforms as template legislation in selected instances, over time it became more likely that road transport reform would be delivered in model legislative form or even as policy. The emphasis in the late 1990s and early 2000s was targeted more at the
speedy, on the ground delivery of reform without being bound up in process. In conjunction with jurisdictions, the Commission ultimately adopted a ‘horses for courses’ approach. In some instances the reduction of a reform to precise legislative wording was critical or very important to its success. The Australian Road Rules were a good example of this and were broadly delivered in a consistent way by States and Territories. In other instances, such precision became unnecessary and in some instances was a hindrance to achieving reform.

**Delivery by jurisdictions**

While the Commission was charged with developing reforms and obtaining approval from Ministers for them, it is the responsibility of States and Territories to entrench the reforms in their local laws. While the Commission could monitor progress it was largely powerless to ensure that reforms are implemented on the statute books and “on the ground” in practice. In the result, however, the Australian Road Rules developed by the NRTC were well adopted and entrenched across the country.

**Project approach**

**Multi disciplinary team**

Shepherd and Calvert explained the process adopted by the National Road Transport Commission to develop and finalise the Australian Road Rules -

"...the Commission has chaired a multi-disciplinary Committee that has included, at one stage or another, policy officers, road safety specialists, traffic engineers, police, lawyers, legislative drafters and, at times, representatives of special interest groups."

**Development and drafting**

The project team started by examining the road traffic rules that were in place in each jurisdiction. Detailed public consultations were also a feature of the policy development process. By 1996, arguably most of the policy basis for the Australian Road Rules was settled. Yet there was still widespread dissatisfaction with the state of the draft Rules at that point. Many thought the document was unenforceable and therefore useless as a template or model law. And so, the group worked very intensively through 1997 and 1998 to ensure that the Rules were not
only satisfactory in a policy sense but crucially were drafted in such a way that
they were enforceable. In effect, the Rules were completely redrafted using the
dedicated resources of the Commonwealth Office of Legislative Drafting who
liaised with the national Parliamentary Counsel’s Committee as the
representatives of State, Territory and Commonwealth parliamentary drafters.

Peak Ministerial approval

Finally, by the end of 1998, the Commission considered that the draft
Australian Road Rules were ready to be submitted to and voted on by Ministers.
That vote was successful. In the result, the Commission considered that the
process produced a superior set of national Rules. They were comprehensive,
expressed simply and most importantly, would advance Australian road safety,
although there was still room for further improvement as road safety research
continued.

Features

Substantive features

The impact of the model road Rules on States and Territories varied from
jurisdiction to jurisdiction. For example, while the banning of hand-held mobile
phones while driving was initially a significant change for some jurisdictions,
other jurisdictions had had such a ban in place for many years. Based on feedback
from States and Territories major changes for some jurisdictions were:

- Banning of hand-held mobile phones when driving.
- Keeping left unless overtaking on multi-lane roads with a speed limit of
  more than 80 km/h.
- The zip merge rule (a driver in a line of traffic that is merging with one or
  more other lines of traffic travelling in the same direction must give way to
  a vehicle if any part of that vehicle is ahead of the driver’s vehicle, but
  only where there are no line markings or lane lines).
- New stopping distances (various locations such as intersections, bus stops,
  crest or curve, railway crossings, children’s crossings)
- Prohibiting U-turns at signalised intersections unless otherwise signed
- Giving way to pedestrians at slip lanes
- Prohibiting the crossing of double continuous centre lines to enter or leave roads
- Prohibiting passengers travelling unrestrained in a vehicle’s load space (e.g. utilities)
- Two tier parking (no stopping, no parking)
- Prohibiting the crossing of single continuous lines unless turning onto or off the road
- Requiring people on skateboards, in-line skates (wheeled recreational devices) and wheeled toys to give way to pedestrians on footpaths
- Allowing footpath cycling by children under 12 years old.

**Features assisting interpretation and understanding**

**The rules as a traffic handbook**

One of the original ideas behind the development of the Australian Road Rules in the 1990s was that the Rules should be so simple that the book containing them would contain not only the law but double as a traffic handbook for learner drivers as well. This ambitious idea was probably always doomed to failure. Early and supposedly simple drafts of the Rules were deemed unenforceable by parliamentary drafters. The final approved version of the Rules was drafted in a plain English style favoured by Australian Parliamentary drafters and has proved since 1999 to have none of the enforcement problems evident in the earlier drafts.

**Reader's guide**

The Australian Road Rules contained a number of other interesting features that were innovative in Australian and possibly in the traffic law in other counties at the time they were first included. Each of these features was aimed at helping readers to interpret and understand the law. For example, the Rules contain a Reader’s Guide aimed at providing a general introduction to the content and structure of the Rules.
**Diagrams**

The Rules also made use of example diagrams to assist in the interpretation of particular rules. Again, this was unprecedented in Australian legislation at this point, particularly in traffic law. For instance, sub-rule 33 outlines how drivers are to make right turns. In basic terms, the rule says that if a road marking exists indicating how a right turn should be made, a driver must turn as indicated by that road marking (rule 33 (2)). However, if there is no such road marking, a driver must make the right turn so that the driver passes as near as practicable to the right of the centre of the intersection. Both of these situations are made clear by colour diagrams which are included in the rules themselves. The diagram feature is used regularly throughout the Rules, most notably to help explain give way rules.

**Examples**

Also, examples in narrative form supplemented many rules too, again to help readers with particular rules and generally to make the law clearer for readers. This leads into another feature of the Rules.

**Use of colour**

The National Road Transport Commission produced the Australian Road Rules in colour. Again, this was a revolutionary development in Australian traffic law and Australian law generally at the time as laws at that time were uniformly produced in black and white only. Each of the common and standard road signs and alternative signs was reproduced in colour in a Schedule to the Rules. However, if required, the diagrams could be viewed and interpreted satisfactorily in black and white as well.

**Adoption**

When the Australian Road Rules were in the final stages of negotiations, States and Territories began to turn their minds to how they would adopt them in local law. Methods of adoption varied across the nation. Some jurisdictions adopted the Rules in a quasi-template fashion by simply referencing the Rules document published by the National Road Transport Commission. Other
jurisdictions, on the other hand, adopted the Rules by a “mirror” approach and basically reproduced the Rules in their local law.

**Maintenance**

States and Territories made a powerful point to the Commission as the Rules process was concluding. In essence, the jurisdictions said that the value of the national Road Rules would dissipate quickly, given the dynamic nature of traffic law, unless the Commission established a process to ensure the Rules were kept up to date. The National Road Transport Commission agreed that a maintenance process was necessary and submitted an appropriate proposal on an in-principle basis to Ministers. Ministers then specifically approved the establishment of a maintenance process for the Rules when they approved the Rules themselves.

Since that time the details of the process have been settled with States and Territories and have been put into practice. In fact, the need for maintenance was seen to be so fundamental to ongoing national uniformity or consistency that it was written into the statute which founded the successor organisation to the National Road Transport Commission, the National Transport Commission. The National Transport Commission now acts as the coordinator of the Road Rules maintenance group.

**Jurisdiction exemptions**

The vast bulk of the 351 rules and Schedules that comprised the initial 1999 version of the Australian Road Rules were determined by consensus. A further eight rules were subject to a special Ministerial vote. Some issues could either not be settled during the negotiations or were simply left to local law rather than delay the approval and implementation of the Rules. In other instances, it was simply agreed that some matters were not appropriate to be dealt with in a national document.

**Ongoing activity**

The Commission regarded the gradual minimisation of jurisdiction exemptions as a good example of how the maintenance process might be used not
only to maintain national uniformity or consistency but also to enhance it. More fundamentally, new road safety policies and strategies emerge from time to time and will form the basis for changes to the rules including potential new controls.

**Current activity**

The National Transport Commission is charged with maintaining the Australian Road Rules. From time to time, the Commission develops maintenance packages for the Rules which are submitted to the Australian Transport Council for the approval of Australia's Transport Ministers and for the ultimate adoption and roll out across the States and Territories of Australia.

### 3.1.5 Singapore

Transport within Singapore is mainly land-based. Many parts of Singapore are accessible by road, including islands such as Sentosa and Jurong Island. The other major form of transportation within Singapore is rail: the Mass Rapid Transit which runs the length and width of Singapore, and the Light Rail Transit which runs within a few neighbourhoods. The main island of Singapore is connected to the other islands by ferryboat services.

Singapore also has many links to the rest of the world. There are two bridges which link Singapore to Malaysia – the Causeway, and the Second Link. The Singapore Changi Airport is a major aviation hub in Asia, and Singapore is a major transshipment port. According to the study conducted by London consulting firm Credo, Singapore has one of the most cost-efficient public transport networks in the world.

**Roads**

Singapore pioneered the modern use of toll roads to enter the most congested city centre area with the Singapore Area Licensing Scheme, which has since been replaced with the Electronic Road Pricing, a form of electronic toll collection.

- Total length of expressways: 161 km
- Total length of major arterial roads: 645 km
• Total length of collector roads: 557 km

• Total length of local access roads: 2048 km (as of 2011)

• Traffic drives on the left which is typical in Commonwealth countries.

**Cars**

As of 2015, there was a total of 957,246 motor vehicles in Singapore, with 519,645 of them being private cars.

**Expressways**

The planning, construction and maintenance of the road network is overseen by the Land Transport Authority (LTA), and this extends to expressways in Singapore. These form key transport arteries between the distinct towns and regional centres as laid out in Singapore's urban planning, with the main purpose of allowing vehicles to travel from satellite towns to the city centre and vice versa in the shortest possible distance. These expressways include:

• Ayer Rajah Expressway (AYE)

• Bukit Timah Expressway (BKE)

• Central Expressway (CTE)

• East Coast Parkway (ECP)

• Marina Coastal Expressway (MCE)

• Kallang–Paya Lebar Expressway (KPE)

• Kranji Expressway (KJE)

• Pan Island Expressway (PIE)

• Seletar Expressway (SLE)

• Tampines Expressway (TPE)

• North-South Expressway (under planning)
The influence of expressways on Singapore's transport policy developed shortly after independence during the history of Singapore because of frequent traffic congestion in the Central district. The aim was to encourage residential development in other parts of the island and give residents in these new "satellite towns" a convenient link between their homes and their workplaces (which were mostly situated around the city centre.)

**Cable car**

The Singapore Cable Car, plies between Mount Faber on the main island of Singapore and the resort island of Sentosa as an alternative means of accessing that tourist attraction. The cable car system underwent a revamp that was completed in August 2010.

**Water transport within Singapore**

Water transport within the main island is limited to the River Taxi along the Singapore River. The service was introduced in January 2013, with low ridership. There are also daily scheduled ferry services from the Marina South Pier to the Southern Islands such as Kusu Island and Saint John's Island.

**Public transport**

Singapore has one of the most cost-efficient public transport networks in the world, according to a study by London consulting firm Credo. Public transport covers a variety of transport modes such as bus, rail and taxi. This is a result of great emphasis by the Government of Singapore to promote its use over private transport. About 5.308 million trips are made on a daily basis on the public transport system and at least half of its population utilises it daily.

The public transport system is the most important means of transportation to work and school for Singaporeans. About 52.4% of Singaporean residents (excluding foreigners) go to work using public transport according to the Singapore Census of Population 2000, with 41.6% using private transport and the remaining 6.1% not requiring any form of transport. Amongst school-going residents, 41.5% of them go to school by public transport, 24.9% by private transport, and a further 30.1% do not require any form of transport at all.
A slight dip has been noted in the number of Singaporeans and permanent residents using public transport compared to 1990, which had 55.0% and 46.3% of them going to work and to school respectively. The government aims to reverse this trend such that the total average number of commuters on public transport rises above 75% of all trips made.

**Buses**

Go-Ahead Singapore will commence the operation of 24 services in two tranches. 13 bus services will begin on 4 September 2016, while another 11 on 18 September. Another route will be introduced in 2017, and details of the route will be announced closer to the implementation date.

**Taxis**

Taxicabs are a popular form of public transport in the compact sovereign city-state of Singapore, with fares considered relatively low compared to those in most cities in developed countries. As of December 2014, the total taxi fleet in Singapore is 28,736 taxis, operated by six taxi companies and 178 independent drivers. Taxis may be flagged down at any time of the day along any public road outside of the Central Business District (CBD).

**Public transport regulations**

The public transport system is regulated by the Land Transport Authority, which oversees the three main modes of public transportation. Fare regulation and bus service standards are under the purview of an independent body, the Public Transport Council, while TransitLink, established by SBS Transit, SMRT Trains and SMRT Buses, helps to create an integrated multi-modal system with a common fare-payment mode, information platform, and a physical network without duplication of services.

The policies of the Land Transport Authority are meant to encourage the use of public transport in Singapore. The key aims are to provide an incentive to reside away from the Central district, as well as to reduce air pollution. Singapore has a Mass Rapid Transit (MRT) and Light Rail Transit (LRT) rail system consisting of five lines. There is also a system of bus routes throughout the island,
most of which have air conditioning units installed due to Singapore's tropical climate. Buses without air conditioning installed are gradually being phased out. A contactless smart card called the EZ-Link card is used to pay bus and MRT fares.

**Public transport for tourists**

Launched in December 2007 by Land Transport Authority, Singapore Tourism Board and EZ-Link, the Singapore Tourist Pass offers unlimited travel for tourists to Singapore on Singapore's public transport system. For $10 a day ($20 for 3 days, as of April 2017) and with $10 deposit, tourists can take any number of rides on buses and trains operated by SBS Transit, SMRT Buses and SMRT Trains. Certain buses like Night Rider, train service like Sentosa Express are not applicable. The Singapore Tourist Pass is available at selected MRT stations.

**International transport links**

Singapore is well connected to other countries via land, air and sea.

**Land**

Singapore has two land links to Malaysia. The Johor-Singapore Causeway, built in the 1920s to connect Johor Bahru in Johor, Malaysia to Woodlands in Singapore, carries a road and a railway line. The Tuas Second Link, a bridge further west, was completed in 1996 and links Tuas in Singapore to Tanjung Kupang in Johor.

The international railway line to Malaysia is an extension of the Malaysian rail network operated by Keretapi Tanah Melayu (Malayan Railways). Since 1 July 2011, Woodlands Train Checkpoint serves as the southern terminus of the KTM rail network. Previously, KTM trains terminated at Tanjong Pagar railway station in central Singapore. Two more rail links are being planned: the Kuala Lumpur-Singapore High Speed Rail terminating in Jurong East, and the Johor Bahru-Singapore Rapid Transit System between Woodlands North and Bukit Chagar, Johor Bahru.

**Sea**

There are boats and ferry services to nearby islands of Malaysia and Indonesia. These services can be found at Changi Ferry Terminal, Changi Point Ferry Terminal, Tanah Merah Ferry Terminal, Singapore Cruise Centre and Marina Bay Cruise Centre Singapore.
The Port of Singapore, run by the port operators PSA International (formerly the Port of Singapore Authority) and Jurong Port, is the world's busiest in terms of shipping tonnage handled. 1.04 billion gross tons were handled in the year 2004, crossing the one billion mark for the first time in Singapore's maritime history. Singapore also emerged as the top port in terms of cargo tonnage handled with 393 million tonnes of cargo in the same year, beating the Port of Rotterdam for the first time in the process. In 2006, it handled a total of 448 million tonnes of cargo.

Singapore is ranked second globally in terms of containerised traffic, with 21.3 million Twenty-Foot Equivalent Units (TEUs) handled in 2004, and is also the world's busiest hub for transshipment traffic. Additionally, Singapore is the world's largest bunkering hub, with 23.6 million tonnes sold in 2004.

In 2007, the Port of Singapore was ranked the world's busiest port, surpassing Hong Kong and Shanghai. The Port of Singapore is also ranked the Best Seaport in Asia.

### 3.1.6 Global Status Report on Road Safety

In 2010 the governments of the world declared 2011-2020 as the decades of action for road safety. They invited the world health organization to prepare a report as a base line to access the state of global road safety at the on set of the decade and to be able to monitor progress over the period of the decade. The unanimous support for this decade of action from member states indicates a growing awareness that the devatation scale of road traffic injuries is a global public health and development corner. The report of 2016 shows that millions of people work field on the words roads in few years. This is uncabably high road traffic injuries take an enormous toll on individuals an communities as wells as on national economies. Middle income countries, which are motorization rapidly, are the hardest hit. This report shows that, which sufficient political will, road traffic deaths can be averted. In supporting the decade of action for road safety, government around the world have shown their political commitment to make the words roads safer. Eighty Eight countries have reduced the number of deaths on
their roads but the total number of road traffic deaths remains unacceptably high at 1.24 million per year.

The number of road traffic deaths – 1.25 million in 2013 – has plateaued since 2007 despite the global increase in population and motorization and a predicted rise in deaths. This suggests that interventions implemented over the past few years to improve global road safety have saved lives. This report shows that 68 countries have seen a rise in the number of road traffic deaths since 2010, of which 84% are low- or middle-income countries. Seventy-nine countries have seen a decrease in the absolute number of deaths, of which 56% are low- and middle-income.

However, low-income countries have fatality rates more than double those in high-income countries and there are a disproportionate number of deaths relative to these countries’ level of motorization: 90% of road traffic deaths occur in low- and middle-income countries, yet these countries have just 54% of the world’s vehicles.

This report shows that 1.25 million people are killed each year on the world’s roads, and that this figure has plateaued since 2007. In the face of rapidly increasing motorization, this stabilization of an otherwise projected increase in deaths is an indication of the progress that has been made. However, these efforts to reduce road traffic deaths are clearly insufficient if the international road safety targets set by the Sustainable Development Goals are to be met. Achieving effective and long-lasting improvements in road safety has been attained in a number of countries that have adopted a broad approach addressing many dimensions of road safety. The challenge today is for the downward trends in road traffic deaths seen in these countries to be replicated in other countries, but in a shorter timeframe. Political will is crucial to driving such changes, but action is particularly necessary on a number of specific issues:

- Good laws relating to key risk factors can be effective at reducing road traffic injuries and deaths. Some progress has been made: over the past 3 years, 17 countries (representing 5.7% of the world’s population) have amended their laws to bring them into line with best practice on key risk
factors. Nonetheless, many countries lag far behind in terms of ensuring their laws meet international standards.

- Lack of enforcement frequently under-mines the potential of road safety laws to reduce injuries and deaths. More effort needs to be placed in optimizing enforcement efforts.

- Insufficient attention has been paid to the needs of pedestrians, cyclists and motorcyclists, who together make up 49% of all global road traffic deaths. Making the world’s roads safer will not be possible unless the needs of these road users are considered in all approaches to road safety. Making walking and cycling safer will also have other positive co-benefits if non-motorized forms of transport become more popular, including more physical exercise, reduced emissions, and the health benefits associated with such changes.

- Making cars safer is a critical component of saving lives on the roads. Eighty percent of countries around the world notably low- and middle-income countries – still fail to meet even the most basic international standards on vehicle safety. The lack of such standards in middle-income countries (which are increasingly becoming major car manufacturers) also risks jeopardising global efforts to make roads safer.

Governments must urgently sign up to the minimum international vehicle standards for manufacturers and assemblers, and limit the import and sale of sub-standard vehicles in their countries. Countries need to address a number of other areas in order to improve road safety. These include improving the quality of their data on road traffic injuries and harmonising data in line with international standards, having a lead agency with the authority and resources to develop a national road safety strategy whose implementation they oversee, as well as improving the quality of care that is available to those who suffer a road traffic injury. These data represent the road safety situation 3 years into the Decade of Action for Road Safety. Despite a strong evidence base around what works, it shows insufficient attention has been paid to road safety and that a heavy price is being paid in terms of lives lost, long-term injury and pressure on health-care
services. The inter-national attention promised to the issue of road safety by the new Sustainable Development Goal target to halve deaths and injuries from road traffic crashes by 2020 presents a golden opportunity for much needed action, and one that must be seized by all countries. Through this, the pace of progress can be accelerated and an actual decline in global road traffic deaths realized.

3.2 INTERTNATIONAL TRENDS

3.2.1 UNO

The UN Road Safety Collaboration is pleased to announce that the Fourth UN Global Road Safety Week will be held from 8-14 May 2017. The Week will focus on speed and what can be done to address this key risk factor for road traffic deaths and injuries. Speed contributes to around one-third of all fatal road traffic crashes in high-income countries, and up to half in low- and middle-income countries.

Countries successfully reducing road traffic deaths have done so by prioritizing safety when managing speed. Among the proven strategies to address speed include:

- Building or modifying roads to include features that calm traffic
- Establishing speed limits to the function of each road
- Enforcing speed limits
- Installing in-vehicle technologies
- Raising awareness about the dangers of speeding.

The Fourth UN Global Road Safety Week seeks to increase understanding of the dangers of speed and generate action on measures to address speed, thereby saving lives on the roads.

3.2.1.1 Global Plan

Purpose of this document

General Assembly resolution 64/2551 of March 2010 proclaimed 2011–2020 the Decade of Action for road safety, with a global goal of stabilizing and then reducing the forecasted level of global road fatalities by increasing activities
conducted at national, regional and global levels. Resolution 64/255, requested the World Health Organization and the United Nations regional commissions, in cooperation with the United Nations Road Safety Collaboration and other stakeholders, to prepare a Plan of Action for the Decade as a guiding document to support the implementation of its objectives. In addition, Resolution 64/255 invited the World Health Organization and the United Nations regional commissions to coordinate regular monitoring, within the framework of the United Nations Road Safety Collaboration, of global progress towards meeting the targets identified in the plan of action through global status reports on road safety and other appropriate monitoring tools.

In compliance with the above, this Plan is intended as a guiding document for countries, and at the same time for facilitating coordinated and concerted action towards the achievement of the goal and objectives of the Decade of Action for Road Safety 2011–2020. It provides a context that explains the background and reasons behind the declaration of a Decade by the United Nations General Assembly. This global Plan serves as a tool to support the development of national and local plans of action, while simultaneously providing a framework to allow coordinated activities at regional and global levels. It is directed at a broad audience including national and local governments, civil society and private companies willing to harmonize their activities towards reaching the common objective while remaining generic and flexible to country needs.

**Background**

**Magnitude of the problem, increasing trends**

Each year nearly 1.3 million people die as a result of a road traffic collision—more than 3000 deaths each day—and more than half of these people are not travelling in a car. Twenty to fifty million more people sustain non-fatal injuries from a collision, and these injuries are an important cause of disability worldwide. Ninety percent of road traffic deaths occur in low- and middle-income countries, which claim less than half the world's registered vehicle fleet. Road traffic injuries are among the three leading causes of death for people between 5 and 44 years of age. Unless immediate and effective action is taken, road traffic
injuries are predicted to become the fifth leading cause of death in the world, resulting in an estimated 2.4 million deaths each year. This is, in part, a result of rapid increases in motorization without sufficient improvement in road safety strategies and land use planning. The economic consequences of motor vehicle crashes have been estimated between 1% and 3% of the respective GNP of the world countries, reaching a total over $500 billion. Reducing road casualties and fatalities will reduce suffering, unlock growth and free resources for more productive use. Activities taken as part of a Decade of Action for Road Safety will also have an impact on steps taken towards improving systems of sustainable development.

**Initiatives that work**

Road traffic injuries can be prevented. Experience suggests that an adequately funded lead agency and a national plan or strategy with measurable targets are crucial components of a sustainable response to road safety. Effective interventions include incorporating road safety features into land-use, urban planning and transport planning; designing safer roads and requiring independent road safety audits for new construction projects; improving the safety features of vehicles; promoting public transport; effective speed management by police and through the use of traffic-calming measures; setting and enforcing internationally harmonized laws requiring the use of seat-belts, helmets and child restraints; setting and enforcing blood alcohol concentration limits for drivers; and improving post-crash care for victims of road crashes. Public awareness campaigns also play an important role in supporting the enforcement of legislative measures, by increasing awareness of risks and of the penalties associated with breaking the law. United Nations legal instruments developed under the auspices of the regional commissions have assisted many countries in developing and enforcing traffic rules and measures; producing safer road vehicles; reducing the risk of collisions with dangerous goods and hazardous materials; and ensuring that only safe and well-maintained vehicles and competent drivers are allowed to participate in traffic. Transport infrastructure agreements developed under the United Nations regional commissions’ auspices have given the world coherent and safer road transport networks.
Gaining momentum

There is growing awareness that the current road safety situation constitutes a crisis with devastating social and economic impacts that threaten the recent health and development gains that have been achieved. Road safety is not a new issue but over the last decade activity at the international level has gained new momentum. A number of documents have been developed that describe the magnitude of the road traffic injury situation, its social, health and economic impacts, specific risk factors, and effective interventions. These have served to provide momentum for the adoption of a number of resolutions that call on Member States and the international community to include road safety as a global policy issue, making specific recommendations for action. The resolutions have called for international collaboration to be strengthened.

The United Nations Road Safety Collaboration (UNRSC) was established as a follow up to General Assembly resolution 58/289 of April 2004, recognizing the need for the United Nations system to support efforts to address the global road safety crisis. Resolution 58/289 invited WHO, working in close cooperation with the United Nations regional commissions, to coordinate road safety issues within the United Nations System. The Collaboration is chaired by the World Health Organization, with the United Nations regional commissions as rotating vice chairs. It has brought together international organizations, governments, nongovernmental organizations, foundations and private sector entities to coordinate effective responses to road safety issues since 2004. It is an informal consultative mechanism whose members are committed to road safety efforts and which provides governments and civil society with good practice guidelines to address the major road safety risk factors.

Even so, current initiatives and levels of investment are inadequate to halt or reverse the predicted rise in road traffic deaths. The United Nations Secretary-General’s 2009 report on the global road safety crisis notes that despite evidence of growing awareness of and commitment to road safety issues, political will and funding levels are far from commensurate with the scale of the problem. The United Nations Secretary-General concludes that the crisis requires ambitious
vision, increased investment, and better collaboration, and he highlights the First Global Ministerial Conference on Road Safety as a major opportunity for crystallizing action plans and catalysing the next action steps.

Why a Decade of Action for Road Safety?

The Commission for Global Road Safety issued a call for a Decade of Action for Road Safety in its 2009 report. Endorsements for the proposal have come from a wide range of public figures as well as the United Nations Road Safety Collaboration. The United Nations Secretary-General, in his 2009 report to the General Assembly, encouraged Member States to support efforts to establish a Decade. A Decade would provide an opportunity for long-term and coordinated activities in support of regional, national and local road safety.

Key partners in global road safety agree that the time is right for accelerated investment in road safety in low-income and middle-income countries, together with the development of sustainable road safety strategies and programmes, which rethink the relationship between roads and people, encourage the use of public transport, and also change approaches to measurement of national progress in transport policy. Major risk factors are understood, as are effective counter measures to address them. Collaborative structures are in place to bring together key international players, funders, civil society, and there is a funding mechanism to support accelerated investment and activity. Sufficient resources and political will are the key elements still lacking. A Decade would provide a timeframe for action to encourage political and resource commitments both globally and nationally. Donors could use the Decade as a stimulus to integrating road safety into their assistance programmes. Low-income and middle-income countries can use it to accelerate the adoption of effective and cost-effective road safety programmes while high-income countries can use it to make progress in improving their road safety performance as well as to share their experiences and knowledge with others.

In March 2010 the United Nations General Assembly resolution 64/255proclaimed a Decade of Action for Road Safety 2011–2020 with a goal of stabilizing and then reducing the forecasted level of road traffic fatalities around
the world by increasing activities conducted at national, regional and global levels. The resolution calls upon Member States to implement road safety activities, particularly in the areas of road safety management, road infrastructure, vehicle safety, road user behaviour, road safety education and the post-crash response. While supporting the regular monitoring of progress towards the achievement of global targets relating to the Decade, it notes that national targets relating to each area of activity should be set by individual Member States. The resolution requests that the World Health Organization and the United Nations regional commissions, in cooperation with other partners in the United Nations Road Safety Collaboration and other stakeholders, prepare a global Plan for the Decade as a guiding document to support the implementation of its objectives. In 2010 the United Nations regional commissions finalized a global project entitled “Improving global road safety: setting regional and national road traffic casualty reduction targets” with the publication of the final report, which recognized the value of targets in improving road safety and assisted governments in low and middle income countries in developing such targets.

A framework for the Decade of Action and the guiding principles underlying the Plan for the Decade of Action are those included in the "safe system" approach. This approach aims to develop a road transport system that is better able to accommodate human error and take into consideration the vulnerability of the human body. It starts from the acceptance of human error and thus the realization that traffic crashes cannot be completely avoided. The goal of a safe system is to ensure that accidents do not result in serious human injury. The approach considers that human limitations - what the human body can stand in terms of kinetic energy - is an important basis upon which to design the road transport system, and that other aspects of the road system, such as the development of the road environment and the vehicle, must be harmonized on the basis of these limitations. Road users, vehicles and the road network/environment are addressed in an integrated manner, through a wide range of interventions, with greater attention to speed management and vehicle and road design than in traditional approaches to road safety.

This approach means shifting a major share of the responsibility from road users to those who design the road transport system. System designers include
primarily road managers, the automotive industry, police, politicians and legislative bodies. However, there are many other players who also have responsibility for road safety, such as health services, the judicial system, schools, and nongovernment organizations. The individual road users have the responsibility to abide by laws and regulations.

The Plan for the Decade also recognizes the importance of ownership at national and local levels, and of involving multiple sectors and agencies. Activities towards achieving the goal of the Decade should be implemented at the most appropriate level and the involvement of a variety of sectors (transport, health, police, justice, urban planning etc) should be encouraged. Nongovernmental organizations, civil society, and the private sector should be included in the development and implementation of national and international activities towards meeting the Decade's goals. In this respect, having road safety related legislation in place is essential. Such legislation should be harmonized among countries as much as possible.

Therefore the major related United Nations international agreements and conventions should become the basis of global road safety legislation, as indicated in General Assembly resolutions and reports. Moreover, special attention should be given to the most vulnerable groups, those living in countries of conflict or where road safety is not embraced as a quality of life concept.

**Goal and specific objectives**

The overall goal of the Decade will be to stabilize and then reduce the forecast level of road traffic fatalities around the world by 2020. This will be attained through: adhering to and fully implementing the major United Nations road safety related agreements and conventions, and use others as principles for promoting regional ones, as appropriate; A number of global milestones will mark progress through the Decade. The Decade -and implementation of this Plan - will be evaluated at regular intervals by the World Health Organization and the United Nations regional commissions, within the framework of the United Nations Road Safety Collaboration. Baseline data will be obtained through country surveys conducted for the 2nd *Global road safety status report on road safety* due for
publication in 2012 and other regional and sub-regional statistics. A third report will be published in 2014 and - should funding be secured - additional status reports will be developed. During the evaluation process, both outcome and process indicators will be assessed. The status reports and other monitoring tools implemented at national, regional and global level will serve as a basis for discussion in mid-term and end-term regional and global review events. At the national level, each country will set its own monitoring system. It is hoped that countries will develop and publish national reports and organize events to discuss progress and adapt plans.

3.2.1.2 Brasilia Declaration 2015

Decade of Action for Road Safety 2011-2020 and the 2030 Agenda for Sustainable Development OP28. Invite all relevant stakeholders and especially the donor community to scale up funding for road safety and to explore innovative funding modalities to support global, regional, national and local-level research and policy implementation; OP29, encourage the WHO, in collaboration with other United Nations agencies and United Nations regional commissions, to facilitate, through the existing mechanisms, a transparent, sustainable and participatory process with all stakeholders to develop national, regional and global targets to reduce road traffic crashes and fatalities, and to engage in the process that will lead to the definition and use of indicators for the road safety-related Sustainable Development Goal’ (SDG) targets; OP30. Invite the United Nations General Assembly to endorse the content of this declaration.

Brasilia Declaration

Second Global High-level Conference on Road Safety: Time for Results Brasilia, 18-19 November 2015. We, Ministers and heads of delegations gathered in Brasilia, Brazil, on November 18 and 19, 2015, for the Second Global High-level Conference on Road Safety, in coordination with representatives of international, regional and sub-regional organizations and non-governmental organizations, academic institutions and the private sector, including philanthropic and corporate donors; Acknowledging the leadership of the Government of the Federative Republic of Brazil in preparing and hosting this Second Global High-
level Conference on Road Safety and the leadership of the Governments of the Russian Federation and the Sultanate of Oman in leading the process for adoption of related United Nations General Assembly resolutions; Concerned that, in light of the World Health Organization’s (WHO’s) Global status report on road safety 2015, road traffic continues to represent a major development issue, public health problem and leading cause of death and injury around the world, as crashes kill more than 1.25 million people and injure as many as 50 million a year, with 90% of these casualties occurring in developing countries;10

Underlining the important role of public health in terms of reducing road traffic fatalities and injuries and improving health outcomes, as well as the role of health systems, including through universal health coverage; Also concerned that road crashes are the leading cause of death around the world for children and youth aged 15-29 years and noting that more than two thirds of the road traffic victims are males11; Recognizing that human suffering, combined with global costs estimated at USD 1,850 billion12 a year, turns reducing road traffic deaths and injuries into an urgent development priority, and that investment in road safety has a positive impact on public health and economy; Recalling the Moscow Declaration recommendations, adopted at the First Global Ministerial Conference on Road Safety in 2009; Convinced that appropriate multisectoral international cooperation and multisectoral national action are necessary to realize the objective of the Decade of Action for Road Safety 2011-2020 to “stabilize and then reduce the forecast level of road traffic fatalities around the world”;

Welcoming the inclusion of a target, within Sustainable Development Goal (SDG) 3 of the 2030 Agenda for Sustainable Development, to "by 2020, halve the number of global deaths and injuries from road traffic accidents" and affirming our willingness to intensify both national action and international cooperation with a view to meeting this target;

Recognizing the need for countries to introduce, or improve and strengthen, arrangements for monitoring serious injuries from road traffic

10 WHO, Global status report on road safety 2015
12 iRAP, The Global Cost of Road Crashes, 2013.
accidents to facilitate action to meet, by 2020, the target to halve the number of
global deaths and injuries from road traffic accidents;

Welcoming as well the inclusion of a target to “provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities, and older persons” by 2030, within SDG 11 as an integral part of the 2030 Agenda for Sustainable Development;

Noting that the overwhelming majority of road traffic deaths and injuries are predictable and preventable and that at the mid-point of the Decade of Action much remains to be done, despite some progress and improvements in many countries, including in developing countries;

Recognizing that to only focus on road users as a cause of crashes is inappropriate and insufficient, as crashes result from multiple causes, many of which are linked to social determinants and risk factors

Welcoming the recognition by the 2012 United Nations Conference on Sustainable Development (Rio+20) that improving road safety can contribute to the achievement of wider international development objectives, and that transport and mobility are central to sustainable development;

Reaffirming that providing basic conditions and services to address road safety is primarily a responsibility of Governments;

Recognizing nonetheless that there is a shared responsibility to move towards a world free from road traffic fatalities and serious injuries, and that addressing road safety demands multi-stakeholder collaboration;

Taking into account the important contribution of passive safety to the progress made to prevent road traffic fatalities and injuries, and encouraging the vehicle and safety equipment industries to further develop their efforts to increase the existing passive safety levels globally;

Taking into account that road traffic deaths and injuries are also a social equity issue, as the poor and the vulnerable are most frequently also vulnerable road users (pedestrians, cyclists, users of motorized two-and-three wheeled
vehicles and passengers of unsafe public transport), who are disproportionately affected and exposed to risks and road crashes, which can lead to a cycle of poverty exacerbated by income loss; and recalling that the aim of road safety policies should be to guarantee protection to all users;

Recognizing that road safety requires addressing broader issues of equitable access to mobility, and that the promotion of sustainable modes of transport, in particular safe public transport and safe walking and cycling, is a key element for road safety;

Stressing the importance of giving due attention to the issues of sustainable urban mobility and enhanced accessibility to destinations, activities, services and goods in drafting the New Urban Agenda, to be adopted at the United Nations Conference on Sustainable Urban Development and Housing (Habitat III), to be held in Quito, Ecuador, in October 2016;

Reaffirming the role and importance of the United Nations legal instruments on road safety, such as the 1949 and 1968 Conventions on Road Traffic, the 1968 Convention on Road Signs and Signals, the 1958 and 1998 agreements on technical vehicle regulations, the 1997 Agreement on Periodic Technical Inspection of Vehicles, and the 1957 Agreement on Transport of Dangerous Goods;

Commending States that have adopted comprehensive legislation on key risk factors, including the non-use of seat belts, child restraints and helmets, drinking alcohol and driving, speeding, and drawing attention to other risk factors such as medical conditions and medicines which affect safe driving, fatigue, the use of narcotic, psychotropic drugs and psychoactive substances, cell phones and other electronic and texting devices;

Considering the crucial importance of traffic law enforcement actions supported by intelligent risk monitoring practices, and the role of awareness-raising campaigns for the prevention of road traffic crashes, and to minimize the injuries and damage they cause;
Recognizing the commitment of States and civil society to road safety by observing the annual World Day of Remembrance for Road Traffic Victims as well as United Nations Road Safety Weeks;

Recognizing the progress made by some countries in providing universal access to health and integral care in the pre-hospital, hospital, post-hospital and reintegration phases to road traffic crash victims, including strengthening mass casualty management;

Acknowledging the work of the United Nations system, in particular the leadership of WHO as coordinator, working in close cooperation with UN regional commissions, in particular the United Nations Economic Commission for Europe (UNECE), in establishing a Global Plan for the Decade of Action for Road Safety 2011–2020, the commitment of the United Nations Human Settlements Programme (UN-Habitat), the United Nations Environment Programme (UNEP), the United Nations Children’s Fund (UNICEF), and the International Labour Organization (ILO) among other agencies, to supporting these efforts as well as that of the World Bank and regional development banks towards implementing road safety projects and programmes, in particular in developing countries;

Emphasizing the role of the UN Safety Road Safety Collaboration as a consultative mechanism to facilitate international road safety cooperation;

Welcoming the establishment of the High-level Advisory Group on Sustainable Transport, and noting the appointment of the UN Secretary-General’s Special Envoy for Road Safety as efficient tools for fostering international action in reducing the number of global deaths and injuries related to road traffic crashes;

Inviting Governments and all relevant stakeholders to collaborate with the United Nations Secretary General’s High-Level Advisory Group on Sustainable Transport and give due consideration to its recommendations related to road safety.

Taking into account the importance of strengthening capacity and continuing international cooperation, including fostering South-South and triangular cooperation, including between countries that share roads across
borders, to further support efforts to improve road safety, particularly in developing countries, and providing, as appropriate, financial and technical support to meet the goals of the Decade of Action and those of the 2030 Agenda for Sustainable Development.

Determined to learn from past experiences and build on achievements made; Hereby renew their commitment to the Decade of Action for Road Safety 2011-2020 and to the full and timely implementation of the Global Plan for the Decade of Action, and decide to:

Recommended actions for strengthening road safety management and improving legislation and enforcement. Encourage States that have not yet done so to designate and/or strengthen funded lead agencies and related coordination mechanisms at national or sub-national level as well as to strengthen the collaboration between governments, including parliamentary bodies, civil society, academia, private sector and philanthropic foundations in that realm;

Encourage civil society, academia, private sector and philanthropic foundations to strengthen their commitments to accelerate the implementation of the Global Plan for the Decade of Action for Road Safety 2011-2020;

Invite States that have not yet done so to redouble efforts to develop and implement national road safety plans and to adopt and enforce comprehensive legislation, in line with the Global Plan for the Decade of Action for Road Safety 2011–2020, with a view to meeting the target of increasing the percentage of countries with comprehensive legislation on key risk factors, including the non-use of seatbelts, child restraints and helmets, drinking alcohol and driving, and speeding, from 15% to at least 50% by 2020, as agreed in United Nations General Assembly resolution 64/255 of 2010;

Identify other risk factors which lead to distracted or impaired driving, such as medical conditions and medicines which affect safe driving, fatigue, the use of narcotic, psychotropic drugs and psychoactive substances, road environment visual distraction, cell phones and other electronic and texting devices and adopt, as appropriate, effective and evidence-based legislation;
Enhance road policing strategies and traffic enforcement measures, with a view to reducing road traffic crashes, including by means of promoting integration among traffic enforcement agencies in policing and inspection, as well as collecting road infrastructure and road traffic crashes data;

Improve the quality of systematic and consolidated data collection on the occurrence of road traffic crashes, including information from different sources, as well as on mortality and morbidity and disabilities, comprising disaggregated data; in order to address matters of data reliability and underreporting, data collection should be conducted by the appropriate authorities, including traffic police and health services, in line with international standards and definitions;

Invites the WHO to further standardize definitions, indicators and reporting practices, including on road traffic fatalities, injuries, and risk factors with a view to producing comparable information; and building on existing best practices in this area;

Encourage researching and result-sharing to support evidence-based approaches to prevent road traffic crashes, deaths and injuries and to mitigate their consequences;

Encourage States to introduce new technologies in traffic management and intelligent transport systems to mitigate road traffic crash risk and maximize response efficiency;

Encourage States that have not yet done so to consider acceding to or ratifying the UN legal instruments on road safety, as well as to engage in the activities of specialized UN transport fora;

Recommended actions to promote safer roads and the use sustainable modes of transportation.

Promote environmentally sound, safe, accessible and affordable quality modes of transport, particularly public and non-motorized transport, as well as safe intermodal integration, as a means to improving road safety, social equity, public health, urban planning, including the resilience of cities and urban-rural linkages, and in this regard take into account road safety and mobility as part of the effort to achieve sustainable development;
Adopt, implement and enforce policies and measures to actively protect and promote pedestrian safety and cycling mobility, such as pedestrian walkways and bicycle lanes and/or tracks, adequate lighting, speed cameras, road signs and road marking, with a view to also improving road safety and broader health outcomes, particularly the prevention of injuries and non-communicable diseases;

Establish and enforce adequate safe speed limits supported by appropriate safety measures such as road signs, speed cameras, and other speed restricting mechanisms, in particular around schools and residential areas, to ensure the safety of all road users;

Encourage efforts to ensure the safety and protection for all road users through safer road infrastructure, especially on highest risk roads with high rates of crashes, involving both motorized and non-motorized modes of transport, through a combination of proper planning and safety assessment, design, building and maintenance of roads taking into consideration the country’s geography;

Encourage the United Nations Conference on Sustainable Urban Development and Housing (Habitat III), taking into account that the majority of road deaths and injuries take place in urban areas, to give appropriate consideration to road safety and access to safe public transport and non-motorized modes of transport in the future New Urban Agenda;

**Recommended actions to protect vulnerable road users**

Urge States to promote, adapt and implement road safety policies for the protection of vulnerable people among road users, in particular children, youth, older persons and persons with disabilities, in line with relevant UN legal instruments, including the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities;

Take appropriate measures to ensure persons with disabilities and other users with reduced mobility, on an equal basis, access to the physical environment of roads and surrounding areas and to transportation, both in urban and in rural areas;

Fully integrate a gender perspective into all policy-making and policy implementation related to mobility and road safety, especially in roads and surrounding areas and public transport;
Encourage States to develop and implement comprehensive legislation and policies on motorcycles, including training, driver licensing, vehicle registration, work conditions, and the use of helmets and personal protection equipment by motorcyclists, given the disproportionally high and increasing numbers of motorcycle deaths and injuries globally, particularly in developing countries;

**Recommended actions to develop and promote the use of safer vehicles**

Promote the adoption of policies and measures to implement United Nations vehicle safety regulations or equivalent national standards to ensure that all new motor vehicles meet applicable minimum regulations for occupant and other road users protection, with seat belts, air bags and active safety systems such as anti-lock braking system (ABS) and electronic stability control (ESC) fitted as standard;

Encourage national action and international cooperation to ensure that issues of road safety, air quality, and vehicle disposal for both individual and public transportation, are addressed with respect to second hand vehicles;

**Recommended actions to increase awareness and build capacity of road users**

Develop public policies to decrease work-related road traffic crashes, with the participation of employers and workers, in order to enforce international standards on safety and health at work, road safety and adequate road and vehicle conditions, giving particular attention to the issue of professional drivers’ work conditions;

Increase awareness of road safety risk factors, protection and prevention measures and implement multi-stakeholder advocacy actions and social marketing campaigns, that emphasize the importance of the interrelation between road safety and a healthy lifestyle;

Develop and implement comprehensive, inclusive and evidence-based educational and training programmes, on a life-long learning and testing basis, to stimulate responsible behavior of all road users with a view to creating a peaceful road and social environment, as well as awareness of risk factors;
Recommended actions to improve post-crash response and rehabilitation services

Strengthen pre-hospital care, including emergency health services and the immediate post-crash response, hospital and ambulatory guidelines for trauma care, and rehabilitation services, through the implementation of appropriate legislation, capacity-building and improvement of timely access to integral health care, and request WHO to support Member States in their national endeavors;

Provide early rehabilitation and social reintegration, including in the world of work, to injured people and persons with disabilities caused by traffic crashes and comprehensive support to victims of road traffic crashes and their families;

Recommended actions to strengthen cooperation and coordination towards global road safety

Invite governments and road safety agencies to continue and enhance their activities of international cooperation in order to share best practices, and lessons learned, transfer knowledge, promote access to innovative and sustainable technologies and build capacity, in line with the Global Plan for the Decade of Action for Road Safety 2011-2020 and the 2030 Agenda for Sustainable Development;

Invite all relevant stakeholders and especially the donor community to scale up funding for road safety and to explore innovative funding modalities to support global, regional, national and local-level research and policy implementation;

Encourage the WHO, in collaboration with other United Nations agencies and United Nations regional commissions, to facilitate, through the existing mechanisms, a transparent, sustainable and participatory process with all stakeholders to develop national, regional and global targets to reduce road traffic crashes and fatalities, and to engage in the process that will lead to the definition and use of indicators for the road safety-related Sustainable Development Goal (SDG) targets; Invite the United Nations General Assembly to endorse the content of this declaration.
**Brasilia Declaration on Road Safety**

- High-Level Road Safety Conference in Brasilia in November 2015
- Indian delegation led by Minister Gadhkari
- Confirmed the goal of *halving road fatalities by 2020* as part of UN Sustainable Development Goals adopted in September 2015
- India has a big role to play:
  - 11% of all global road traffic fatalities occur in India.
  - Without at least halving fatalities in India by 2020, it is unlikely the SDG goal on road safety for 2020 will be met on global scale.

**Growing problem in India**

- In the last 10 years (2005-2015) road deaths increased by 53%
- Continuing motorization - number of vehicles doubled in less than 10 years & continues to grow rapidly
- In 2015 – about 146,000 people killed on Indian roads
- More than half killed on the roads - Vulnerable Road Users (motorcyclists, pedestrian, bicyclists)
- 54% of fatalities – young people 15-34 years old

**Success stories**

- Some of the countries were able to achieve drastic reduction in fatalities
- Key success factors:
  - Political commitment
  - Establishment of independent and fully empowered lead agency
  - Targeted programs focused on key risks
  - Strong enforcement coupled with education aimed at behavior changes
Approach

- Lay down foundation for delivery of results (immediate term)
- Identify high-priority quick-win measures to achieve results by 2020 (short to medium term)
- Start the key initiatives expected to bring results in medium- to long-term

Laying foundation

- Set up management model for delivery of road safety program - empowered institutional arrangements:
  - Oversight mechanism – National Road Safety Council
  - Lead Agency/Secretariat – with dedicated full-time staff
  - High-powered working group with federal and state executives
  - Expert advisory panel with Indian and international road safety experts
- Set up a robust legal and regulatory framework
- Identify priorities and target actions
- Prepare strategy and agencies delivery accountability
- Put resources in place
- Prepare federal and states action plans
- Develop key agencies partnerships (road agencies, police and health)
- Monitor and evaluate progress

Short-term (2020 goal):

*High Priority Areas for quick gains*

- Targeted infrastructure safety improvements
- Interventions focused on behavior change (through regulation, enforcement and education)
- Speed
- Helmets
- Seatbelts
• Drunken-driving
• Improving safety of Vulnerable Road Users
• Motorcyclists
• Pedestrians
• Improving emergency response and trauma care

**Short-term (2020 goal):**

*Targeted infrastructure safety improvements*

• Identify 10% of NH and SH network with highest risk (high speed, high volume, fatal and serious crashes)
• Targeted road safety engineering programs,
• Going away from just blackspots towards corridor and network safety programs
• Speed management (direct relationship between speed and risk of death or serious injury. A 5km/h increase in mean travel speeds results in an increase in deaths of over 20%)
• Review of speed limits, speed calming measures on high-speed sections in urban and built-up areas
• Address safety of motorcyclists and pedestrians
• Segregation from heavy vehicle traffic, motorcycle lanes, safe pedestrian crossings and footpaths, redesigned intersections)
• Integration of safety in design and operation
• Requirement of strong safety expertise at design stage, not just reliance on Road Safety Audit stricter requirements for concessionaires and contractors

**Short-term (2020 goal):**

*Interventions focused on behavior change*

• Mobile and proactive **highway police**
Focus on prevention of crashes by enforcing key risky behaviors

Highly visible, increase public perception of detection

Intelligence driven –enforcement in high offence/crash areas

Coordinated with well designed and consistent education/media campaigns

Post-crash response and care

Improvement of emergency response/ambulance services and triage

Improvement of incident management on national highways

Training of first responders

Strengthening trauma facilities in the hospitals (including staff)

Strengthening rehabilitation services and facilities

Improving insurance schemes

Approach

Lay down foundation for delivery of results (immediate term)

Identify high-priority quick-win measures to achieve results by 2020 (short to medium term)

Start the key initiatives expected to bring results in medium- to long-term

Medium to long-term:

High Priority Areas (to be started now)

Enhancing effectiveness of crash data and analysis system- development of comprehensive crash database

Enhancing effectiveness of driver licensing and vehicle registration systems

Driver licensing – focus on novice drivers
• Improving vehicle standards
• Improving standards and codes related to safety of road infrastructure
• Strengthening Research & Development institutes at federal and state levels
• Building a cadre of professional road safety specialists – curriculum in universities, professional retraining, accreditation programs.

**Funding**

• Identify funding requirements and sources
• In addition to funding high-priority interventions, fund capacity building, training and professional development
• Develop business cases for funding
• Co-financing schemes – matching federal and state funding to help states deliver results

**State based delivery platform**

• Set up a funding mechanism with co-financing from the central government
• Involve Multi-lateral Development Banks
• States eligibility for funding based on
• Developed action plans to deliver results on priorities identified in the National Strategy through
  o Targeted infrastructure improvements
  o Enforcement
  o Emergency response and trauma care improvement
  o Education and promotion
• Setting up road safety management mechanism for delivery of this program
3.2.2 World Bank

3.2.2.1 Initiative Taken by World Bank on Road Safety

Road Safety: A Call to Action

Each year road traffic crashes kill an estimated 1.3 million people and injure another 50 million worldwide, a toll greater than deaths from malaria and tuberculosis. Ninety percent of road fatalities occur in low and middle income countries where the improved economic outlook is prompting rapid motorization. In many countries, road traffic injuries are one of the top three causes of death for people aged between 5-44 years who lose healthy and productive life to death or disability.

In April 2011, the UN launched the Decade of Action (2011-2020) on Road Safety. The goal is to reduce the forecast 2020 level of road deaths by 50 percent, from 1.9 million to fewer than one million a year. During the Decade, UN member states are called upon to implement road safety activities, particularly in the areas of road safety management, road infrastructure, vehicle safety, road user behavior, road safety education and the post-crash response.

“The World Bank is committed to supporting the UN Decade of Action on Road Safety,” said Jose Luis Irigoyen, the Bank’s Director for Transport, Water, and Information and Communication Technologies. “If we all join forces to meet the 2020 goal we can save up to five million lives and prevent 50 million serious injuries.”

Global Partnership

The Global Road Safety Facility (GRSF), which aims to generate increased funding and technical assistance for road safety activities in low- and middle-income countries, is the focal point for road safety at the World Bank.

The GRSF animates the Multilateral Development Bank (MDB) Road Safety Initiative, through which the World Bank and six other MDBs are collaborating to improve road safety and raise awareness of the Decade. The initiative calls for an integrated Safe System approach that promotes shared
Mainstreaming Road Safety in Bank Operations

Since its creation in 2005, the GRSF has helped the Bank move from a piecemeal approach to road safety to a more comprehensive, Safe System approach in its operations. This approach brings together all concerned sectors, in particular transport and health, to establish a strong policy and results framework leading to improved sustainability on the ground.

For instance, in Europe and Central Asia (ECA), the GRSF has sponsored road safety capacity reviews in many countries and the Bank is now supporting not only nationwide projects but also road safety corridors that incorporate institutional strengthening, for instance in Azerbaijan, Georgia, and Kazakhstan.

“When we started working on road safety we only focused on remediation for black spots, but now the corridor approach is having more impact,” explained Henry Kerali, the Bank’s Transport Sector Manager for ECA. “Regional awareness has improved and speed patrols, policing, and safety audits in road design are all well advanced. The Safe System approach is a priority in all road infrastructure projects for the foreseeable future.”

In Latin America and the Caribbean (LCR), the Argentina Road Safety Project, which benefits from a $30 million IBRD loan, is considered a model of the Safe System approach. The program aims to reduce road traffic injuries and fatalities by strengthening the country’s institutional framework and management capacity for road safety. The GRSF funded the initial capacity review for this program.

“The Argentina road safety project benefited from high-level political support and has already led to a substantial reduction in road crashes,” said Aurelio Menendez, the Bank’s Transport Sector Manager for LCR. “It offers a
model that other countries can learn from and adapt to their specific institutional and transport sector context.”

The Bank, the GRSF, and other partners are also supporting regional road safety initiatives. These include the 2nd African Road Safety Conference in Addis Ababa in November 2011, which led to the endorsement of the elaboration of a Road Safety Charter for Africa by African transport ministers. Another example is the creation of a road safety observatory for Latin American countries, based in Buenos Aires, which will help improve data collection and information on road traffic crashes. The Bank also has a road safety policy for its staff which aims to assist them in mitigating road safety risks faced in the course of their work.

The Global Road Safety Facility (GRSF), a global partnership program administered by the World Bank, was established in 2006 with a mission to help address the growing crisis of road traffic deaths and injuries in low and middle-income countries (LMICs). GRSF provides funding, knowledge, and technical assistance designed to scale-up the efforts of LMICs to build their scientific, technological and managerial capacities. Since its inception, the GRSF has operated as a hybrid grant-making global program, allowing it to distribute funding externally for global, regional and country activities, and internally through World Bank-executed grants, which enhance the work of the World Bank’s transport global practice and leverage road safety investments in transport operations in client countries.

The Global Road Safety Facility has three main objectives, which are detailed in the Strategic Plan for 2013-2020.

Requests for support are received on a rolling basis and evaluated against the facility’s objectives, along with the project’s ability to positively affect road safety outcomes at the city, country, and/or regional level. Written government endorsement accompanying these requests guarantees stronger country ownership, favors more sustainable outcomes, and provides a greater possibility for additional road safety investment in the client country.
3.2.2.2 Examples: Kerala State Transport Project, Road Accident Data Management System (Tamilnadu), Rajasthan Road Sector Modernization Project

Kerala

The objectives of the Kerala State Transport Project (KSTP) for India are:

(a) To improve traffic flow and road safety on the state's primary road network, and

(b) Strengthen institutional and financial capacities of the key transport sector agencies.

The changes, involving modifications in project outcome indicator targets, will constitute a first order project restructuring. The restructuring is aimed towards partially mitigating the loss of time and cost savings benefits arising from exclusion of the second phase corridor improvement works. Moreover, through the restructuring, the project development impact can be extended by bringing in additional 200 km of primary road network under improved periodic maintenance and safety management framework.

Tamil Nadu

The development objective of the Second Tamil Nadu Road Sector Project for India is to increase road capacity, enhance quality of maintenance, improve safety, and support institutional development of Tamil Nadu's core road network (CRN). The project comprises three components. The first component, network improvement will support the up gradation and or maintenance of selected roads within the state's core road network in two phases. The second component, institutional capacity enhancement aims to implement the institutional capacity enhancement plan (ICEP) developed by the highways department (HD) and approved by Government of Tamil Nadu (GoTN). The third component, road safety will support achievement of improved road safety, at two levels, in line with the recommendations of the recent review of the state's road safety management capacity.
Rajasthan

The development objective of the Rajasthan Road Sector Modernization Project for India is to improve rural connectivity, enhance road safety, and strengthen road sector management capacity of the state of Rajasthan. The project has three components. The first component is rural connectivity improvement. This component will support construction of about 2500 kilometer (km) rural roads to provide connectivity to about 1,300 revenue villages with population between 250 and 499 people in the areas of the state not covered by Pradhan Mantri Gram Sadak Yojana (PMGSY) and introduce good practices of cost effective low volume technologies. The second component is road sector modernization and performance enhancement. This component will support implementation of a road sector modernization plan (RSMP) in the following key areas: improved policy framework; modernization of engineering practices and business procedures; sustainable asset management; institutional and human resource development; preparing a pipeline of feasible projects for implementation; and enhancing governance and accountability in public works department (PWD). The third component is road safety management. This component will support the strengthening of road safety management systems in Rajasthan with the objective of reducing the number of fatalities and serious injuries from traffic accidents in the state.

3.2.3 International Road Federation

We assist countries in progressing towards better, safer and smarter road systems. We develop and deliver world-class knowledge resources, advocacy services, and continuing education programs, which together offer a global marketplace for best practices and industry solutions. We serve a wide range of member organizations from both the public and private sectors of the road and transport industry. Together, we form a global network for information exchange and business development. We invest in the next generation of transport leaders. Since 1949, the IRF has awarded educational scholarships to individuals in 119 countries to pursue careers in the road and transport industry.
Our Vision: Better Roads. Better World. We believe that well-planned, safe, accessible and environmentally sound road networks are fundamental building blocks for human and economic development. We are committed to increasing road and transport investments to meet the demands for safe and efficient travel and flow of goods and services to help improve the lives of people worldwide. We engage with governments, development institutions, businesses, and academia around the world to make our vision a reality.

Our Organization: A Global Federation. The International Road Federation welcomes members from government, academia, road associations, research institutes, and private industry. We are a global not-for-profit organization, headquartered in Washington, DC since 1948 and supported by regional offices throughout the world.

The IRF serves a network of public and private sector members in more than 70 countries by providing world-class knowledge resources, advocacy services, and continuing education programs which together offer a global marketplace for best practices and industry solutions.

The International Road Federation does not recognize any legal affiliation, or programmatic collaboration, with the IRF Geneva Programme Centre or its chapter in India.

Key IRF Milestones

- 1948: IRF is chartered in Washington DC
- 1949: First IRF Fellowships awarded
- 1952: 1st IRF World Meeting
- 1954: Establishment of the International Road Educational Foundation
- 1975: IRF begins accepting Governments as Full Members
- 1988: IRF congratulated by 40th US President Ronald Reagan
- 2001: Establishment of the Global Road Achievement Awards
- 2006: 1st IRF Latin America Regional Congress
• 2009: 1st IRF Middle East Regional Congress
• 2011: 1300th IRF Fellow enters the Fellowship Program
• 2011: 1st IRF Caribbean Regional Congress
• 2013: 17th IRF World Meeting & Exhibition in Riyadh attracts delegates from 82 countries
• 2014: Launch of the IRF Examiner
• 2014: 100th GRAA presented
• 2014: 1st IRF Africa Regional Congress
• 2014: 1st IRF Asia Regional Congress
• 2015: 1st IRF Europe & Central Asia Regional Congress
• 2016: Ended unification efforts with IRF Geneva and established IRF Global

3.2.4 Global Road Safety Partnership

The non-profit Global Road Safety Partnership was formed in 1999. Our members are leading multi- and bi-lateral development agencies, governments, businesses and civil society organisations.

Hosted by the International Federation of the Red Cross and Red Crescent Societies, we are governed through a constitution approved by a Steering Committee of our members.

Our role is to create and support multi-sector road safety partnerships that are engaged with front-line good practice road safety interventions in countries and communities throughout the world. We play a powerful role incapacity building and training of road safety practitioners, engage actively in advocacy at all levels, provide road safety programme coordination at the global level and are a recognised expert source of road safety knowledge and good practice.

The Global Road Safety Partnership Secretariat is based at the headquarters of the International Federation of Red Cross and Red Crescent.
Societies (IFRC) in Geneva. The Secretariat is led by a Chief Executive, who has overall responsibility for all operational activities of the Partnership. We also have staff based in China, Vietnam, Cambodia, Thailand, Australia, Brazil, Mexico, Russia, South Africa and Lebanon.

Our Management Team works with the CEO to plan the activities. The Management Team prepares an annual business plan and strategy, which is discussed and approved by the Executive Committee. The plans are then carried out by the whole Global Road Safety Partnership team.

Our work is organised into five geographical areas: Asia, Americas, Europe, Africa, and the Middle East and North Africa (MENA) regions. Within each region there are a variety of ways in which our Global Road Safety Partnership team helps partnerships to achieve improvements in road safety.

The common element of all these methods is that we always work with government, business and civil society groups in order to support the national, regional or local Road Safety Plan.

The International Federation of Red Cross and Red Crescent Societies (IFRC) is one of three components of the International Red Cross and Red Crescent Movement – the world’s largest humanitarian organization, providing assistance without discrimination as to nationality, race, religious beliefs, class or political opinions.

The other two components are the 189 National Societies and the International Committee of the Red Cross.

Founded in 1919, the IFRC supports the 189 member Red Cross and Red Crescent National Societies, through a secretariat in Geneva and more than 60 delegations around the world.

Together with members and collaborating partners, GRSP has developed a programme of high profile, capacity building and knowledge sharing events in the Asia and Africa regions. Since 2007, nine such events have been held in Asia and since 2012, five such events have been held in Africa.
They have become flagship events on the road safety calendar and reach out to a diverse body of road safety stakeholders representing:

- Key government ministries
- National lead agencies
- Development banks
- Road policing agencies
- Private sector organizations
- A broad range of road safety focussed civil society organizations.

The 14 events held in 10 countries have now seen more than 2100 road safety practitioners from over 50 countries participate to share knowledge and professional experiences, discuss successes and challenges, showcase good practice and build strong regional networks where previously few had existed.

These events also provide an important stage for GRSP members to promote their regional good practice and demonstrate leadership in road safety and the power of collaborative action.

GRSP is also an organizing partner to the ‘Roads Between Us’ conferences looking at work-related road risk.

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