

Significance of Road Safety: Challenges and Prospects

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Abstract

This article explores the underlying dynamics of road safety as a global dilemma. It sheds light on Pakistan's current infrastructure and road safety interventions. It presents a multifaceted approach regarding the intricacy, sustainability, and enactment of road safety concerns witnessed in the country. Overall, a comprehensive illustration of road safety assessment and transport management has been discussed in the light of government guidelines. The role of government and provincial transportation authorities has been defined considering the institutional setting, infrastructure, maneuverability, statutes, policies, and commuters' perspectives. Furthermore, pressing needs for reforms at the institutional, operative, and physical levels have been highlighted in view of policymakers and vehicular users. Methodology used to conduct this study is mixed employing both qualitative and quantitative methods. The focal point of this study signifies countermeasures and renovation in national and provincial traffic monitoring by the authorities and reasonable law enforcement along with enactment of road safety-related proposals.

Keywords: Accidents, Highways, Motorways, NHMP, Public Perception, Road Safety, Violations

Introduction

This fast development community is built on the concept of interaction and has transformed the living dynamics questioning the importance of means of transportation. Irrespective of distances and destinations, private vehicles or public transport is becoming prevalent for day-to-day commute. Historically speaking, the ownership of cars was once considered a luxury whereas now its necessity cannot be overlooked. While some people enjoy driving, most of them drive out of necessity as automobiles have become the workhorse of the century. Currently, 4.2 trillion cars are registered worldwide thus the importance of cars is self-evident (Cars are a necessity not a luxury, 2020).

The notion behind vehicles is to act as a connector among people, places, and destinations. The transport department of a country is an integral factor of

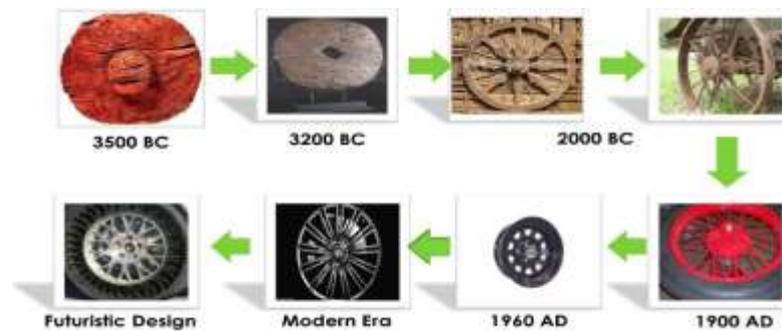
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infrastructure aiming to build a strong and wide-ranging community resulting in surging economic growth. For a better understanding of road safety vision, a comprehensive appraisal of deep-rooted, up-to-date, and prospective aspects needs to be reviewed.

To understand the concept of road travel, a brief appraisal of ‘the thing that started it all’ needs to be addressed. The wheel is a breakthrough invention first witnessed in 3200 B.C. It was first used for transportation (Mesopotamian chariots) and before the first wheel, rollers were required to move objects (Krishna).

Fig. 1: The evolution of wheel



Source: Krishna, R. (n.d.). *Invention of Wheel*.

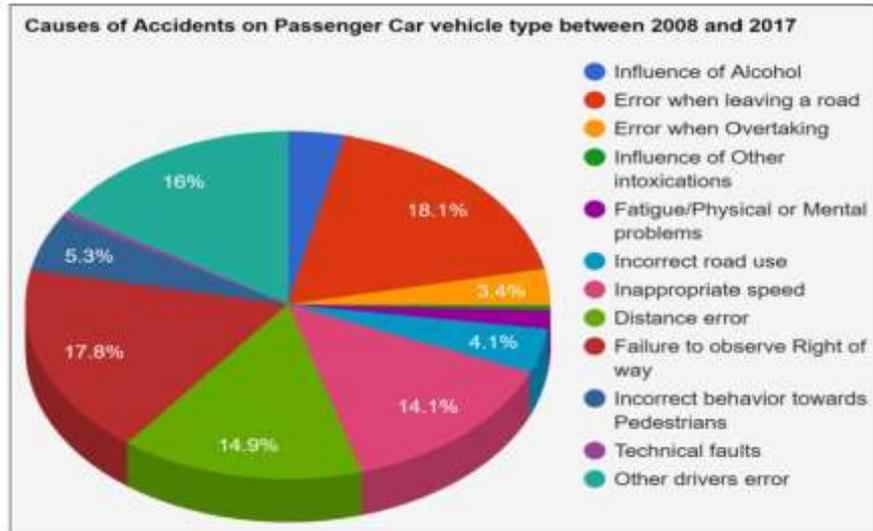
An accident is defined as a scenario in which two or more vehicles come in forceful contact with each other, pedestrians, animals, or other objects while driving, resulting in an insignificant or a major crash. Accidents are a cause of property, vehicle, and physical damage and may even cause death if transpired on a large scale. Motor vehicle collisions result in unfathomable temporary or perpetual disability and injury with substantial financial damage to life and property. Because of this, road travel is still known to be one of the dangerous modes of transport as casualties occur daily (Preske, 2017).

According to WHO Advisory Group, an accident can be defined as an ‘unintended event resulting in recognizable damage or occurrence in a sequence of events, which usually produces unpremeditated injury, death, or property damage’ (Road Safety: Basic Facts).

Known Grounds of Road Accidents

Traffic accidents are caused either because of human error or factors leading towards collisions (Common Causes of Car Accidents, 2020).

Fig. 2: Causes of Accidents on Passenger Cars (2008-2017)



Source: Khaliq KA, Chughtai O, Shahwani A, Qayyum A, Pannek J. (2019).

Fig.2 further explains that over speeding, distracted minds, lack of sleep, recklessness, unfavorable weather conditions, road rage, tailgating, less or zero visibility, noncompliance with traffic lights and other guidelines, and mechanical shortcomings in the vehicle as some of the common causes of accidents (Khalid, Chughtai, Qayyum, Shahwani, & Pannek, 2019).

Every year, innumerable lives are lost on the road. This raises serious uncertainties and concerns on road safety as it has now become an integral matter for most nations. To save lives, it is important to teach and raise awareness programs particularly young drivers as they embark upon this new journey. According to the National Safety Council, there were over 30,000 fatal crashes in 2019 alone, resulting in a total of 32,675 deaths. This number should be reduced to save families from potential trauma predominantly by focusing on road safety (The Importance of Road Safety & How To Remain A Safe Driver As You Age).

Fig. 3: Road Safety Guidelines



Road Safety

Road traffic safety refers to the methods and measures used to prevent road users from being killed or seriously injured. It constitutes calculated and systemic initiatives by the public and private sectors. Government and nongovernmental authorities launch policies, programs, and agendas to support and maintain travelers' safety on the highways and motorways. This scheme is required and expected so as to cater to the ever-increasing vehicular population on the road and to methodically address the drastic rise in accidents (Maqbool, Sethi, & Singh, 2019).

Road safety is therefore the act of preventing minor and major car crashes and conditions by welcoming preventative measures. In a nutshell, the concept behind road safety is to ensure maximum safety for the drivers of different vehicles, motorbikes, and other modes of transportation. It entails respecting and acknowledging road safety guidelines, instructions, and dictation whether driving on two, four, multi-wheel, or as a pedestrian.

Development in road safety technologies is linked to the reduced likelihood of road collisions. New technologies such as intelligent speed adaptation and collision avoidant systems are expected to lower the rate of accidents by 40% (Road Safety: Impact of New Technologies). Fatalities are likely to inherently shrink with seat belt detection technology as unbelted drivers are more prone to be a part of irreversible incidents. Technology, therefore, acts as a cost-effective liaison to target the remainder of unbelted drivers and downgrade fatality statistics.

To reduce the detrimental and life-threatening effects of unsafe driving, a proactive technology-oriented attitude is gradually becoming mainstream to highlight casualty and injury statistics. Although some form of technology may render facilitation during driving tasks conceivably making it safer, other technologies such as smartphones can be befuddling and have an unfavorable outcome on safety. Consequently, inculcation of technology by high-income countries has led to 7% of road traffic deaths out of 40% of the world's vehicles (Global Status Report on Road Safety, 2018).

Reports by the World Health Organization verify that, on average, traffic collisions kill 1.25 million people, making it to nearly 3400 road casualties per day and injuring up to 50 million. The detrimental effects collected from traffic injuries depend on the development status of a respective country. This proves that low- and middle-income countries (LMIC) where the communication channel and infrastructure is already questionable are hit harder than others, thus increasing the probability of casualties. As per WHO, 90% of all traffic casualties occur in LMIC. "This rate is less than 9% in high-income countries (HIC) but averages

around 20% in LMIC, with the African region demonstrating the highest rate (26.6%). While road safety trends have been positive in HIC over the last few decades, trends in LMIC are not telling a positive story as road fatalities are expected to increase to almost 2 million road fatalities per year by 2020” (Wegman, 2017).

Status of Road Accidents in Pakistan

With massive urbanization and interprovincial movement at its peak, local highways are mostly seen jam-packed with vehicles. Holding the status of an already developing country, with more than 221 million population, the infrastructure is questionable with prospects of development in terms of road safety, and technological dynamic associated with it. The country is still paving its way towards economic surge and sustainable development, but there exists a lack of respect for traffic laws and road signs directed and aimed at drivers and passengers.

As far as transportation engineering is concerned, highway and road safety constitute one of the integral aspects. Traffic collisions are unavoidable but challenging for developing countries such as Pakistan where new dimensions of safety challenges and predicaments keep surfacing. Because of these challenges, safety management is the top priority for law enforcement and traffic enforcers demanding an exhaustive study and evaluation of safety concerns particularly due to high-speed dynamics.

If we look at Pakistan, our total population is 221 million, a total road network is 493,088 kilometers and total registered vehicles are 14.6 million. In the year 2020, 242,852 units of cars were produced which is 665/day, whereas 2,231,340 (2&3 Wheels) were sold which is 6,100/day. On average, 5000 vehicles increase each day on the main highways (National Highway Authority).

There are 15 police departments in Pakistan, with a force of 450,000 personnel, who are manning 1974 police stations and registering around approx. 9 ½ lac FIRs in years. Road accidents are a leading cause of injuries, deaths & disabilities in Pakistan. According to the Federal Bureau of Statistics, during the year 2020, 9,701 accidents occurred. In which 5,436 persons died and 12,317 received injuries. Analysis shows that on average 24 accidents occurred and 15 persons were killed daily in road traffic accidents. As per the WHO 2018 report, every year in Pakistan around 30,046 people die on roads due to traffic accidents. (WHO Road Safety Report, 2018)

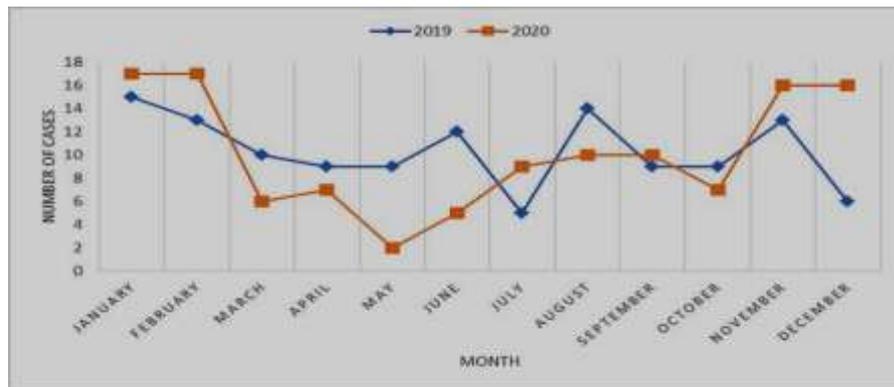
If we analyze the causes of accidents, we observe that on Motorways and Highways the major causes are:

Table 1: Analysis of Road Accidents in Pakistan

Motorways		Highways	
Dozing at wheel	29%	Careless driving	30%
Careless driving	27%	Improper pedestrian crossing	8%
Tyre burst	13%	Dozing at Wheel	7%
Over speeding	4%	Improper U Turn	7%
Slippery road	4%	Slippery road	6%
Wrong Overtaking, Brake failure, Dense Fog, Improper U-turn etc	23%	Over speeding, wrong overtaking, tyre burst	41%

Source: (Khurshid, Sohail, Khurshid, Shah, & Jaffry, 2021)

Fig. 4: Analysis of Road Accidents in Pakistan



Source: (Khurshid, Sohail, Khurshid, Shah, & Jaffry, 2021)

Fig. 4 shows the yearly distribution and data of fatalities in 2020. The total number of fatalities is around 50.4% in 2020, because of pandemic lockdown, the casualties decreased to 35.6% as compared to the previous years. This directly resonates with the fact that population is directly proportional to accidents as with increased vehicles on the road, traffic management gets harder to manage. However, if drivers comply with the rules and respect the laws, and strict implementation is observed then this figure will undoubtedly fall with time to come (Khurshid, Sohail, Khurshid, Shah, & Jaffry, 2021).

These tragic incidents result in disability for more than 50,000 people further costing about 500 billion rupees in the overall maintenance of automobiles. This increases the cost of vehicle damage and hospitalization (Zaman, 2019).

Government Measures – National Road Safety Strategy

With the increased usage of cars, the need for developing rigid and impressive infrastructure is compulsory. Pakistan needs a system where motor vehicles can commute safely. This entails developing a key infrastructural foundation where roads act as an ultimate connection between destinations. Government and non-governmental authorities should redefine steps that need to be undertaken for the efficient achievement of visualized set targets.

To improve road safety on coast-to-coast, regional, and local roads of Pakistan, a National Road Safety Strategy (2018-2030) has been developed. The strategy has highlighted the fact that in Pakistan, every five minutes someone is killed or badly injured in a road accident, affecting in financial loss of 3 to 5 percent to Pakistan's GDP. This requires the government, industry sector, and the people of Pakistan to fundamentally change how we value and approach road safety (National Road Safety Strategy, 2018).

The vision of the strategy is to:

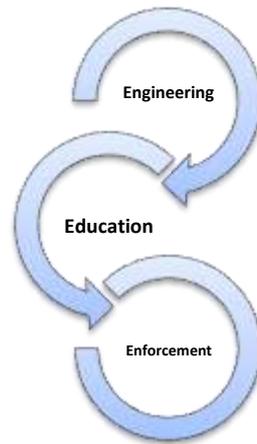
1. Save at least 6000 lives by 2030
2. Reduce 50% fatalities on Central Asia Regional Economic Corporation (CAREC) corridor
3. Lessen the number of multivehicle fatal collisions on Motorways and National Highways
4. Road safety performance objectives ranging from management, safe roadsides, safe speeds, safe vehicles, safe road users, and post-traumatic response.

The Pakistan National Road Safety Strategy 2018-2030 is based on the pillars of the first National Road Safety Plan for Motorways and National Highways 2017-2018 and expands its approach to accommodate multi road user groups on the highways. It calls for a prospective vision of road safety aspects by unfolding evidence-based practical outcomes to introduce safe approaches on the national, provincial, and regional levels (National Road Safety Strategy 2018-2030, 2018).

Accomplishing these objectives will require substantial determination to heighten the safety standard of roads, brace regulation, and implement an approach for safer vehicles. This is expected to improve driver, traveler, and pedestrian relationship and defiance with road traffic laws to construct a culture of security and welfare. Under this agreement, road safety is a mutual societal duty

and each one of us must do more to protect our communities from death and significant injury (National Road Safety Strategy , 2018).

Fig. 5: Pillars of Road Safety (3Es)



Pillars of Road Safety

Road safety revolves around three E's. The three pillars of road safety ensure a safe driving experience with the right impartment of insights and correct enforcement of the law. In Pakistan, the Ministry of Communications is overall responsible to properly address 3E's.

National Highway Authority (NHA) is responsible for the 1st E i.e., Engineering of National Highways and Motorways. It *plans, designs, promotes, organizes constructs, repairs/maintains, provisions, and maintains* road furniture on National highways and Motorways. NHA is the upholder of 39 national highways/ motorways/ expressway/ strategic routes having a total length of 12,131 km (National Highway Authority). It is 4.6% of the total national roads network i.e., 493, 088km; however, it carries 80% of commercial traffic, and N-5 which is the bloodline of Pakistan carrying 65% of this load in the country.

National Highways & Motorway Police (NHMP) is responsible for the other two E's i.e., Education and Enforcement. NHMP is a service delivery organization and was established in the year 1997. NHMP is governed under National Highway Safety Ordinance (NHSO-2000). The mandate of the force is to *help, educate and enforce with honesty, courtesy & gallantry* as their core values (National Highways Safely Ordinance 2000).

NHMP started its operation from Islamabad to Lahore (Motorway M-2 365 kilometers). Policing on N-5 (GT Road) was entrusted to NHMP in 2001 and the department was renamed as “National Highways & Motorway Police”. It is now policing 4,193 kilometers of Highways & Motorways and will take over 4,722 kilometers of additional road in near future. The vision of NHMP is to: “Ensure a safe and secure driving environment on National Highways & Motorways.” The mission is to “Promote safety on Motorways and Highways through effective enforcement and provision of assistance to road users by applying highest standards of courtesy, integrity, and professionalism.”

An interesting comparison is as under:

- i. The comparison shows that in the year 1997 the total registered vehicles were 3.24 million, however the same has now reached 14.6 million in 2021.
- ii. The population of Pakistan which was 131 million is now 221 million.
- iii. The total strength of NHMP which was 637 personnel in 1997 is now 8,696 personnel.

However, the budget granted in the year 1997 was 220 million and in 2021, the budget allocated is Rs. 8,786 million. The operational area of NHMP has increased from 365 kilometers to 4,193 kilometers (Government of Pakistan Ministry of Communications Islamabad, 2019-2020).

Moreover, NHMP is managing on average 1.4 million traffic volume per day. NHMP intends to ensure that road users on Motorways & Highways should follow traffic laws. Briefing and strict enforcement are used as a tool to ensure safety. Consequently, on average NHMP is issuing 40,000 challans per day. It has introduced an E-Ticketing system. This system has enabled the patrolling officers to launch challan electronically through a hand-held device linked with a central data server.

Table 2: Some major violations on Highways and Motorways

Violation Code	Detail of Code	Percentage
• B61	Other violations listed in part (i) and (ii) of the eighth schedule i.e. seat belt, use of mobile phone, weak tyres etc	23%
• B56	Improper Lane usage (lane straddling)	12%

•	B43	Driver of motorcycle without safety helmet	9%
•	B41	Obstructing traffic	7%
•	B39	Improper loading of goods	7%
•	A24	Overloading of goods 15 % in excess of permissible limits	7%

Other major violations are careless and reckless driving, overtaking where prohibited, exceeding speed limits by less than 40 KM/H, and driving without a permit. Overall, NHMP believes in strict and equal enforcement of rules on the highways to regulate traffic inflow. The organization promises to adhere to the basic ideologies of honesty, courtesy, and swift assistance on motorways and national highways ('NHMP strictly enforcing laws on highways', 2021).

To ensure the safety of commuters, NHMP arranges regular meetings with District Police and notables of adjacent villages/deras. Due to combining efforts with District Police, hundreds of criminals have been arrested. Through coordinated efforts with Anti Car Lifting Cell (ACLC), NHMP has recovered 398 stolen/snatched vehicles in the last five years. National Highways & Motorway Police has taken another initiative of issuance of driving licenses in line with international standards in Islamabad in June-2014. DLA has issued 37,834 driving licenses so far.

The establishment of DLA has not only provided for better drivers on the Motorways and Highways, but NHMP can also provide technical assistance to provinces to enable the district drivers licensing authorities to improve the testing standards.

Moving further, road safety awareness is an important and continuous component of NHMP. Several campaigns are launched regularly to bring improvements in lane discipline, over speeding, use of helmets and seat belts while driving, avoiding the use of mobile phones while driving, the fitness of vehicles and tires, etc.

Table 4: HMP imparts extensive road safety education to all segments of the society

Activities	Year 2021
Workshops	230
Walks	117
Seminars	354
Verbal Briefings	9.7 M

Mobile Education Unit:

Mobile Education Units (MEUs) is an effective method to educate the masses for attitudinal change. These units visit educational institutions, multinationals, bus/ van terminals, madaris, masjid, public and private entities, markets, public places, etc. and conduct seminars and workshops on road safety. The NHMP Mobile Education Unit briefed almost 17 million people regarding road safety regulations and traffic laws in the year 2021, aimed to protect lives and property. NHMP also guided private driving training schools for uniformity and integration among all levels (NHMP sensitized 17m people on road safety, 2021).

Table 6: Mobile Education Unit for Road Safety

Institutes	Visits in 2021
Madaris	917
Bus Terminals	656
Masajid	1,519
Toll Plazas	1,000

Challenges – As a Stakeholder

From the NHMP perspective some challenges are: long queue on toll plazas which can now be resolved by the introduction of M-tag; closure of motorways - fog/adverse weather; axle control implementation; fine enhancement and implementation; financial implications on the acquisition of latest gadgetry; poor cellular coverage on highways & motorways; less capacity and lack of strategic planning to accommodate increased traffic flow caused due to motorization and urbanization (Nasir, Nadeem & Véronneau, 2016); crime infested areas; climate-related extreme weather; mounting population and disciplining highway congestion.

Furthermore, with the addition of new roads and highways under the umbrella of NH&MP, challenges related to CPEC require emphasis. Accordingly, enhancement of the administrative milieu of the NH&MP as an organization is needed by introducing the 'best practices and introduction of technology (Chaudhry, 2018).

From the road user perspective challenges are poor road engineering or road condition; non-adherence of traffic laws or rules by commuters; lack of training of drivers; absence of safety indoctrination to peers and family

members; no centralized database; lack of standard infrastructure; lack of strict uniformity in adherence and implementation.

Moreover, the provincial road network authorities are demand driven and focused on construction rather than facilitating the users. Low functionality and lack of efficiency because mostly work is carried out by the department employees leading to bureaucracies and other non-developmental finances is taken up by monthly salaries. This ultimately limits the range of construction work. Outcomes are experience driven eventually being influenced because of subjectivity. Inadequate maintenance facilities and events of third-party interventions lead to poor road network.

Highways in Pakistan are further divided into federal, provincial, and municipal routes. Provinces and territories have their own authorities in charge of managing provincial and territorial network. Contrary to the national highways, the local road network entails lack of transport management by transportation department and enforcement by provincial authorities leading to capacity limitation and traffic congestion. Having said that, around 91% of the passengers and freight movement is performed via roads.

While national highways have experienced a substantial improvement, provincial highways need serious attention as they are permanently inaccessible or subjected to pitiable conditions. Provincial road network, district and urban roads requires an operational transport policy framework to address pressing issues such as traffic cramming, mismanagement, lack of toll tax, single lanes, unregistered/uninsured vehicles and unregulated heavy traffic.

Initiatives Taken by Authorities to Address Challenges

NHMP has achieved tangible improvements both in personnel skills and the overall performance of the department. Road Safety has been the primary focus. The ultimate goal is to make Pakistanis a disciplined and road safety-conscious nation. Some initiatives taken by NHMP related to human resources to achieve the goal are: new medical policy for NHMP employees has been approved and implemented; children of deceased/martyred employees of NHMP has been appointed through PM Package; for better management of the human resource, NHMP has developed and deployed human resource management information system; NHMP is facing an acute shortage of strength due to the opening of new roads. Recently NHMP sanctioned 3,957 new posts; during the last two years the recruitment of 1,345 uniformed and 1,233 non-uniformed staff has been completed, 1,188 Officers/officials have been promoted, capacity building courses have been imparted to 3,801 officers/officials.

Due to effective policies, NHMP reduced accidents ratio by 44% in 2021, leading to an 18% decrease in deaths and a 59% decrease in injuries in comparison with 2020. There is a noticeable improvement in road safety education by 36%. Traffic enforcement is increased by 83%. To help distressed road users, NHMP Helpline “130” is now Toll-Free. To improve the driving standards NHMP is working on accredited driving schools, development of NHMP foundation, mandatory insurance of vehicles, establishment of the center of excellence, establishment of satellite DLAs, staff and logistics for new roads, provision of safety gadgets in motor vehicles and legislation regarding transgender, minorities, axle load and fine enhancement.

Moving further, NHMP has taken initiatives regarding Information Technology including: installation of Body-worn cameras to ensure transparency; deployment of drones for surveillance and enforcement; tracker system for fleet management; establishment of National Data Repository of all drivers licensing authorities; PSV management system to ensure passenger safety; implementation of e-office ; social media outreach having Facebook followers – 250,000, Twitter – 100,000 and FM Radio – 24,000; development of performance audit system; implemented an E-ticketing system throughout the country; establishment of emergency response center; development of centralized vehicle registration System.

NHMP has also worked on due process. Five years Master Plan, five years Training Plan, Dress Regulations, Job description, Revision of SOPs including Performance Evaluation Report, Accident Handling and Motor Vehicles Management Policy have been prepared. Moreover, NHMP has acquired far-reaching North-South Motorway Link, fortifying East-West Connectivity i.e., Baluchistan, revitalization of Sick Mega Projects, off budget bankrolling and cost saving of Rs. 498.98 billion, contribution to GDP Growth i.e. 1.0% to 1.5%.

Way Forward

In order to guarantee effortless and efficient transfer of merchandise and travelers in a constructive environment, NHA has intended to work on China-Pak Economic Corridor (CPEC) and its progress, connecting Khunjab to Gwadar. This includes short, medium, and long-term projects and schemes with the introduction of segments of motorways across the country. ‘NHA is now constructing M-4 (Faisalabad- Khanewal-Multan) through the financial assistance of Asian Development Bank (ADB) & Islamic Development Bank (IDB) and Karachi-Hyderabad Motorway (M-9) on BOT basis’ (Yearbook Motorways, 2018).

The government should inculcate WHO road safety standard report to gauge current standing in terms of mechanisms, regulations, equipment, schemes, aptitude, and response. The WHO-based recommendations should be spread out across a diverse range of fields for maximum influence. NHMP should involve all concerned demographics in its operational efforts from cooperation, communication, and knowledge as these are the cornerstones of a successful national road safety program.

Institutional approach should be incorporating road safety as political agenda, providing adequate resources for the proper functioning of authorities with accountability, multidisciplinary approach for road safety; establish road safety plans occasionally catering to the change in environment and policies; safety advocacy groups; proper budgeting and increase in investment; establishment of data collecting as legislation and wise use of data to implement road safety; digitization of processes; management of infrastructure; intelligent enforcement System; establishment of NHMP “Safer Roads” Command & Control Center; reorganization of ranking structure and manpower.

It is recommended that a comparative study of different countries or cities should be performed regarding traffic accidents. Government should work on weak infrastructure areas of Pakistan. Drivers should be made to follow all rules and regulations. Rashness and absent-minded behavior must be deterred. Use of cell phone technology and smartphones should be dissuaded (Tabish, 2017).

The NHMP should launch rapid recruitment drives and awareness programs among the common public through seminars, workshops, and countrywide coverage of social interactive platforms such as FM Radio – 95. Alongside, students should be taught basic road-safety lessons in the academic syllabus to create awareness about the green cross code means which is stop, look, and listen, think and then cross, learning of traffic lights, understanding of road signs, etc.

Young drivers should be given lessons and basic awareness about the vehicle, defensive driving according to weather and road conditions, use of vehicle lights and horn, wearing a seat belt, appropriate use of vehicle mirrors, avoidance of over-speeding, understanding road lights, maintaining distance on road, a proper understanding of handling crisis, telecast of awareness documentaries on TV, should be highly encouraged (Tabish, 2017).

To revamp the provincial transport system, a viable and cost-effective plan should be formulated. A government introduced plan that extensively covers transport issues through institutional development, management preparation, infrastructure sponsoring, and maintenance should be announced. This will help in

lifting the road strength management, particularly for urban and district road options with a holistic planning approach. Furthermore, the introduction of M-tag similar to national highways will considerably help in overseeing the heavy and light traffic.

Provincial traffic enforcement authorities should work in alliance with transportation department and increase manpower, provide them with incentives, enhance driving license capacity, employ traffic enforcement cameras, number plate recognition system, and gadgets to monitor and administer traffic.

The reform agenda includes transforming institutions and provincial departments to assemble available funds leading to safe, controlled and comfortable transport network. This is possible with the help of improved governance, and the utilization of experience and performance-based assessment indicators employed and implemented by the traffic department and linked authorities monitoring local and highway traffic.

Conclusion

The highways are used for transportation of vehicles, personal and commercial, rendering a massive and viable set-up, shaping local and regional infrastructure. Since it is becoming highly critical, the traffic influx needs to be contained along with the outcome, which requires instant emphasis to avert traffic accidents. Overall, road safety management, groups, and authorities such as NHA and provincial traffic authorities should set new thresholds and enhance the current standard by upholding road safety agendas and initiatives.

Only trained drivers should be allowed to drive on highways and without official permits, drivers should be heavily fined with license suspension. Vehicles should be insured and registered prior to entering highways. This is doable only if revival in terms of quality training as per international standards for traffic enforcement are furthered and improved to cope up with new encounters including expansion in road network under national proposals.

Furthermore, an exchange of ideas at the national level among policymakers and citizens regarding the prominence of challenges is necessary. This involves stakeholders' interpretation to discuss, review, and analyze how transportation can progress to accommodate rising needs and adapt to changes in society, technology, environment, and public strategy. In addition, government branches should be able to share criminal data to introduce data policing for prompt and effective enforcement of traffic regulations and screening of suspicious vehicles.

In a nutshell, modern civilization is only achievable through extensive and reliable transportation systems. Efforts need to be introduced at government,

individual, and grassroots levels to transform the department and influence society and the environment in ways we cannot fully envisage but must be equipped to successfully manage. An established and mature road safety approach can be thus attained with an all-inclusive, multi-dimensional paradigm that emphasizes cooperation and positive reinforcement. This will naturally allow the authorities to look into proper implementation and management as safety policies to reduce fatal car crashes.

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