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Road Safety Performance Review
Zimbabwe

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Foreword

The recent global health situation revealed the relevance of road safety initiatives in crisis settings and the need to adapt our efforts. During COVID-19, mobility remains an essential service. Governments must still provide their citizens with affordable and safe transport including those with disabilities, frontline health care and other essential workers. Even as many people stay at home, cutting off mobility is not an option, particularly not in the developing world – where many people live on a "hands-to-mouth" basis. Transport will have to play a major role in economic recovery from the pandemic; public transport, for example, offers a low cost and safe mobility option for most of the urban population and particularly for the most deprived. As governments focus their attention on addressing COVID-19 in their countries, it is of utmost importance that other priorities, like road safety, are not scaled back.

The spread of the virus and the corresponding implications overlapped with an important event on the global stage: the third Ministerial Conference on Road Safety, held in Stockholm, Sweden in February 2020. The conference marked the ending of the first Decade of Action for Road Safety (2011-2020) as well as recognized the shortcomings to achieve a 50 per cent reduction in road traffic fatalities and injuries in that timeframe. Charting a way forward for 2030, the Stockholm Declaration called to establish a "Second UN Decade of Action for Road Safety" and to extend the Sustainable Development Goals (SDG) target 3.6 deadline to 2030. It called for an increase in global and national funding to the issue, encouraged accession to and better implementation of the UN Road Safety Conventions, highlighted the importance of improved data collection and expressed the urgent need to progress towards green and active modes of safe mobility. These calls for action were subsequently reflected in arguably one of the strongest United Nations General Assembly resolutions on Improving Global Road Safety (A/RES/74/299), adopted in August 2020.

Sustainable and vibrant transport systems can lead to long-term economic growth. If designed well, transport facilitates access to opportunities, education, medical services, and goods, and improves overall quality of life. Sustainable transport contributes to achieving many of our SDGs and human rights objectives. However, if all the relevant considerations are not taken into account, new roads and transport infrastructure yield the opposite result. This makes the crisis on the world's roads one of the most pressing development challenges of our time. Despite the lessons learned and resources accumulated through the first Decade of Action for Road Safety, we have achieved no decreases in the number of global annual road traffic deaths.

The global facts are menacing: 1.3 million people are killed every year from road crashes and millions more are injured. The majority of road traffic deaths occur in Africa. Therefore, as we begin the new Decade, accelerated and strategic action by stakeholders and governments is essential.

The core solutions to address road safety at the country level fall under the safe systems approach, which also considers improved management, safer roads, vehicles and road users, as well as better post-crash response; and include applying the UN Road Safety Conventions.

As the UN Secretary-General's Special Envoy for Road Safety, I am committed to supporting road safety performance reviews in Africa. The project assists developing countries in strengthening their management systems capacities and improving their national records. The Government of Zimbabwe requested support for carrying out a road safety performance review. It was conducted in partnership with the United Nations Economic Commission for Africa and the United Nations Economic Commission for Europe.

I am optimistic that this report will provide the Government and its partners with a detailed assessment of the road safety and management capacity situation in the country, and recommendations to be taken for stronger action in the next Decade.

Jean Todt
United Nations Secretary-General's Special Envoy for Road Safety

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Preface

The Ministry of Transport and Infrastructural Development of Zimbabwe requested support of the United Nations Secretary-General's Special Envoy for Road Safety to carry out a national Road Safety Performance Review (RSPR) for Zimbabwe. The support is provided through the United Nations Economic Commission for Europe (UNECE) and the United Nations Economic Commission for Africa (UNECA) as a global initiative to assist governments to strengthen road safety management capacities of developing countries. The review is conducted in five phases:

Phase I: A preparatory country mission was undertaken by the team representing UNECE and UNECA. The mission agreed with the Government of Zimbabwe on four priority support areas and timing of the review process:

(a) road safety management
(b) strengthening the capacity of the national lead agency
(c) creating a road crash database and improving road performance statistical indicators
(d) a post-crash care response and coordination system.

A national team was selected to carry out the review.

Phase II: Following approval of the initial report, the national team conducted fact-finding activities, including key stakeholder consultations and five pillar stakeholder review focus group meetings or workshops. The Global Framework Plan of Action for Road Safety, UNRSTF/AB/2018 (1) /4/ Rev.1 and UNRSTF/SC/2018 (1) /4/ Rev.1 was used to develop a review checklist to assess progress in the present situation and identify priorities in strengthening road safety management systems capacities and make recommendations.

Phase III: A draft report with conclusions and recommendations including priority interventions was submitted for joint review by both UNECE/UNECA and the Government of Zimbabwe through a national validation workshop feedback in Harare.

Phase IV: The final review of the report which is reflected in this consolidated final report was conducted by UNECE, UNECA and additional international experts.

Phase V: Official launch of the RSPR and capacity-building support offered to the Government.

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List of abbreviations

AfDB	African Development Bank Group
AKAPB	Attitude, Knowledge, Awareness, Practices/ Behaviours
ATLS	Advanced Trauma Life Support
ASANRA	Association of Southern African National Road Agencies
AU	African Union
CEO	Chief Executive Officer
COF	Certificate of Fitness
CVR	Central Vehicle Registry
DDC	Defensive Driver Certificate
DDF	District Development Fund
DoR	Department of Roads
EMA	Environmental Management Agency
FGD	Focus Group Discussions
GDP	Gross Domestic Product
GFPARS	New Global Framework Plan of Action for Road Safety (2018).
GOZ	Government of Zimbabwe
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
KPI	Key Performance Indicator
MD	Managing Director
MDPCZ	Medical and Dental Practitioners Council of Zimbabwe
MDCI	Multidisciplinary Crash Investigations
MIC	Ministry of Industry and Commerce
MLGPW	Ministry of Local Government and Public Works
MOTID	Ministry of Transport and Infrastructural Development
MOHCC	Ministry of Health and Child Care
NGO	Non-Governmental Organization
PGH	Parirenyatwa Group of Hospitals
POTRAZ	Postal and Telecommunications Regulatory Authority of Zimbabwe
PSV	Public Service Vehicle
RAF	Road Accident Fund
RDC	Rural District Council
RTA	Road Traffic Accident
RSPR	Road Safety Performance Review
SWOT	Strengths, Weakness, Opportunities and Threats
UN	United Nations
UNECA	United Nations Economic Commission for Africa
UNECE	United Nations Economic Commission for Europe
TSCZ	Traffic Safety Council of Zimbabwe
SADC	Southern Africa Development Community
VID	Vehicle Inspectorate Department
WHO	World Health Organization
ZIMTIS	Zimbabwe Integrated Transport Information Management System
ZRP	Zimbabwe Republic Police

Executive summary

The first United Nations Road Safety Performance Review for Zimbabwe was conducted in September 2021. The scope of the review are the five pillars of road safety: safe road management, safe roads, safe vehicle, safe user, and effective post-crash response. The review involved a desk study, stakeholder participatory review, and visual observation survey of road infrastructure along select highways and cities and towns. The key findings and conclusions are presented in this review.

Overall, assessment of road safety performance by means of official statistics confirms that Zimbabwe has not achieved the Sustainable Development Goal target 3.6 of the United Nations nor that of the Decade for Road Safety to reduce road crash deaths and serious injury by 50% by 2020. Official statistics come from national police. Statistics provided by TSCZ confirm that road crash deaths rate rose by 34.45% between 2011 to 2019, from 1,291 deaths in 2011 and rising to 2,000 in 2019. A major concern is that the official statistics relate only to crash scene deaths count and rarely take into account victims who die on the way and in hospital or after discharge, for which World Health Organization (WHO) estimations aim to also account. The WHO estimation indicates that crash fatalities, were close to 7,000 in 2017, hence three times the rate reported by the country. Because of gaps in data availability and accuracy, the need to create an integrated and coordinated database is an agreed priority.

With respect to causes and increase of road crashes and deaths, the review presents the likely reasons why Zimbabwe is headed in the opposite direction of the global target. According to Zimbabwe Republic Police (ZRP) and the central vehicle registry (CVR), between 2011 and 2019 there was a high increase in the number of imported second-hand public and private vehicles from 800,000 to 1,500,000, including in the number of first time young and elderly road users. Unlicensed or improperly qualified drivers averaged 25% of the 2016 crash deaths.[1] According to TSCZ (2017), road crashes are costing the country an average of 3% of its gross domestic product annually. On the other hand, the main cause of accidents in Zimbabwe is reportedly human error. According to research conducted in 2018 by TSCZ, 94% of road crash accidents and deaths and injuries are due to human error rather than to vehicle defects (5%) or road environment (1%).[2] As multidisciplinary crash investigations are generally not conducted in Zimbabwe, data that disaggregate and link accidents to their specific and actual scientific causes are not available.[3]

Regarding road safety management, review stakeholders[4] confirm that the Traffic Safety Council of Zimbabwe in the Ministry of Transport and Infrastructure are the overall road authority to provide road and safety policy championship and leadership across national and local government authorities. Road safety has not been politically championed and elevated to a national transport and road traffic, health, and national human development concern and priority. This is confirmed by the lack of a designated coordinator or lead agency for post-crash response and lack of multisectoral plan of action. On the other hand, TSCZ as designated road safety lead agency and coordinator has not established coordination and monitoring of the Decade of Action across all echelons of government, agencies, and stakeholders as a national priority programme as there is no adopted multisectoral national action plan and timebound targets to provide basis for multi-stakeholder coordination and monitoring. A strategic systems approach and multisectoral programming approach would have been more successful. Strengthening the role of lead agency, championship by the Traffic Safety Council of Zimbabwe, adoption of national road safety strategy and multisectoral action plan including acceding to five United Nations conventions and benchmarking international and regional good practices are among recommended priority interventions.

Concerning safe road infrastructure, the major issue confirmed by the Zimbabwe Road Conditions and Inventory Report in 2017 and review stakeholders[5] is that the increase in the number of vehicles has not been accompanied by any meaningful road upgrade and maintenance or rehabilitation of existing road infrastructure since independence

1 Research commissioned by TSCZ in 2018 on causes and effects of road crashes in Zimbabwe

2 Ibid.

3 Stakeholders confirmed in checklist nos.1 and 5 that MCDIs are not conducted and no framework exists to guide who leads and how they should be conducted.

4 Stakeholder findings checklist No.1 of the main report.

5 Stakeholder findings in checklist.2 in Annex 3 of the main report.

in 1980.[6] According to the Department of Roads and Zimbabwe Infrastructure Development Report by AfDB of 2019, the road infrastructure investment prioritisation has been to focus on new capital roads investments projects than routine and scheduled maintenance.[7] Significantly, Zimbabwe currently lacks an up-to-date framework to monitor and evaluate road safety performance, mainly because there is no actual review and benchmarking done with United Nations Convention and Standards on Road Safety, 1968 despite the Government having become a contracting party before the Decade of Action for road safety, and the need for benchmarking regional and international good practices is being emphasised. Benchmarking regional and international good practices, adoption of a roads and maintenance improvement programme to ensure safety of all users are among priority interventions recommended.

Regarding safe vehicles, VID, CVR, and ZINARA and stakeholder key informants confirm[8] that Zimbabwe has a sound legislation and standards framework in place for vehicle inspection, certification, and check management systems. All public services vehicles undergo mandatory periodic inspection and certification of fitness, and roadside checks. Although private vehicles are exempt, they nevertheless operate informal public commuter services, thereby operating outside the transport regulatory and enforcement framework.

Further, according to TSCZ, traffic regulation and enforcement policing in cities is a major concern in Zimbabwe. Review stakeholders agree in that although traffic laws are well established, they are not benchmarked to international and regional good practices. A major weakness is that the framework and practice exempt all non-public service vehicles from periodic inspection and certification of fitness. The challenge facing enforcement is inadequately skilled traffic officers because skilled and experienced officers are redeployed to other service areas since 2017.

Also, enforcement and surveillance operations capacity of national traffic police is constrained by limited funding, and lack of advanced technology and equipment as well as a database and information management system. This means that cities and towns lack traffic enforcement and surveillance and that all urban road users have become vulnerable. Strengthening enforcement framework and practices with legislative and standards review and benchmarking against regional and international good practices and United Nations conventions are among priority interventions recommended.

With respect to safe user, the TSCZ and stakeholders[9] confirm that Zimbabwe's driver licensing system (standards, training, testing and certification) is quite well established and functional, and only requires updating and benchmarking to regional and international good practices. The country's road driving standards are historically high, having been modelled on the British system of international standards. However, enforcement of such standards has come under increasing threat of corrupt practices by officers entrusted to enforce them who collude with learner drivers to cut corners. Also, road users collude to bribe the national police and vehicle inspectors who pocket money at VID inspection stations, roadblocks, and roadside check points to overlook vehicle defects and infringements such as overloading or failure to produce a driving licence. Further and more serious, national traffic police lack equipment and technology to provide relevant metrics for speed and alcohol and other substances measurement and data admissible at law. Strengthening enforcement framework, resourcing, dealing with corrupt practices, and benchmarking are recommended.

Concerning effective post-crash response, the MOHCC and stakeholders[10] confirm that the framework of principal laws (The Public Health Act) and institutions for public health and emergency facilities are in place, but leadership, regulations and standards for post-crash care, data management and MDCIs are not established. Zimbabwe's public health care and emergency care services sector faces severe institutional, human resources, financing, and technical capacity constraints. Instead of stabilizing the number of deaths and mitigating the seriousness of injuries, the system is assisting only a fraction of those who have good chances of survival and recovery from serious injury. Establishing emergency medical services and emergency responses policy, laws, lead agency, and guidelines and standards in line with WHO Guidelines, including a common 3-digit national

6 Vehicle population increased from 800 000 in 2010 to 1 540 354 from 2011 to June 2019 according to CVR.

7 List of contributors at the beginning of the report and findings in checklist no.2.

8 Ibid.

9 Stakeholder Findings Checklist No. 4 in Annex 3 of the main report.

10 Stakeholder Findings Checklist No.5 in Annex 3 of the main report.

emergency call number and call centre and educating the public on how to use the call centre are among priority interventions recommended.

Four priority interventions agreed between UNECE/UNECA and confirmed by national stakeholders, respectively: (a) Road Safety Management strengthening; (b) Increase capacity of the National Road Safety Lead Agency; (c) Road Crash Database, improving statistical indicators and disaggregated data, and (d) Post-Crash Care Response and Coordination System (establishment of lead coordinating agency).

Finally, on the way forward 2021–2030, a 10-Year national road safety strategy and action plan are recommended to improve road safety in Zimbabwe.

Chapter 1 | Introduction

1.1 Purpose and structure of the report

The purpose of the Road Safety Performance Review Report for Zimbabwe is to determine progress made in implementing the United Nations Decade of Action for Road Safety 2011–2020[11] to stabilise the rate of road crash fatalities and reduce them by 50% by 2020, and make recommendations to the Government to strengthen road safety management for the Second Decade of Action 2021–2030.

The review focuses on five priority road safety pillars of the Global Framework Plan of Action for Road Safety[12]: (I) Road Safety Management, (II) Safe Roads (Infrastructure), (III) Safe Vehicles; (IV) Safe Users and (V) Post-Crash Care.

This chapter outlines the study approach and methods used, and provides a country background, followed by the review itself in chapters 2-7, which include conclusions and recommendations.

1.2 Study approach

The first activity of the review involved desk research on international literature and national relevant documents, which include legislation, data, previous studies and evaluations. These resources were provided by the Traffic Safety Council of Zimbabwe (TSCZ),[13] and are listed in the bibliography at the end of this report. Good practices[14] were used to inform report production, while other relevant resources[15,16] were used to inform the development of checklist tools that were used to capture data.

The second activity involved interactive road safety performance review interviews with the UNECE/UNECA Team, national management experts of TSCZ, and national sector representative stakeholder reviewers. Participatory engagement focus group reviewer meetings and workshops were conducted with pillar 1-5 representatives shown in the list of contributors[17] using a checklist that provided the findings shown in Annex 3 (1-5).[18]

The secretariat of the Special Envoy, UNECE, UNECA, international reviewers, the Ministry of Transport and Infrastructural Development (MOTID), and the TSCZ liaised a team of national consultants and reviewed this report. A brief country background is profiled below.

1.3 Country background: Zimbabwe

Zimbabwe (see figure 1) is a landlocked Southern African country measuring 390,757 km^2 and is geographically well positioned to function as a regional transit for road, rail passenger and freight movement to countries to the north, south, east and west.

According to the Zimbabwe National Statistics Agency, the country's official population was 13.6 million in 2017, 32% of which live in the largest cities and towns: Harare, Bulawayo, Gweru, Mutare, Masvingo, Chinhoyi, Bindura, Marondera and Kwekwe. Zimbabwe is classified as a low-income country. Its developmental vision is to become an upper middle-income country by 2030.

1.4 Transport sector

Zimbabwe's Vision 2030[19] and the 2013 National Transport Policy emphasize the urgent need for an integrated transport infrastructure network to be put in place to support the country's economic growth towards Vision 2030 to

11 United Nations General Assembly resolution 64/255 on Improving Road Safety, March 2010 proclaimed; Decade of Action for Road Safety 2010–2020, with the goal to stabilize and then reduce the forecast level of road traffic fatalities.

12 United Nations Global Framework Plan of Action for Road Safety, 2018.

13 Road Safety Lead Agency.

14 The Uganda RSPR online version was used as good practice to inform the production of this report.

15 Systra RSMCR (2018) Road Safety Management Capacity Review Report.

16 United Nations Road Safety Trust Fund, Global Framework Plan of Action for Road Safety, 2018.

17 See List of contributors located at the beginning of the report.

18 Annex 3 of Pillar 1-5 presents the Review Findings used to develop Chapter 2-7 of this RSPR report.

19 Towards an Upper - Middle Income Economy by 2030: "New Dispensation Core Values", 19 April 2018, Washington DC, Government of Zimbabwe.

Figure 1: Map of Zimbabwe

Source: www.un.org/geospatial/content/zimbabwe

become an upper middle-income economy. At present, road transport accounts for over 95% of cargo freight and passenger movement and is considered an important driver of economic growth. The transport sector's contribution to gross domestic product (GDP) was estimated at 2.1% in the financial year 2018/2019.

Zimbabwe's Transitional Economic Stabilization Programme Vision 2030 (TSP) is prioritizing infrastructure as one of the development requirements to reach the upper middle-income status target by 2030.[20] Of the total 2020 budget allocated to the transport infrastructure sector, only 20% is allotted to roads infrastructure and is considered insignificant to keep current rehabilitation and upgrade contracts on the Chirundu-Beitbridge regional corridor highway going, let alone leave anything for key primary and secondary roads in the country that are in need of maintenance programmes.

1.5 Legal framework

According to MOTID and TSCZ, Zimbabwe has seven principal pieces of legislation and standards that provide powers and authority for road safety management and monitoring: (a) Roads Act 13:12; Road Traffic Act 13:11; (b) Statutory Instrument (S.I.) 309 of 1985 (Road Traffic Regulations, 1985); (c) Road Motor Transportation Act: 13:15; (d) Vehicle Registration and Licensing Act 13:14; (e) Toll-Roads Act 13:13, and (f) Traffic Safety Council Act 13: 17.

Policy and strategy documents include the Zimbabwe National Transport Policy, 2013, and the Zimbabwe National Transport Master Plan, 2014.[21]

According to the Department of Roads (DoR), a roads sector reform programme of SADC Protocol on Transport and

20 Ibid.

21 MOTID and TSCZ.

Meteorology in a Zimbabwe National Road Administration (ZINARA) being established for road administration and management to administer a road fund for routine and periodic maintenance of public roads and public safety based on treasury allocations and revenue from toll roads, licensing, levies and fees.[22]

The MOTID confirms that Zimbabwe participates in global processes for achieving the targets of the United Nations Decade of Action for Road Safety and of the Sustainable Development Goals (SDGs). To date the country is a contracting party to the United Nations Convention on Road Traffic, but not yet to the following additional United Nations road safety legal instruments: (a) 1968 Convention on Road Signs and Signals; (b) 1958 Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts; (c) 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles, (d) 1998 Agreement concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts; and (e) 1957 Agreement concerning the International Carriage of Dangerous Goods by Road. Should the Government become a contracting party to the aforementioned instruments, it will need to significantly strengthen its regulations and standards framework, as well as utilize modern tools and technology in order to improve road safety performance.

Zimbabwe's membership of the African Union commits it to continental transport development obligations. It is recommended that it become a signatory of the African Road Safety Charter and participate in the new African Observatory for Road Safety. By becoming a contracting party to the Charter, Zimbabwe will advance the goals of the African Agenda 2063 for socioeconomic transformation.

1.6 Road safety actors

According to the MOTID and TSCZ, an institutional framework for roads and road safety management is established, comprehensive and functional. Key ministries and departments and local government authorities regulate and enforce laws and standards of safe roads, safe vehicles, safe users and post-crash response. MOTID is the lead government authority on road and road safety, while the DoR is the lead road and road safety authority within MOTID and TSCZ is the national road safety agency under the supervision of DoR. There are other critical departments and divisions under MOTID road safety management: Central Vehicle Registry (CVR); Vehicle Inspection Department (VID), Central Mechanical and Equipment Department (CMED) and Zimbabwe Road Motor Transport (RMT) and ZINARA, whose roles together with those of other government authorities, agencies and stakeholders are laid out in table 1.6 in annex 1.

1.7 Road safety trends

TSCZ official statistics show an increase in road traffic crash fatalities of 35% between 2010 (1,291 fatalities) and 2019 (2,000 fatalities).[23] Five people die every day on the roads in Zimbabwe and this translates to 153 persons killed per month.[24] Estimates by TSCZ research in 2018 showed that the country loses about US$ 406 million annually from an average 40,000 road traffic accidents every year, and this is estimated to be almost 3% of the gross domestic product ; estimated at US$ 14 billion.[25]

1.7.1 Road traffic accidents trends by category

Although TSCZ has no official disaggregated data, a WHO country profile from 2018 provides useful indicators. According to the WHO, drivers and passengers of the bus category account for 50% of the total fatalities recorded in 2017, followed by pedestrians at 16%. Drivers and passengers of four-wheeled cars and light vehicles contribute 13%, drivers of four-wheeled cars and light vehicles 8%, riders of two- or three-wheeled motorized cycles 6%, pedal cyclists 4%, and drivers/passengers of heavy trucks 3%.[26] The high numbers of bus-related fatalities show a need in this category, consisting of the poorest most vulnerable population.

With regard to pedestrian vulnerability, WHO notes that an estimated 2,000 pedestrians were killed by motor vehicles between 2013 and 2016, while an estimated 30,000[27] were

22 ZINARA, MOTID and TSCZ key informants.

23 Traffic Safety Council of Zimbabwe (TSCZ).
24 Ibid.
25 Ibid.
26 WHO: 2018 Death by Road User Category, Country Profile, 2017.
27 ZRP.

injured, giving an average 665 deaths and 10,000 injuries per year. Data and statistics regarding the causes underlying crashes involving pedestrians are not readily available as MDCIs are not carried out; however, there is agreement that pedestrian behaviour is a significant factor.[28] The statistics signify the need to focus on change of pedestrian attitudes and behaviours, as well as enforcement. In addition, WHO notes that in bicycle and motorcycle crashes in 2017 account for 10% of all fatalities. The statistics suggest that Zimbabwe lacks a policy and strategy for promotion of motorcycles and non-motorized transport.

1.7.2 Urban road traffic trends

WHO data (as confirmed by ZRP and TSCZ) note that Harare Metropolitan City accounted for 42,430 of the accidents recorded countrywide in 2017, a 9% increase from 38,620 in 2016.[29] ZRP and TSCZ researchers attribute crashes mainly to poor driver and pedestrian behaviours and poor urban driving conditions. This includes congestion of different modes of traffic in narrow streets, disregard of road rules, driving and walking without due care, driving under the influence of intoxicating substances, and driving without a licence. [30,31]

28 "Pedestrians to blame for Accidents: TSCZ", The Herald, 13, June 2016.
29 TSCZ, ibid.
30 "Factors Associated with Road Traffic Accidents among Survivors: A Pilot study" Njodzi Millicent et al (2016).
31 Traffic Safety Council interviews.

1.7.3 National road corridors

Concerning national road corridors, DoR and TSCZ report that as the running surface of Primary roads is improved, we are witnessing an increase in number of crash fatalities and injuries on primary roads.[32] For example, the recently rehabilitated, upgraded and modern Plumtree-Mutare-Plumtree highway is leading in fatalities compared to the Beitbridge-Chirundu Road which is considered the worst and most busy of the two highway corridors in Zimbabwe.[33] TSCZ reports that in 2016 the upgraded Plumtree-Harare Road recorded 367 crashes, while the Harare-Mutare section contributed 202: a total of 569 fatal crashes in a single year. The Kwekwe national disaster on the Plumtree-Mutare Road on 3 March 2016 killed 31 people and injured 36. On the same road, another disaster in 2016 near Gweru killed 10 people and injured 13.[34] The Rusape bus accident disaster on the same highway killed 50 people in 2018. Police reports and TSCZ research from 2018 note that these fatal accidents are characteristically head-on and side-sweeping crashes, and thus represent avoidable vehicle conflicts involving large buses, trucks, minibuses and stray domestic animals.

Against this background, the report will now present the findings carried out with checklists 1-5 (Annex 3).

32 TSCZ.
33 Ibid.
34 TSCZ ibid.

Chapter 2 | Road Safety Management

2.1 Introduction and background

This chapter reviews the status of road safety management, with a focus on management action and monitoring in checklist 1 of Annex 3.

According to TSCZ and national traffic police statistics, road accidents occur on Zimbabwe's roads every 15 minutes in which five people die every day or approximately 153 people every month. The official road accident fatality rate was 1,291 in 2011 rising to 1,838 deaths in 2016 and 2,000 deaths in 2019. This represents a 35% rise in nearly 10 years within the Decade of Action for Road Safety. Official figures of crash deaths come from the national police.

On the other hand, WHO estimates that there are 7,000 road deaths per annum, more than a threefold difference from country-reported figures. Variance emanate from the lack of a national definition of a traffic accident death, and the non-recording of deaths that occur after patients have been transferred to referral hospital. While deaths in the country are recorded at the health facilities and by the police, the figures are also not then aggregated.

TSCZ, DoR, MOHCC and ZRP confirm that official disaggregated data and statistics that are scientifically established are not available in Zimbabwe because MDCIs are not carried out.[35] If available, these would link motor vehicle crashes to causes and types and victim types, vehicle type, driver type, location, and relevant loss (deaths, injuries, and property).

Finally, according to TSCZ, Harare City has the highest number of traffic crashes with most of the victims being mainly passengers and pedestrians. According to TSCZ research in 2018, approximately 94% of crashes in 2017 were due to human error, and the remainder due to vehicle condition (5%) and road environment (1%). Multidisciplinary investigations reports are not available to scientifically back currently available research which is based solely on traffic police crash reports.

2.2 Management action

The conclusions for this section use the analysis of review findings in checklist 1 and national stakeholder feedback workshop from 19 November 2019.

Zimbabwe's framework for road safety management (legislation, standards, policies, strategies and institutional actors) is comprehensive, functional and well established and is a significant strength to deliver on the required strategic objectives and KPIs of pillars 1 to 5. However, the framework's main weakness is that it is outdated and in need of updates benchmarked to international standards and good practices, particularly of the United Nations conventions on road safety, the African Road Safety Charter, and regional SADC/SATCC.

The status of establishment of a national road safety lead agency and designated coordinator was reviewed and analysed. This analysis of findings of checklist 1 confirms that although TSCZ is legislatively and institutionally established as a road safety lead agency and therefore a designated coordinator and monitor of the Government's national road safety policy, it has significant institutional functional gaps and weaknesses in that the council is not functioning as intended.

35 Verified by MCDIs which are not done in Zimbabwe.

TSCZ was established in 2000 by MOTID. Its 11-member council or board is appointed by the Government on the basis of sectoral professional expertise and political clout, including the capacity to forge sector leadership, and therefore provide strategic championship for the national coordination and monitoring function of a multisectoral effort across pillars 1-5. This strategic leadership, planning and programming function to guide TSCZ is not established and needs to be developed.

The same analysis of findings shows that although TSCZ is operating on a three-year strategic integrated programme and annual results-based integrated annual performance plan, there is a significant weakness in that the objectives and targets of these TSCZ strategic programming instruments are not shared, adopted, coordinated and monitored across key actors in pillars 1-5. The most relevant strategic instrument TSCZ requires to fulfil the function to promote by coordinating and monitoring the various national actors is a multisectoral national road safety action plan with time-bound targets by 2020. This national action plan must be owned and implemented by multiple stakeholders of pillars 1-5. This may be the main reason why TSCZ has not succeeded in establishing and rolling out the coordination and monitoring function for the road safety management action.

For TSCZ and the Ministry of Transport and Infrastructural Development to successfully work together with others or to lead coordination, necessary institutional development mechanisms and facilitation tools need to be developed and are currently not in place. Crucially, these may take the form of collaboration and cooperation charters, memoranda of understanding, or service-level agreements to establish joint working arrangements between MOTID, TSCZ and stakeholders.

The other critical working tools that the MOTID needs to put in place include adoption of a national road safety strategy, facilitation of the council or board of TSCZ to champion and lead the adoption of a national action plan, the adoption of targets linked to said national action plan, funding based on adopted national action plan targets, sector stakeholder platforms, and adoption of sector action plans.

Ensuring coordination with other country priorities and policies especially with land-use planning and mobility policies is vital. The Department of Physical Planning and the Department of Roads confirm that there are strongly established policies, legislation and standards for transportation and roads planning, design and construction, which are coordinated through the Regional Town and Country Planning Act (Chapter 29:12), which guide and control land-use planning for highways, human settlements approvals and development control; however, illegal property developments have been a threat in the last 10 years.

TSCZ is a statutory body and has some revenue funding. TSCZ confirm that its 2020 annual budget for capital budget is 28% of a US$ 64million budget spent mainly on the national mass media road safety campaign activities, mostly conducted over public holidays. TSCZ budget is inadequate for the activities needed to be carried out under its mandate. However, without an adopted multisectoral road safety action plan, analysis of the scope of resource requirements and availability across pillars 1-5 is limited. It is recommended that a multisectoral national road safety action plan be adopted as a basis for assessing the scope of funding required.

2.3 Monitoring action

The framework for monitoring is the same as for the management action. MOTID confirm that a national transport information management system (ZIMTIS), is already improving data management and road safety management by providing seamless vehicle registration, insurance, licensing, and toll road fee collection operations.

Some key gaps are as follows:

(a) No common road crash database is established and those in TSCZ, DoR, ZRP, MOHCC, CVR, VID, Department of Civil Protection, and others are not integrated or linked for purposes of monitoring and enforcement;

(b) Stakeholders still need to agree on standards for road data and statistics; and

(c) Calculating and sharing of indicators linked to a national action plan are absent because there is no adopted national action plan with common targets.

2.4 Conclusions

Following from analyses in the sections above and confirmed by stakeholders at the national feedback workshop, the prioritised interventions are as follows:

(a) The MOTID should provide strategic championship and leadership by adopting a national road safety policy and multisectoral road safety strategy including to facilitate and support TSCZ to develop and adopt a multisectoral national road safety action plan with targets;

(b) The MOTID should develop the capacity of the council and board of TSCZ to establish frameworks, instruments and tools for collaboration and cooperation for road safety multisectoral action planning and programming;

(c) TSCZ should function as the designated lead agency with all powers and funding to cary out its full mandate including developing the national road safety action plan with targets, cooperation framework and platforms, and instruments and tools;

(d) Leadership and a database for road traffic management need to be established to generate agreed-upon statistical indicators of road safety performance;

(e) TSCZ should assess the funding requirements to effectively carry out duties, based on the actions necessary under the multisectoral national road safety action plan; and

(f) TSCZ should advocate for the implementation of a road accident fund (RAF).

Chapter 3 | Safe Roads

3.1 Introduction and background

This chapter reviews road infrastructure standards and practices, identifies strengths and weaknesses, and proposes recommendations for strengthening safe roads in Zimbabwe. It focuses on legislation, enforcement, education, technology, and international regulatory support. It is informed by findings of checklist 2 of Annex 3.

According to the Zimbabwe Road Conditions and Inventory Report (2017) and the Zimbabwe Infrastructure Development Report (2019), and including the United Nations Decade of Action for Road Safety, safe roads in general are those designed to reduce the possibility of crashes occurring and to give higher chance for evasive action or mitigation and recovery before they occur. Roads designed to reduce the possibility of crashes are those that will allow the users to evaluate situations and make appropriate and timely decisions.

According to the Zimbabwe Road Conditions and Inventory Report of 2017, the road infrastructure in Zimbabwe can be classified as generally unforgiving and providing many opportunities for users to make errors such as jagged broken bitumen edges, worn out centre lanes, vandalized road signs and unmarked or worn out carriageway lanes. The report used the visual condition assessment index method to make the assessment. In addition, the national consultant conducted vehicle driver observation transect surveys aimed at confirming the conditions of the 2017 report. The transect surveys were performed in October 2019 along the highways of the Beit-Bridge – Chirundu regional corridor, the Harare-Nyamapanda Border highways and the Harare-Gweru highway, including urban roads in Harare City, Chegutu, Kwekwe and Gweru which fall along the Harare-Gweru highway. These surveys confirmed that the status of road conditions remains the same as assessed in 2017.

According to the Department of Roads, the road itself should assist drivers by providing a road environment that is simple and comprehensible to all users, and Zimbabwe's roads are intended to be designed on the same principles and standards.

Research by TSCZ in 2018 notes that high-speed of cars, an increased number of cars, increased vehicle density and younger driver population are adding to the risk of crashes and injuries. Finally, DoR confirms that rehabilitation and modernizing of existing roads would provide opportunities to incorporate road safety features in their design. The rehabilitation being undertaken on Plumtree-Forbes Border Post Highway and Chirundu-Beit Bridge Highway is an example of where the safe road design principles of DoR and SADC / SATCC road design guidelines and standards are being applied in Zimbabwe.

3.1.1 Road network and condition.

Zimbabwe's total road network length was 98,049 km in 2017, an increase from 88,000 km in 1999 (Roads Network Condition and Inventory Report: 2017). Of four road authorities, the District Development Fund (DDF) is responsible for 26% or 25,034 km of the network. The Department of Roads (DoR) are responsible for 19% or 18,431 km, 55 rural district councils have 41% or 40,205 km, and 28 urban councils have 12% or 11,333 km of the road network. The remaining 3.5% or 3,046 km of the road network is not yet classified.[36]

The Zimbabwe Road Conditions and Inventory Report of 2017 and DoR confirm that the road surface finishes are bitumen, gravel, gravel earth and earth. A total of 18%

36 Zimbabwe Road Conditions and Inventory Report, 2017.

or 17,846 km is bitumen surfaced comprising regional, secondary, primary and tertiary, and these are roads under the Department of Roads and the 28 urban councils. The remaining 80% which are not bitumen surfaced fall under the rural district council areas. Of this, 47,479 km is of gravel finish, 27,532 km is gravel-earth and 3,229 km is earth.[37]

Further, DoR, DDF and urban councils confirm that a road classification system is applied to the road network. According to the Zimbabwe Infrastructure Development Report of 2019 by AfDB, primary roads make up 5% of the network comprising the most trafficked arterials that link Zimbabwe to neighbouring countries. The report explains that a portion of the Pan-Africa Highway passes south to north through the country and plays a major role in imports, exports and transit freight. It further describes that secondary roads, which make up 12% of the network and are managed by DoR, link main towns and economic activities in the country and carry 70% of traffic. Tertiary roads that constitute 70% of the road network length are feeder roads that link rural areas to secondary roads and are maintained by DDF and RDCs. The remaining 9% of the road network are urban roads managed by urban councils.

The Zimbabwe Road Conditions and Inventory Report (2017), Zimbabwe Infrastructure Development Report (2019), DoR and DDF all confirm that maintenance of roads and road infrastructure is lacking, not prioritised, and underfunded. The former report confirms that some 30% of the 29,100 km road network is in poor to very poor condition, while 40% or 37,967 km is in fair condition. The remaining 17% or 16,557 km of the network is in good condition, while only 8% or 7,913 km is in very good condition. Finally, both reports confirm that the replacement value of the road network assets was estimated at $10 billion in 2017, then three times the country's GDP.

DoR and stakeholders agree that Zimbabwe's roads do not meet the needs of all users, because facilities for bicycle and pedestrians in a city such as Harare are only evident in old suburban areas and not city centres, and there are no action plans in place for urban non-motorized transport strategy.

Further, according to same reports and also confirmed in checklist 2 of Annex 3, the most basic carriageway pothole repairs, brush clearance and jagged tarmac edge levelling maintenance is not being carried out. When not causing serious loss of control of vehicles, these conditions are costing users a lot of money in replacement of cut tyres and broken suspensions.

In addition, stakeholders confirm that the process of complying to SADC road signs is ongoing, attempting to meet regional standards of SADC /SATTC, both in quality of materials used and in placement. On primary and secondary roads, road signs are now placed within one metre of either side of the carriageway. Characteristic examples of destroyed infrastructure include damaged bridge rail guards and sign boards, worn out road surface and speed markings, road-side furniture at rest areas that is not replaced on time are not uncommon.

Further, TSCZ and DoR and stakeholders confirm that the urban network especially in Harare is imposing high risks especially for commuters and pedestrians, who account for the majority of road user deaths.[38] Transect observation surveys in Harare city during the review showed heavy traffic observed during all day as well as impatient commuter minibus and informal taxi drivers often resorting to driving on road shoulders and emergency lanes in the few sections of roads that have them, thus exposing other drivers to the risk of collision.

TSCZ, Harare City and the review survey confirm that electronic intersection signals are often not working, mainly because of electricity grid blackouts, poor maintenance and vandalism. In some instances, road touts or roadside vendors at the intersections step in to conduct traffic direction roles at the intersections. As a result, traffic police confirmed that most of the accidents occurred in Harare are minor and occur as a result of wet conditions and when traffic signals are faulty.

TSCZ has embarked on erecting barrier fences along highway towards reducing vehicle and animal collision however, vandalism or the lack of fencing have led to animal collision resulting in injuries, loss of human and animal lives as well as damage to vehicles.

3.2 Legislation, standards, and polices

Based on the *Zimbabwe Roads Conditions and Inventory Re*port (2017) and consultant observation surveys and stakeholder key informants identify the following key

37 Ibid and Zimbabwe Infrastructure Development Report, 2019.

38 TSCZ statistics and research in 2018 on causes of accidents.

strengths: (a) road classification; (b) road standards; (c) signs and signals; (d) level-crossing standards and regulated zones; (e) planning and design principles and regulations and land-use planning; road maintenance standards; (f) road work zones standards; and (g) designation of four road authorities.

However, analysis based on checklist no. 2 and also confirmed in section 2.3 of chapter two confirms that there are notable gaps and weaknesses requiring intervention:

(a) Legislation and standards, including the Road Traffic Action and Road Act, need to be updated to meet international and regional good practices;

(b) Standards for maintenance are not being adhered to; and

(c) Country-wide and consistent road assessment and safety inspections and audits are not being done.

3.3 Enforcement

DoR and DDF, and stakeholder review findings in checklist no. 2 confirm that a framework of laws, standards and polices for enforcement of audit, assessment and inspection by qualified team is in place and is a key strength. This framework includes:

(a) Practice of traffic safety audits of new infrastructure plans are carried out before development approvals by local planning authorities and Department of Spatial Planning and Development (DSPD), as well as before environmental management assessment approvals, although these are often sidestepped when projects are fast-tracked, usually for political reasons;

(b) New road safety assessments are carried out before construction by DoR;

(c) Periodic safety inspections are carried out by DoR consultants;

(d) Safety measures are introduced when safety conditions of a road deteriorate; and

(e) Road enforcement activities currently use detectors but ZRP confirmed that these will be discontinued because of legal issues raised in court.

DoR and review stakeholders confirm the existence of the following three gaps and weaknesses:

(a) There are no licensing and accrediting of road assessment, inspection and audit organizations;

(b) There are no new road safety audits conducted before opening new roads to traffic; and

(c) Road assessment, inspection and audits have been de-prioritised and are therefore, underbudgeted.

3.4 Education

Review findings in checklist 2 confirm that the Town and Regional Planning Act, Urban Councils Act, Rural District Councils Act, and Roads Act provide standards for public awareness and invitation of objections through publication of intended or temporary road closures and any other works that affect or are of interest to the road user. Crucially, the departments confirm that certain gaps and weaknesses exist:

(a) There are limited public consultations to build awareness or support for the construction and maintenance of safe roads and their proper usage;

(b) There is limited access to information and the engagement or public outreach to develop community awareness in cases of temporary street closures and intersection redesigns being made;

(c) There is no local road safety assessment training for road designers, construction engineers, inspection and audit organizations;

(d) There are no key performance indicators for assessment of effectiveness of education or awareness activities; and

(e) There is no national plan of action and targets to ensure adequate budget allocations for education and awareness-raising/training; and the methods of advertising are not adequate as they do not reach all the people affected.

3.5 Technology

DoR, DDF and consultant review surveys on rehabilitated and upgraded roads in cities and towns confirm that the following key strengths:

(a) Design and construction of forgiving and self-explaining roads;

(b) Design and construction of urban street speed humps and traffic calming equipment such as ripples and traffic circles are applied, though separate lanes for pedestrians and cycles are applied only in older settlements.

Two main weaknesses are identified:

(a) lack of development of intelligent cost-effective road systems and technologies (e.g. Vehicle Management Systems (VMS) to increase user attention, infrastructure to vehicle communication systems) and;

(b) lack of policy and strategy leading to the slow introduction and uptake of intelligent traffic management systems based on sensor data and traffic forecasts.

3.6 International regulatory support

Review checklist no.2 confirmed that a key strength is that Zimbabwe is implementing SADC guidelines and standards on traffic signs and signals. However, during the transition period of adopting these standards and slow uptake, progress has largely been visible on rehabilitated highways and where damaged signage has to be replaced. The immediate result being a mix of old and new signage which will be the status quo with the cut-off date of December 2025. Critically, Zimbabwe has acceded to the United Nations 1968 Convention on Road Traffic Signs and Signals to align with good practice.[39]

The regional SADC/SATCC guidelines and standards for roads and road signs and signals, though having been embraced in the revised Highway Code, are not being applied systematically countrywide, resulting in inconsistent signage.

3.7 Conclusions

The following section presents recommendations for strengthening road infrastructure in Zimbabwe.

3.7.1 Legislation and standards (road design, construction, maintenance)

The following priority interventions are recommended to the Government:

(a) Commitment to review and update to good practices of the United Nations Convention Traffic Signs and Signals, 1968 and SADCT/SATCC regional good practices of road signs and signals;

(b) Ratify and apply the African Charter for Road Safety so that its targets are mainstreamed in the TSCZ programming;

(c) Prioritize roads maintenance planning and practice that meet regional and international performance standards;

(d) Accelerate the systematic country wide application of the SATCC signs and signal system to create consistency with the Highway Code;

39 According to UN, the Convention on Road Signs and Signals of 1968 establishes a set of commonly agreed road signs and signals. It classifies road signs in three categories: danger warning, regulatory and informative, and provides\ for each of them definitions and physical appearance, including dimensions, shapes and colours, graphic symbols and norms for ensuring their visibility and legibility. The Convention also prescribes common norms for traffic light signals and signals for pedestrians. Moreover, the Convention prescribes uniform conditions for road markings, signs for road works and signals and gates for level crossings.

(e) Resuscitate the Harare traffic control centre and develop the same countrywide for monitoring and ensuring road traffic signals are consistently functioning at all times and ensure deployment of traffic police control to ensure safety;

(f) Strengthen strategy and programmes for road maintenance targeting monitoring, (i.e. pothole repair, road markings, and signs);

(g) Build capacity for road assessments and audits;

(h) Strengthen the existing strategy and action plan for non-motorised traffic and enforce compliance to SADC/SATCC guidelines that ensure all users are provided safe roads in urban areas; and

(i) MOTID should develop a strategic programme for rural highway fencing, together with communities concerned with safe roads and highways.

3.7.2 Enforcement (audit, assessment, and inspection by qualified teams)

The following are priority interventions for the Government (DoR, DDF, Urban and Rural Councils):

(a) Prepare a business case for independent road assessment, inspection and audit organizations or institutions, benchmarked to regional and international good practices;

(b) All four road authorities should develop and adopt standards and procedures for conducting new road safety audit and testing before opening road and bridges; and

(c) Prepare and adopt strategic and action plans for road assessment, inspection and audit as a basis for budget commitment and lobbying for allocation of resources.

3.7.3 Education: awareness-raising (road manager, user, inspector)

Road Authorities should:

(a) Strengthen public consultation that build awareness and support for the construction and maintenance of safe roads and their proper usage;

(b) Strengthen stakeholder/public engagement to improve community awareness in new or rehabilitation projects;

(c) Strengthen local road safety assessment training for road designers, benchmarked to regional and international good practices for construction engineers, inspection and audit organizations;

(d) Develop a toolkit of indicators for assessing the effectiveness of educational or awareness activities; and

(e) Provide leadership for a national plan of action and targets that ensure adequate budget allocations for education and awareness raising/training across all road authorities and stakeholders.

3.7.4 Technology – forgiving and self-explaining road design and intelligent road and traffic management systems

DoR/TSCZ should:

(a) Develop intelligent cost-effective road systems and technologies, such as VMS and infrastructure to vehicle communication systems to increase user attention; and

(b) Develop policy to guide introduction and uptake of intelligent traffic management systems based on sensor data and traffic forecast.

3.7.5 International regulatory support (benchmarking and ratification of United Nations and African Union, SADC transport conventions and standards (Pillar 2).

DoR / TSCZ should apply the United Nations Convention for Road Traffic Safety Signs and Signals, 1968, and the African Road Safety Charter, among others.

Chapter 4 | Safe Vehicles

4.1 Introduction and background

This chapter reviews motor vehicle standards and use, as well as identifies strengths and weaknesses and proposes recommendations for strengthening the use of safe vehicles in Zimbabwe. It focuses on legislation, enforcement, education, technology, and international regulatory support. The chapter was informed by the results of checklist 3 of annex 3 and review research.[40]

According to the Ministry of Industry and Commerce (MIC), Zimbabwe's motor sector has four major subsectors: motor vehicle manufacturers, franchise holders, car dealers and component manufacturers. The country has two motor vehicle assemblers, Willowvale Motor Industries in Harare and Quest Motors in Mutare, and two bus assemblers, Deven Engineering and AVM Africa. Willowvale Motor Industries entered a joint venture with BAIC of China and a local company, Astol, in 2017.[41]

MIC confirmed that franchise holders import already assembled vehicles and sell them directly or through car dealers. Franchise holders in Zimbabwe include Toyota, Nissan, Mitsubishi, VW, Isuzu, Mercedes Benz, Hyundai and Ford. Car dealers in Zimbabwe sell both new, locally manufactured and second-hand imported vehicles. There are more than 40 small and major car dealers in Zimbabwe. Production by all companies is being affected by macroeconomic currency instability challenges in the business environment.

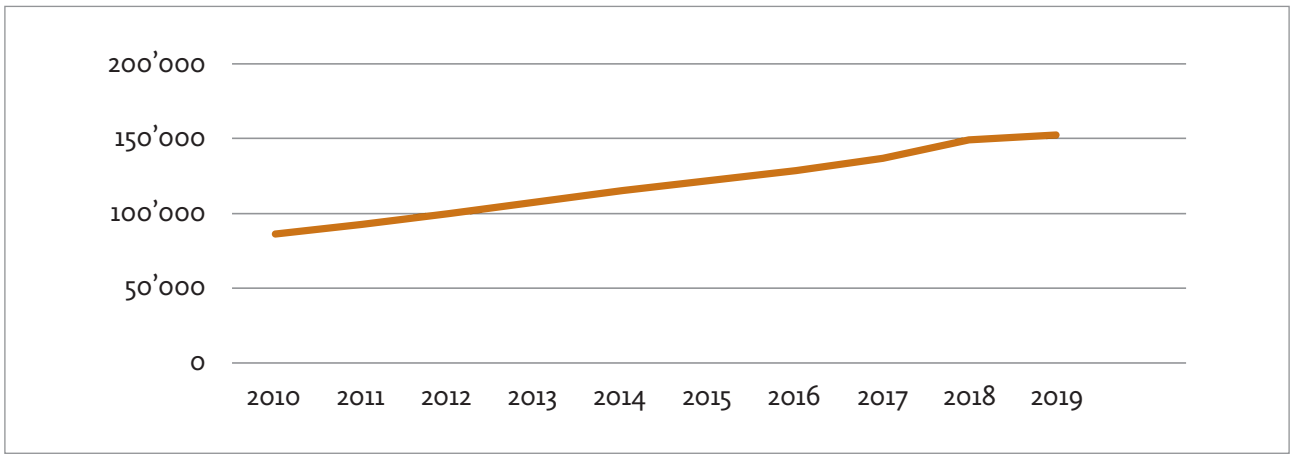
Zimbabwe's component manufacturers produce parts used by motor vehicle assemblers and by car dealers for after-sales support. Components manufactured include glass, batteries, tyres and suspension components. Most of these manufacturers have closed or scaled down operations due to challenges in the business environment and, foreign currency shortages.[42] Most components in Zimbabwe are now imported. The massive importation of second-hand tyres from South Africa, China and Japan, has negatively affected local tyre manufacturers.

According to MIC and the Automotive Manufacturers Association (AMA), the motor vehicle manufacturing sector industry has been affected by foreign currency shortages. There is reluctance by some government institutions to support government policy on buying locally manufactured cars.[43]

According to CVR database, Zimbabwe had 1,524,534 registered vehicles as of 30 June 2019. Figure 2 shows the vehicle population growth trend for the period from 2010 to 2019. This illustrates a 77% increase in the vehicle population during that timeframe.

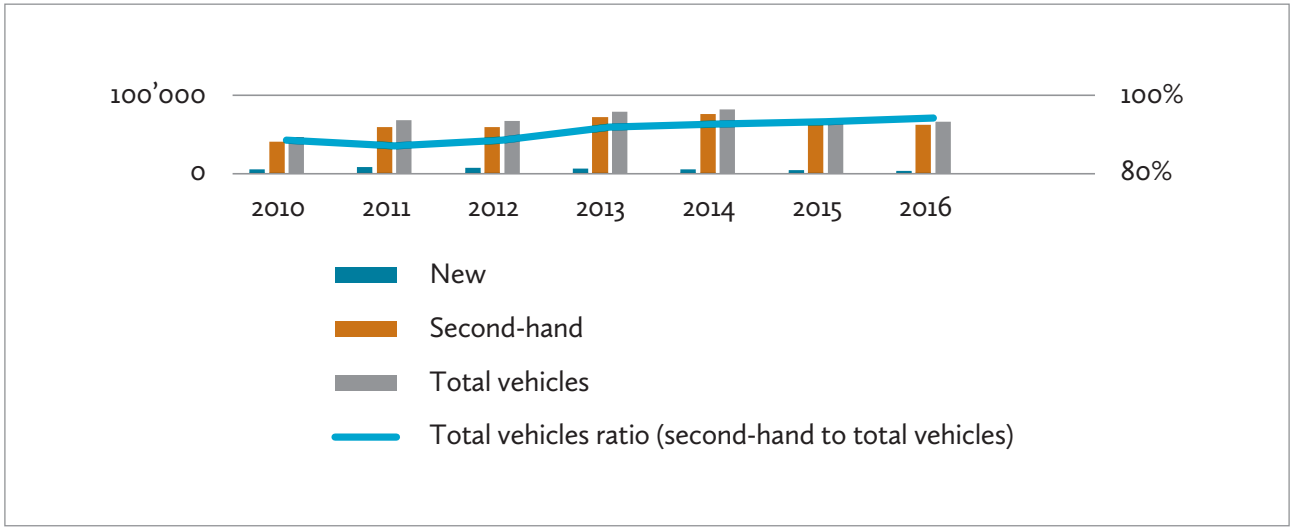
40 Review field research – Tawanda W Sisimayi, October 2019.
41 Ministry of Industry, Commerce and Enterprise Development
42 https://www.timeslive.co.za/sunday-times/news/2019-02-17-nearly-100-zimbabwe-companies-close-down/
43 Ministry of Industry, Commerce and Enterprise Development

Figure 2: Total vehicle population – 2010–2019



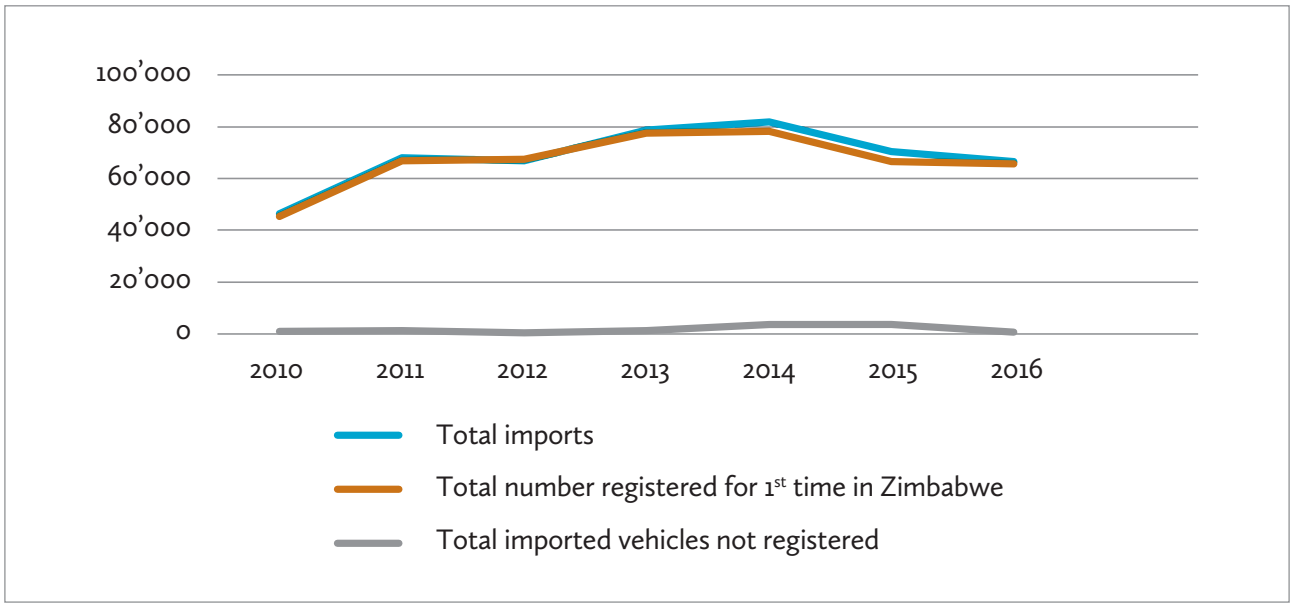
Source: CVR Database

Figure 3: Second-hand and new vehicle imports – 2010–2016



Adapted from: Motor Industry Development Policy, 2018–2030,
Ministry of Industry, Commerce and Enterprise Development, pp. 5-6.

Figure 4: Unregistered imported vehicles, 2010–2016



Source: Adapted from CVR database.

Figure 3 compares second-hand and new vehicle imports from 2010 to 2016. Second-hand vehicle imports accounted for more than 85% of vehicle imports during the same period.

Figure 4 shows that not all vehicles that were imported were registered.[44] According to CVR, the percentage of imported vehicles not registered for the period 2010 to 2016 ranges from 0.7% to 5.2%.

4.2 Legislation, standards, and policies

According to the CVR, MOTID is responsible for Zimbabwe's vehicle registration system. The Roads Traffic Act (Chapter 13:11), provides the vehicle safety requirements for admission of vehicles to traffic. The Vehicle Inspection Department (VID) is responsible for monitoring and enforcing safe vehicle standards. While PSVs are subject to mandatory periodic inspections and certification, non-PSVs are excluded from this exercise. The review concludes that this is a significant weakness

44 CVR and ZINARA confirm gaps in database of imported and registered and licensed vehicles.

as the larger segment of the vehicle total of 1,524,534 has no certified fitness compliance requirements.

In addition, VID and TSCZ confirm that Statutory Instrument 268 of 2018, Environmental Management (Control of Hazardous Substances) (General), covers vehicle requirements and certification for carriage of dangerous goods, and which only apply to public services vehicles.

4.3 Enforcement

According to VID and TSCZ, the provisions in Road Traffic Act 13:11, Vehicle Registration and Licensing Act and Statutory Instrument (S.I.) 309 of 1985 (Road Traffic Regulations, 1985) are being enforced across all 23 VID depots; VID depots carry out periodic vehicle inspections mainly for PSVs and provide COFs that are renewable in 6 months. VID and Zimbabwe Republic Police (ZRP) conduct joint roadside technical vehicle inspections.

Enforcement is negatively affected by the several institutional development gaps and weaknesses, as follows:

(a) Lack of modern inspection equipment at depots and roadside checks;

(b) Absence of fully integrated real-time databases, accounting vehicle registration, ownership, licensing and periodic vehicle inspections, which could facilitate enforcement;

(c) Uncoordinated legislation relating to the safety standards of imported of vehicles;

(d) Lack of deterrent penalties for violations of traffic laws related to expired COF; and

(e) Low public confidence in government institutions to effectively curb corruption of vehicle fitness by traffic enforcement agents and road users.

4.4 Education

A system for training, retraining, and testing vehicle inspectors should be strengthened to sharpen skills and keep pace with changes in vehicle technology and inspection standards. It is confirmed that national roadside awareness campaigns for safe vehicles are done by TSCZ together with VID and ZRP, and mostly during public holidays such as Christmas and New Year holidays and Heroes Holidays,[45] as opposed to throughout the year.

4.5 Technology

There is no policy, strategy, or programmes to fully support collaboration of TSCZ with institutions of technology, research and development, private innovators, or the automobile sector to enable investment in research and innovation. This has been a limiting factor to the uptake of automated technologies to increase the safety of vehicles and to facilitate safe behaviours of drivers.

4.6 International regulatory support

Of significance is the conclusion by MOTID, DoR, TSCZ, and stakeholders findings of checklist 3 including section 2.2 and 3.3.5 that though the Government is a signatory to United Nations Convention on Road Traffic, 1968,[46] there is priority need for the Government to accede to and apply the recommended UN vehicle regulations that relate to safe vehicle standards and good practices, including the 1958 and 1998 Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts; the 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles; and the 1957 Agreement

45 Zimbabwe public holiday in honour of eminent persons declared so, usually deceased.

46 The Convention on Road Traffic of 1968, aims at facilitating international road traffic and increasing road safety through the adoption of uniform road traffic rules. The Convention sets out commonly agreed rules on all factors influencing international road traffic and its safety, including the driver and the vehicle.

concerning the International Carriage of Dangerous Goods by Road (ADR).

4.7 Conclusions

This section presents key recommendations for ensuring safe vehicle standards in Zimbabwe.

4.7.1 Legislation

The following recommendations are for improving rules and standards for admission of vehicles to traffic in Zimbabwe, on account of the gaps identified in section 4.2:

(a) Revise the law to include vehicle inspection and certification of vehicle roadworthiness for non-PSVs

(b) Review the current legislation to include international standards for admission to traffic;

(c) Update existing legislation to reflect the high safe vehicle standards of regional and UN road safety legal instruments.

4.7.2 Enforcement

The following recommendations are for improving enforcement efforts, based on the analyses in section 4.3:

(a) Upgrade inspection equipment at all vehicle inspection centres;

(b) Fully implement ZIMTIS to compile vehicle registration, ownership, licensing, periodic vehicle inspections and other information that enable roadside inspections and multiple agency enforcement;

(c) Coordinated implementation of existing policies that control the importation of vehicles based on safe vehicle standards;

(d) Assessment of the effectiveness of vehicle enforcement activities using key performance indicators (KPIs);

(e) Make vehicle safety infringement penalties deterrent; and

(f) Establish effective mechanisms to curb corruption by traffic enforcers and road users.

4.7.3 Education

The following recommendations are for increasing awareness-raising programmes for users and training for inspectors, based on the evaluation in section 4.4:

(a) Adopt strategies and programme for training, retraining, and testing vehicle inspectors to develop knowledge and skills that keep pace with changes in vehicles technology and inspection standards; and

(b) Develop key performance indicators (KPIs) for assessing performance of educational programmes to measure effectiveness and to improve accordingly.

4.7.4 Technology

On the basis of findings in section 4.5 confirming a gap in technology promoting safer vehicles, there is a need for the development of policy and programme to fully support collaboration of TSCZ and institutions of technology, research and development, private innovators and the automobile sector to enable investment in research and innovation.

4.7.5 International regulatory support

Finally, noting in section 4.6 that the Government acceded to the United Nations Convention on Road Traffic of 1968, and should accede to and apply the remaining UN legal instruments to raise vehicle safety to internationally recommended levels:

- 1958 Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations
- 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles
- 1998 Agreement concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts
- 1957 Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)

Chapter 5 | Safe Users

5.1 Introduction and background

This chapter reviews and identifies strengths and weaknesses in laws, standards and polices, and proposes recommendations for making roads safer for users. Its focus is legislation, enforcement, education, technology, and international regulatory support. It is informed by results from checklist 4 in annex 3.

According to the TSCZ, a road traffic accident (RTA) on average occurs every 15 minutes on Zimbabwean roads and an average of five people die every day giving an annual average of 2000 fatalities. Most of the RTAs occur on Fridays and Saturdays. Easter, Heroes, Christmas, and New Year holidays also record high number of RTAs. Most RTAs occur during the day (0600 to 1800hrs) and most fatal accidents occur between 1801hrs and 0600hrs. There were 16 national road traffic accident disasters between 2011 and 2017. The disasters mostly involved public passenger buses and claimed a total of 316 lives. The fatalities disasters could have been avoided because they were mainly a result of human error.[47]

The analysis by TSCZ of the causes of RTAs during the 2017/2018 festive season or end of year holiday season showed that the main cause of fatalities was speeding which accounted for 37% of the fatalities. Tyre bursts contributed about 4% and road conditions about 1%. Reversing and overtaking errors accounted for about 6% of the fatalities. Disobeying road rules contributed about 3% and negligent driving about 9% of the fatalities. About 92% of the established causes were due to human error especially over speeding. Of concern was the failure to determine the cause of 41% of the fatalities.

5.2 Legislation, standards and policies

According to checklist 4, the legal framework to ensure and enforce correct road use and user behaviours is well established and comprehensive. These include those concerning speed, following distance, signals, road signs, loading of vehicles, carriage of passengers, and reporting crash incidents as expressed in the Highway Code of Zimbabwe.[48] The main laws and regulations are: the Road Traffic Act (Chapter 13:11) of 2001, the Road Motor Transport Act (Chapter 13:15) and the Vehicle Registration and Licensing Act (Chapter 13:14).

Further, a framework of designated authorities responsible for implementation and enforcement is already established, consisting of MOTID (CVR, TSCZ, RMT, VID, ZINARA),

47 TSCZ research conclusions on study and analysis of 16 major crash disasters between 2016 and 2017 that claimed 316 fatalities.

48 The Highway Code is published by TSCZ and is recently harmonized with SADC/SATCC code of signs and signals.

ZRP and insurance companies, whose roles are outlined in section 1.6 and table 1.6 in annex 1. TSCZ and ZRP confirm that compulsory basic liability third party insurance is in place under the Road Traffic Act, Chapter 13:11. SI268 of 2018, Environmental Management (Control of Hazardous Substances) (General Notice), 2018 covers statutory requirements for the carriage of dangerous goods by road in Zimbabwe.

The following gaps and weaknesses were identified:

(a) Inadequate replacement and maintenance of the visibility of road signs and signals given that majority of old road informative, regulatory and direction signs have fading paint, are broken or leaning, and that road carriageway markings are worn out or were never installed;

(b) Defensive Driver Certificate (DDC) is not compulsory for drivers of non-PSVs;

(c) There are rules for road use in terms of the Highway Code, however pedestrians do not appear to be aware of whether and how regulations and penalties apply to them, and furthermore, traffic police do not enforce or penalize negligent pedestrians;

(d) There is weak legislation concerning persons driving under fatigue or under the influence of drugs/substances other than alcohol;

(e) There is no legislation to mandate the use of child restraints, seat belts for rear passengers and occupants of heavy motor vehicles as well as none to address distracted pedestrians using portable electronic devices; and

(f) The penalties for not adhering to rules of the road are not sufficiently deterrent.

5.3 Enforcement

Although the framework for laws, regulations, and penalty schedules are established, there are significant gaps and weaknesses requiring the attention of the Government. Highest priority gaps and weaknesses include:

(a) No effective anti-corruption mechanism in place to curb corruption by law enforcement and road users;[49]

(b) No mechanism exists for monitoring rest times for professional drivers;

(c) Limited enforcement equipment such as breathalysers and cameras at road intersections;[50]

(d) There is no system for real time online entry of offences and penalties by ZRP and other enforcement agencies; and

(e) The installation of vehicle speed limiters on PSVs is optional.

5.4 Education

TSCZ reports a strong framework of standards of safe user driving.[51] The incorporation of road safety in primary school curriculum could be good practice if assessment of effectiveness is carried out. TSCZ provides special skills development training and certification for driver instructors, while VID provides continuous training to vehicle inspectors

49 'Bribe-taking traffic cops fueling accidents' https://www.newsday.co.zw/2017/05/bribe-taking-traffic-cops-fuelling-accidents/

50 ZRP and TSCZ confirm that speed guns without camera were being abused by officers to extort money from any innocent road users because the digitals could be planted on those who did not infringe

51 AAZ issue international driving permits on basis of Zimbabwe driver permit

to keep abreast of changing automotive technology. All drivers of PSVs undergo a mandatory DDC training once every 4 years. GOZ is making efforts to use technology like computerized testing for the learner's licence, which was introduced in April 2019 and is similar to that used in SADC countries such as South Africa. The following gaps and weaknesses were identified:

(a) Road safety is not incorporated in the curriculum of tertiary institutions;

(b) No national certification of professional drivers for different vehicle types (e.g. articulated vehicles with triaxle, interlink and super link, tanker trailers, hazardous substances conveyance);

(c) There is generally a slow uptake of technology;

(d) There is a need to expand the education programmes for pedestrians and cyclists; and

(e) Increase awareness and education programmes for road users on consequences of bribe inducing behaviours.

5.5 Technology

TSCZ and ZRP confirm that there are priority road traffic safety research and development (R&D) programmes and funding across research institutions in the country. Stakeholders noted there is need to support developers to innovate or take up the type of technologies that keep road users attentive and improve safety in vehicles and road infrastructure.

5.6 Conclusions

This section summarizes the key recommendations for interventions to ensure the safety of road users in Zimbabwe.

5.6.1 Legislation

The following interventions are prioritized and confirmed:

(a) There is a need to amend the legislation to make the DDC compulsory for all drivers and not only for divers of PSVs;

(b) Strengthen legislation for driving under fatigue and other drugs and substances other than alcohol;

(c) Introduce legislation for use of child restraints, safety belts for rear passengers and occupants of heavy vehicles;

(d) Introduce deterrent penalties for offenders of road rules, including pedestrians;

(e) The installation of speed governors should be made compulsory for PSVs as this will go a long way in controlling over speeding by PSV drivers; and

(f) Setting up of a Professional Drivers Council for monitoring the professional conduct of professional drivers can go a long way in monitoring the behavior of PSV.

5.6.2 Enforcement

Following from the gaps identified in section 5.3, the following recommendations will ensure lawful behavior on roads through enforcement agencies:

(a) Urgent development of a water-tight mechanism for curbing corruption through a "whistle blowing" reporting system managed by enforcement agencies and ZACC;

(b) Introduction of a toll-free and WhatsApp lines for reporting offenders. The toll-free and WhatsApp numbers should be displayed on all PSVs;

(c) Expedite introduction of enforcement technology such as cameras at intersections;

(d) ZRP should prioritise purchasing breath analysers for controlling drinking and driving as currently the country does not have such equipment;

(e) Implementation of ZIMTIS will go a long way in improving enforcement efforts through an integrated system; and

(f) There is need to enhance the enforcement of non-cell phone use whilst driving.

5.6.3 Education

Following from the gaps and weaknesses confirmed in section 5.4, priority interventions put forward for increasing awareness, training and examination for users are:

(a) Conduct more road safety awareness programmes for road users in rural areas;

(b) Target youth in road safety awareness programmes;

(c) Increase use of social media for awareness programmes;

(d) Introduce additional competency licenses for different light and heavy vehicle configurations;

(e) Partner with more private sector and NGOs to close funding gaps for education programmes; and

(f) Highlight year-round awareness campaigns using all media including the seasonal campaigns during Christmas, New Years, Easter, and Heroes Holidays.

5.6.4 Technology

Following from gaps and weaknesses in section 5.5, it is clear that the Government should instate strategies, policies and funding to support technology development and use.

Chapter 6 | Effective Post-Crash Response

6.1 Introduction and background

According to MOHCC and UNAIDS,[52] while deaths due to malaria and HIV/AIDS are decreasing in Zimbabwe, the country was facing an increase of road crashes, deaths and injuries as it entered the final year of the UN Decade of Action for Road Safety 2011–2020.[53] Zimbabwe suffers from the same challenges as most low-income countries: an unacceptable rise in road crashes and deaths affecting mostly a young and productive population at a high economic cost.[54] In the 1980s and 1990s, Zimbabwe made major investments in health with notable success.[55] Such gains have largely been eroded by underfunding in the past two decades. In 2018 Zimbabwe spent 8.3% of its budget on health which is less than the 15% of that recommended by the Abuja Declaration.[56, 57]

Zimbabwe faces unique economic challenges characterized by high inflation and inadequate spending on an increased burden of disease. Adequate budgetary planning is rendered impossible. There is a dearth of empirical data and research in the country, posing challenges for generating evidence-based reports. Apart from those obliged to present dissertations for scholarly qualifications, there is little incentive or funding for research.

Accidents can happen anywhere, at any time. The majority of accidents happen in urban areas due to high vehicle and human population densities, but in remote areas, major crashes with multiple deaths and injuries, such as the Nyamakate bus disaster in 2017[58] occur in the late evening or at night. Mortality is high because of inadequate and delayed emergency response. Zimbabwe had the worst road crash mortality rate amongst its neighbours – 35 per 100,000 in 2016.[59]

A study by C. Mbanje (2017) found that in Zimbabwe 68% of persons injured within 100km of Harare metropolitan area took an average of 3 ½ hours to reach emergency care at the city's largest referral hospital Parirenyatwa Group of Hospitals[60] and were transported by members of the public in civilian vehicles. The majority of injured therefore do not receive the benefit of professional treatment during the golden hour period. Victims of accidents occurring more than 100km of Harare fared worse.

6.1.1 Summary of pre-hospital care system

Emergency care for injury is the cornerstone of the post-crash response according to WHO. and effective care requires a series of time sensitive interventions starting at the scene during the prehospital care stage.[61]

At the scene injury care is provided by the first responders who are able to initiate the system activation by rendering care, assistance and making the calls to alert the emergency services. Comprising the police, paramedics with ambulances, fire rescue and the Civil Protection Unit. These constitute the second level responders who are able to render professional assistance and triage.

This stage is followed by transportation to the nearest treatment facility where further management and treatment is rendered including transfer up the referral chain for specialised care. Further need for the injured includes rehabilitation, management of disabilities both mental and physical, followed by workplace re-integration.

Supporting the Post-Crash regimen is the requirement for research and information. Accurate data is collected at

52 UNAIDS Overview Report 2018.
53 UN Decade of Action for Road Safety 2011-2020.
54 WHO publication: Post-Crash Response Supporting Those Affected By Road Traffic Accidents. World Health Organization, 2016.
55 Zimbabwe Health System Assessment 2010 Ministry of Health and Child Care. https://www.hfgproject.org/wp-content/uploads/2015
56 UNICEF.org Health and Child Care 2018 Budget Brief for Zimbabwe.
57 Abuja Declaration Ten Years On. WHO.
58 Nyamakate Bus Disaster. 43 perish in bus crash. Chronicle Newspaper 9 June 2017 Chronicle.co.zw.
59 DataWorldBank.org WHO Global Status report on road safety 2018. Through global health observatory
60 Mbanje C., and G. Muguti. "Access to Tertiary Trauma Care: Challenges Within A Developing Health System." South African Journal of Surgery, Vol.55, no.2, 2017, p. 63. Gale Academic OneFile. Presentation to Surgical Society of Zimbabwe.
61 WHO Model: https://www.who.int/violence_injury_prevention/publications/road_traffic/Post-crash_response_booklet.pdf

the scene by the police and other professional responders followed by an organised systematic documentation of the care given through the introduction of nation-wide trauma register and fatal injury surveillance. There is need for legal support and legislation covering facility designation standards, crash responders, police reports, and multidisciplinary crash investigations (MDCI's). Financing mechanisms must be in place to make emergency care access universally and widely available.

6.1.2 Emergency call numbers

Following a crash, the first assistance for victims comes from witnesses, passers-by or even survivors of the crash. They use their personal cell phones to call the police to set in motion the emergency medical response. A caller needs to have adequate prepaid 'airtime' in order to make an effective call or retrieve relevant data. There is no policy of educating the public on making emergency calls.

Zimbabwe used to have effective and free 3-digit emergency call numbers on the old and now largely obsolete landline telephone system[62]. These have now fallen into disuse with the advent of the versatile mobile phone and replaced by a plethora of numbers that may cause confusion in an emergency setting. There is no single national 3-digit emergency call number. The three mobile phone operators Econet (182), NetOne (114) and Telecel (112) each have their own 3-digit call number. [63] However, they are not cross transferable, and the review found that they were unreliable. A subscriber to one operator cannot call a different operator's number.

The country's cell phone penetration exceeds 90% and coverage exceeds 90% along the major highways. Internet penetration is 60% while fixed telephone tele density has fallen to 1.8%.[64]

Many hospitals and police stations still use an antiquated fixed wire system which is often faulty, and many calls go unanswered. Policemen sometimes use their personal phones for emergency calls. More reliable numbers are connected to private ambulance operators who provide service only after a fee is paid or by pre-arrangement with medical insurance providers. High unemployment and prices render most Zimbabweans unable to pay for private ambulances in an emergency.

POTRAZ has been mandated to oversee the creation of a 3-digit toll-free across-all-networks emergency call number.

The first responders assisting the injured lack protective attire such as gloves, first aid kits and basic first aid training. There is no law that governs or inhibits the public from rendering assistance to the best of their ability. The absence of such laws and the absence of gloves and first aid kits may inhibit some from giving effective assistance. When ambulances and professional help is delayed or unavailable, the responders (who lack triage skills) take it upon themselves to move the injured on any available mode of transport to the nearest medical facility. This poses obvious danger for both the helper and the helped.

6.1.3 Transfer and Transport

C Mbanje (2017) found that within the capital city Harare only 49% of the injured were conveyed by ambulance to the major trauma centre at Parirenyatwa Group of Hospitals for receiving professional emergency care. The Harare Urban City Council had 43 fully-kitted ambulances in 2002, but now has only 4 due to inadequate funding and poor vehicle maintenance.[65] The government and urban council used to operate and provide the majority of the ambulances to provide free service. The ratio has since been reversed and the private sector now has the higher number of ambulances, whose service requires payment upfront (figure 5, table 1).

Private ambulance operators have fully kitted ambulances including aircraft for domestic and international transfers.[66] Some operate sophisticated call centres. Private ambulance operators who concentrate their services in the cities and economic hubs are reluctant to commit assets over long distances or after hours when there is no guarantee of payment. They do commit some limited units when requested in the event of major disasters. The army and air force have readily given assistance in the past when requested by the Civil Protection Unit.

62 Telone Telephone Directory Volume 2 2003

63 http://www.zim.gov.zw/index.php/en/my-government/government-ministries/about-zimbabwe/466-emergency-services

64 POTRAZ (Post and Telecommunications Regulatory Authority 3rd Quarter Report 2019. www.potraz.co.zw

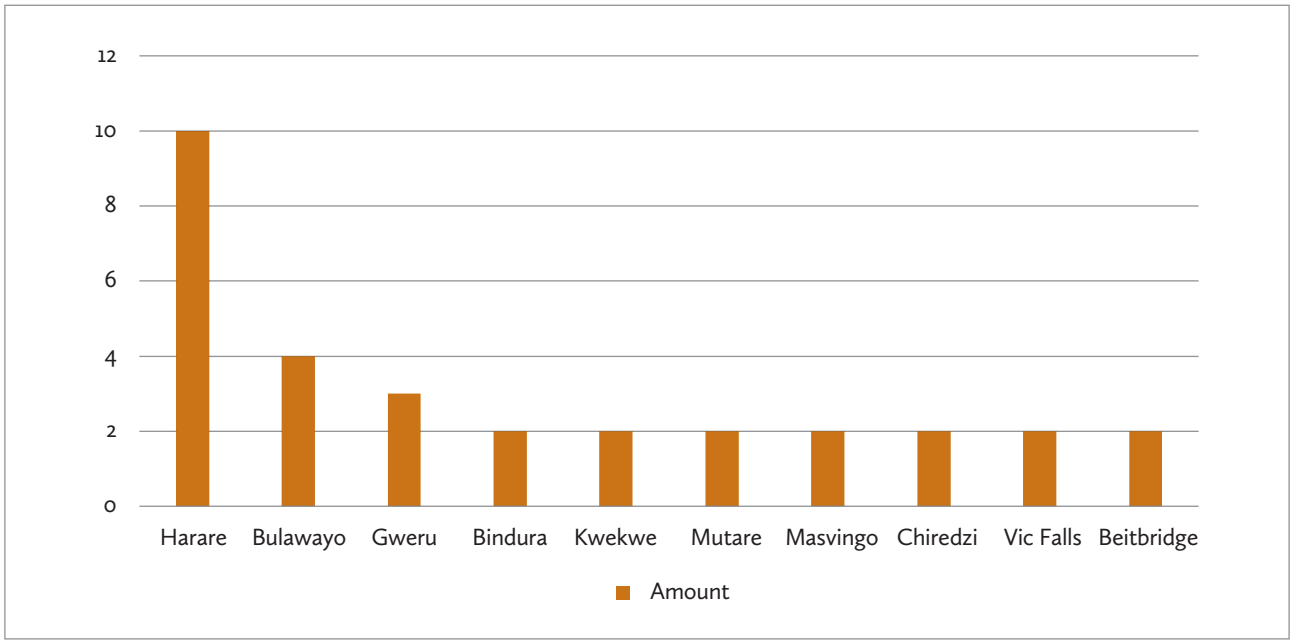
65 Interview with Dr P Chonzi Chief Medical Health Officer Harare Urban City

66 ACE Ambulances ww.ace-ambulances.com

Government hospitals have very few serviceable ambulances, which are are used for a multiplicity of tasks, and the staff are untrained. These ambulances are often not available when road crashes occur and are unsuitable for major trauma cases. The Health Professions Authority strictly regulates and supervises the standards of private ambulance operators.[67] Government ambulance supervision is notably lax.

67 Health Professions Authority (HPA) hpz.co.zw

Figure 5: Deployment of Ambulances in Zimbabwe by the Largest Private Ambulance Operator EMRAS



Source: EMRAS www.emras.co.zw

Table 1: Harare's Five Largest Private Ambulance Operators vs Government and Urban Council

	No.	Aircraft
EMRAS	10	1
MARS	6	1
NETSTAR	4	
CIMAS	2	1
ACE	4	3
Public Sector		
City of Harare	4	
Sally Mugabe Central	2	
Parirenyatwa Central	2	
Chitungwiza	2	

Source: Individual Hospitals, Individual Ambulance Operators

The police by law are obliged to attend every road crash scene. Their role is to secure the scene, collect crash data for insurance and legal processes, assist the injured, and transport the dead. Police data is used for statistical purposes. They cannot attend timely to all calls due to manpower and vehicular limitations. This leads to data shortcomings. Some deaths that occur after the scene of crash are not included in the police report although the hospitals record them in their case files.[68] There is no sharing of data or case file coordination. Data recording and retrieval is done manually, posing challenges for researchers.

6.1.4 Hospital Care

Most casualties are initially sent to government institutions because of their wide distribution and free service. The government has established a health system of district (50), provincial (8) and central hospitals (5) which have a functional Accident and Emergency units operating 24 hours a day. They are manned by qualified doctors, nurses

68 Fatal Injury Surveillance in Mortuaries and Hospitals, A Manual for Practitioners and Hospitals. WHO

and physiotherapists. They maintain standards of practice as prescribed by regulatory authorities such as the Medical and Dental Practitioners' Council of Zimbabwe (MDPCZ) and Nurse's Council under the Health Professions Act. The large hospitals have MRIs, CT and ultrasound scans. Parirenyatwa and Sally Mugabe Hospitals have recently started rolling out a WHO-based Trauma Register.

There is no standardized emergency care protocol such as a trauma check list or trauma registry.[69] There is a need to standardize and update these to meet current best practice. Crash victims requiring specialized care are transferred along the referral chain to central hospitals.

A policy for an even establishment and distribution of emergency care centres along the major highways is not in place, leaving some long stretches uncovered. The major motor vehicle artery from South Africa to Zimbabwe and beyond the A4 has just two district hospitals and one provincial hospital with one specialist surgeon along the entire 670 km route between Beitbridge and the capital city Harare (Figure1.1). It is a route with a high road crash and casualty rate. There are well known crash hotspots along major highways but there is little preparation of such institutions in readiness for the next crash. There is no organized system of replacing consumables utilized in road crashes. There are shortages of essential items such as chest drains, blood, intravenous fluids pulse oximeters, ultrasound machines. Some peripheral hospitals often do not have working x-ray machines. Institutions in high accident zones are better rehearsed to manage them.

The Government does not run any standardized training or registers for emergency trained medical staff. Private ambulance organisations run courses such as ATLS (Advanced Trauma Life Support), BLS (Basic Life Support) or equivalents for their own staff and other professionals for a fee. The Surgical Society of Zimbabwe, a professional organisation for surgeons in Zimbabwe was in 2019 accorded international accreditation to run ATLS courses.[70] The Red Cross[71] and St John Ambulance run free first aid courses for the public but there is no standardized national curriculum or register, and the enrolment is limited and voluntary.

69 WHO International Registry For Trauma and Emergency Care.

70 Ace Ambulances, EMRAS Ambulances psmi.co.zw.

71 Red Cross Zimbabwe www.redcrosszim.co.zw, www.dailynews.co.zw 2019,10.

6.1.5 Rehabilitation: Physical and Mental Care

While still undergoing treatment or after discharge, the victims undergo rehabilitation. All the general, provincial and most district hospitals have functional rehabilitation departments manned by trained and regulated professionals. These give attention to physical and occupational therapy leading to reintegration back to work and previous activity.

According to MOHCC, the Department of Rehabilitation is responsible for oversight of medical and social rehabilitation in all public health institutions in Zimbabwe. The department oversees and supervises physiotherapy, occupational therapy, speech therapy, audiology services, orthotic and prosthetic services, assessment and referral and domiciliary services in the country. There are four public Rehabilitation Centres offering specialised services in the country , namely: (i) Children Rehabilitation Units (CRUs) at Mpilo CRU and Harare Hospital CRU; (ii) Ruwa Rehabilitation Centre for spinal injuries; (iii) Rehabilitation for mental illness (Ingutsheni, Parirenyatwa Annexe, Harare Hospital and Ngomahuru), and (iv) National orthopaedic referral centres (Parirenyatwa and UBH Bulawayo).

There is a general shortage of equipment and most of it is old and needing replacement with modern versions. Funding and maintenance are poor. Workmen's Compensation and medical insurance providers have their own rehabilitation centres and programmes catering for their clients. These units are better resourced.

It is recognised that victims, their families, and crash helpers suffer from acute and sometimes lasting psychological trauma needing treatment. This fact is accorded to little awareness or attention in Zimbabwe and may be related to mental health stigma.[72]

6.2 Legislation

6.2.1 Standards for post-crash response and for crash investigation

According to MOHCC, the Public Health Act [Chapter 15:171] is the primary legislation for health services delivery in Zimbabwe. The Health Professions Act makes a legal provision for emergency health services professional

72 Dr M Madhombiro, Unit Coordinator for Mental Health at University of Zimbabwe School of Health Sciences

management and sets standards of health services delivery.[73] The Allied Health Act makes a provision for emergency management by professionals and sets standards. Checklist 5 shows that the primary legislation is silent on effective post-crash care. Part III (Emergency) of the Public Health Act does not mandate post-crash care or functions to any district, provincial or national public health teams.[74] It instead only provides that in all emergency cases, health facilities (public and private) shall not deny anyone free emergency care services.[75]

According to stakeholders in checklist 5, there is currently no legal provision, policy or regulations in terms of the Public Health Act enabling, protecting or regulating anyone to perform post - crash emergency first-aid activities within his/her capacity, or prohibiting anyone from performing first aid activities according to his or her capacity.[76]

73 Fatal Injury Surveillance in Mortuaries and Hospitals, A Manual for Practitioners and Hospitals. WHO

74 Ibid.

75 Reviewed and confirmed by consultant.

76 Dr G. Vera, T Chonzi key informants MOHCC

Table 2: Strategic Priorities and Recommendations

	Priority Investment Recommendations
	Legislation (Standards for data collection, post-crash response and investigation)
1	Set up lead agency to coordinate, set standards of operation and cooperation between stakeholders, private and public
2	Provide legal framework to protect first responders and the injured at crash site
3	Provide toll-free 3-digit national emergency call number. Set up national call centre and educate the public on emergencies and making emergency calls.
4	Set standards for education in first aid for the public, drivers of PSVs, police and military, driving license holders
5	Provide standardised curriculum and database of personnel and professionals trained in post-crash response
6	Regulate and enforce prescribed first aid boxes and standards for rescue equipment
7	Introduce trauma register and adoption of international best practice standards. Institute medical checklists and protocols as recommended by WHO, and record data electronically with case-based linkages between disciplines
8	Establish multi-disciplinary crash investigations, training of investigators and certification
9	Regulate the establishment of a link between 3rd party and passenger liability insurance with care of the injured and rehabilitation. Simplify claims process, regularly revise quantity apace with inflation.
10	Legislate for emergency centre staffing standards, designation classification and site location along traffic corridors.
11	Legislate for guaranteed payment for providers of service and pre-stocking and replacement of equipment and consumables at emergency centres.
12	Lead agency to source funds both internally and externally and lobby actively for the setup of a Road Crash Fund based on experiences in neighbouring countries.
13	Set up a Road Accident Fund to finance a viable road crash emergency framework and system.
14	Encourage and provide funding for research

6.2.2 Multidisciplinary crash investigations

Zimbabwe does not have an organized system for multi-disciplinary road crash investigations. Civil aviation has an efficient system of thorough investigations of all crashes or mishaps involving aircraft, even of a minor nature. (Civil Aviation Act 13.16). TSCZ, MOHCC and DoR[77] confirm that no legislation exists for enabling the institution of multidisciplinary crash investigations (MDCIs), including standardising and coordinating data collection and information sharing. On the other hand, the Civil Protection Unit under the Ministry of Local Government holds regular meetings on disasters including major crashes. As previously mentioned, the Government can declare major crashes with multiple fatalities to be "National Disasters" and the victims can qualify for state assistance for medical treatment and funerals. No formal in-depth inquests are held for these disasters. This review established that the main institutional framework of actors who could be involved in MDCIs are ZRP, MOTID, MOHCC, Civil Protection Unit, TSCZ, VID, Insurance, Ministry of Justice and local authorities.

TSCZ and ZRP confirm that traffic police carry out road crash investigations, including collecting accident scene data and evidence, mainly to establish blame apportionment and liability in terms of road rules, whereas MDCIs would provide scientific explanation and evidence of cause-effect.[78] The data produced by traffic police is aimed to be admissible evidence for judicial, legal and insurance claim processes. Traffic police data are utilized to compile national statistics indicators by TSCZ.

6.2.3 Financing Road Crashes

The greater burden of road crash finances is borne by the government or the MOHCC budget. The other players who play a small but significant role are given below:

Third Party Insurance: There is compulsory third-party insurance for all motor vehicles and trailers (Road Traffic Act Chapter 13.11). It covers third party property, damage, injury or death. In the immediate post-crash period, this facility provides no benefits as the claims process is laborious and often requires lawyers and payments are fault-based. Payments are low, subject to limits and do not keep pace with inflation.

Passenger Liability Insurance: This covers against passenger liability for public service vehicles. Payments are not fault-based but the quantities are subject to limits – ZWL$20,000 per accident for private vehicles and, ZWL$30,000 (US$460) per accident for public service vehicles. There is very little public education and information on making claims for insurance pay-outs. Insurance pay-outs cannot cover ambulance evacuation. Sadly, most vehicles transporting passengers for a fee are uninsured due to lack of enforcement.

Workers' Compensation: Workers injured in road crashes while on duty are fully covered by the Workers' Compensation Act in the crash period, for evacuation, hospital care, rehabilitation and disability payments and can receive fully funded private care.

Medical Insurance: While private medical insurance provides comprehensive emergency medical treatment for road accident victims, only 6% of the Zimbabwean population is covered.

National Disasters: Major crashes with deaths exceeding 10 are declared national disasters by the government. The government takes responsibility for treatment in government institutions and provides funeral assistance for the dead.

Government and Out of Pocket Financing: Insurance based financing models provide no direct link with crash injuries are unsuitable in the acute emergency phase. Their contribution is small, leaving the bulk of the financing burden to out-of-pocket payments by relatives or ultimately to the government through the health budget.

6.3 Enforcement

The Public Health Services Act empowers the Ministry to establish a Health Services Board that regulates and sets standards of service delivery as well as provides enforcement through various regulatory agencies. Health services charters, professional health services standards and ethics, manuals and policies are in place to regulate and enforce compliance for health services. However, Part III of the Public Health Act, which provides for emergencies, does not designate or mandate district, provincial nor national health teams for oversight of rescue services and investigation of crashes,[79] meaning that it is possible for the minister to make proclamation of designated coordinators, standards

77 Sector Key informants in List of contributors.

78 ZRP key informant in List of contributors.

79 Public Health Act 27:9 Part III.

and regulations for post-crash care; there is a need that this be done. Overall, the review in checklist 5 confirms a gap in the enforcement framework in that a lead agency for post-crash care is not established.

6.4 Education

Setting of curriculum, programmes and standards and certification of nurses, doctors and others in health services delivery is the mandate of the health ministry through its regulatory boards and councils. On the other hand, first aid training is neither regulated nor recognised under the Public Health Services Act and is not regulated by Professional Health Services Council.[80] The review confirmed that first aid lacks a standardized curriculum and is carried out independently by the Red Cross, St John Ambulance, City Health and local authorities and some private ambulance organizations.[81] The MOHCC does not have a programme for training the public in first aid. The programmes are largely free, but some require fees.[82]

Public awareness of road accident prevention, implications and consequences is carried out by the well-funded TSCZ. It does not include training on how to make emergency calls. Legal certification is not available, revalidation of certification is not carried out and there is no national register or database. Police and army train their personnel in first aid.

The same MOHCC key informants confirm that no assessment of the effectiveness of first aid training programmes is carried out. Zimbabwe has recently been granted international accreditation for advanced training in trauma skills (ATLS) Advance Trauma Life Support training by the Surgical Society of Zimbabwe. Zimbabwe does not have specific certification of trauma centres.

MOHCC confirm that budgets made available for training are grossly inadequate.

6.5 Technology

The uptake of advanced technology and equipment is slow, such as for a national call centre and a single national emergency number. Rehabilitation facilities are constrained by lack of equipment and tools for the various recovery disciplines such as physiotherapy, psychotherapy and occupational rehabilitation, which could be developed in technology institutes should there be programmes for support by MOHCC, TSCZ and partners or a national safety road trust fund.

80 Sector Key informants in List of Contributors
81 Ibid.
82 Health Sector Key Informants in List of Contributors.

6.6. International regulatory support

The WHO model of emergency care is comprehensive and provides all pillars necessary for the post-crash response management system with which to review and benchmark Zimbabwe's framework.

6.7 Conclusions

The review has shown the notable shortcomings of emergency care in the pre-hospital and transfer to hospital phase. The care of majority of the injured and transportation during the critical golden hour lies in the hands of well-intentioned but untrained first responders who also raise the alarm to set emergency services into action.

It is well known that a nation providing effective preparedness measures such as national toll-free call centres, educating the public in first aid, provision of first aid boxes, timely evacuation for professional attention can result in significantly reducing mortality and morbidity without the need for expensive high-income country interventions.[83]

Zimbabwe, despite its low ranking in the world mortality rates tables, has the potential to make significant improvement in emergency medical care.

The country's health system has a sound clinical foundation and a tried and tested referral system. The country needs an urgent emergency care systems assessment (ECSA) in conjunction with WHO to enable informed planning to correct the laxity in standards and policing. There is a need to update and adopt current best practice protocols in use internationally. A lead agency with political and legislative clout incorporating all relevant stakeholders will be necessary to bring order to a system that does not march in unison.

A recurring theme in all pillars has been the critical constraint played by the inadequacy of funding. Zimbabwe needs to adopt a Road Accident Fund to carry the burden of road crashes as in neighbouring countries like Botswana.[84] For example, a 5% fuel levy based on the 2016 imports would raise USD 75 million for the country.[85]

The following recommendations will strengthen the post-crash response in Zimbabwe.

6.7.1 Legislation

The following recommendations are for the strengthening of legislation for effective post-crash response in Zimbabwe:

Legislation for post-crash emergency exists in Part III of the Public Health Act (15:171) providing for emergencies, but there are significant legislative and institutional gaps that require priority intervention. Mainly there are no standards, regulations or policies established, a lead agency and coordinator is not designated for post-crash care Only two regulations are in place, that: no health facility or establishment shall fail to admit an emergency victim or patient, and that all emergency services shall be free in both public and private facilities.

Currently, district, provincial and/or national health teams are not delegated or designated the role and function of lead agency and coordinators of post-crash care. Accordingly, priority interventions by MOHCC should be to:

(a) Designate a lead agency and coordinator for post-crash care to coordinate and enforce standards and policies.

(b) Develop comprehensive standards and regulations for post-crash care by benchmarking international good practices of the WHO and regional peers such as South Africa, Botswana and Namibia.

83 Prehospital Care Systems. WHO Publications. Prehospital Care.

84 Botswana Motor Vehicle Accident Fund Annual report 2018:20-24.

85 World Integrated Trade Solution. www.wits.world.bank.org/countryprofile/en/country/ZWE/year2018/Tradeflow/expimp/partner/WLD/product/all-Group.

(c) Investigate development of legal instruments or a policy framework to protect the 'bystander goodwill helper' and the injured.

(d) Set regulations and standards for a national emergency call centre and single national emergency call number.

(e) Establish a framework of regulations and standards for multi-disciplinary crash investigations, training of investigators and certification.

6.7.2 Enforcement

The following recommendation is for strengthening enforcement for effective post-crash response in Zimbabwe:

The findings in section 6.3 confirm that while existing legislated regulations and standards in Part III of the Public Health Act (regulating that no health facility or establishment shall fail to admit an emergency victim or patient, and that all emergency services shall be free at both public and private facilities) are being enforced across public and private health facilities, MOHCC need to review current establishment upon which to develop comprehensive regulations and standards benchmarked to regional and international good models of WHO.

6.7.3 Education

The following recommendations are for strengthening education for effective post-crash response:

The legal and institutional framework for education post-crash care is in place, with MOHCC being the authority, but the main gap is that training curriculum and standards for first aid or paramedical occupation are not regulated. Accordingly, the main priority interventions are:

(a) Standardized curriculum for first aid currently carried out independently by the Red Cross, St John Ambulance, City Health and local authorities and some private ambulance organizations should be standardised and accredited.

(b) Develop standards for training and certification of MDCI investigators.

(c) TSCZ public awareness campaign on road accidents prevention should include training on how to make emergency calls.

(d) TSCZ should educate the public on third party insurance and passenger liability and medical insurance.

6.7.4 Technology

The following recommendations concern improving technology for effective post-crash response:

There is slow uptake of advanced technology and needed equipment, as well as research development in technology good practices, especially for post-crash coordination and rehabilitation, which weakens effectiveness of post-crash care management. The main interventions recommended are:

(a) Introduce a national call centre with three-digit call number, coordinated between responsible stakeholders; and

(b) Address deterioration and lack of rehabilitation equipment through partnership with technology and research institutes and private sector.

6.7.5 International regulatory support

Following recommendation is for strengthening international regulatory support for effective post-crash response in Zimbabwe:

(a) An WHO Emergency Care Assessment should be carried out to identify gaps in the system and recommend localized remedial action; and

(b) the WHO model of post-crash response is recommended for benchmarking to good practices.

Chapter 7 | Conclusions

Overall, Zimbabwe has shown significant commitment to promoting the goals of the United Nations Decade of Action for Road Safety 2011–2020 across Pillars 1-5 and the African Road Safety Plan of Action 2011–2020. This is a key strength that is providing a strong foundation for consolidating and scaling up the improvement of road safety in the country. In the first five years, up to 2015, the country made notable achievements on the agreed priority areas of road safety. In their mid-term review in 2015 UNECA ranked Zimbabwe's overall progress fourth after Ghana, Nigeria and South Africa.

Nearly five years later, a review, which was carried out close to the end of the Decade of Action for Road Safety, concluded that road safety performance had deteriorated since 2015.

This is shown by one crucial road safety statistical performance indicator, Zimbabwe's official road traffic crash fatality rate per annum, which increased from 1,836 in 2016 to an average of 2,000 deaths per annum from 2017 to 2019.

The point has been made that this official indicator is most likely an underestimate because it leaves out those who died in hospital and after hospital discharge, though there still is need for stakeholders to develop common standards for data management. The review agrees that the WHO indicator which triples the official death crash rate, to a close to 7,000 could be the more accurate because it accounts for those who died while in a hospital or afterwards; Zimbabwe does not have an organized process for fatal injuries surveillance in mortuaries and hospitals.

As the second United Nations Decade of Action for Road Safety begins, Zimbabwe will have another opportunity to work towards the goal to halve its road traffic crash fatalities and injuries by 2030.

The review has concluded that the crash death rate per annum could even triple in the next ten years if there is no corresponding increased commitment by all stakeholders to address road safety as a serious national crisis and national development concern.

Table 3: Effective Post-Crash Response Capacity Building Investment Framework

	Priority area	Recommended priority interventions	Responsible entity
I. Road safety management			
1	Accession to and implementation of international regulatory support	1. TSCZ should provide championship, and MOTID provide leadership for the necessary political commitment. 2. Government of Zimbabwe should become contracting party to and implement following treaties: (i) the six United Nations Conventions on road safety; (ii) African Road Safety Charter; (iii) African Pan African Trans-Highway Agreement. 3. Seek capacity-building support from the United Nations to implement the 6 United Nations road safety conventions as necessary.	Ministry of Transport and Infrastructural Development

Priority area		Recommended priority interventions	Responsible entity
2	Strengthening of the strategic, technical, and financial capacity of the Traffic Safety Council of Zimbabwe (TSCZ) to better conduct the functions expected of a lead national road safety entity as well as raising political priority and commitment on road safety.	1. Enable TSCZ to function as the legislated lead road safety agency. 2. Strengthen TSCZ to clearly function as legislated Coordinator to provide championship and coordination of multisectoral plan of action and target setting for national road safety. 3. Formulate a national Multisectoral Road Safety Policy. 4. Produce a Multisectoral Road Safety Strategy. 5. Establish comprehensive multi-sectoral national road safety Plan of Action plan with time-bound objectives for 2030. 6. Facilitate development and adoption of Action Plan with time-bound targets for 2030. 7. Formalize and build capacity of the existing multisectoral stakeholder coordination frameworks and platforms. 8. TSCZ should provide leadership in resource mobilization and coordinate accurate road safety statistical indicators in Zimbabwe. 9. Ensure coordination among designated authorities across road safety components and related policies and areas, so that all designated authorities are not operating in isolation, especially with land-use planning and mobility policies. 10. Establish a periodic review process to monitor progress towards road safety performance indicators. 11. Consolidate and disseminate common road safety performance statistics from all road safety authorities. 12. Fully implement ZIMTIS. 13. Create Road Safety Multi-Media Campaign and Advocacy Strategy and Programme. 14. TSCZ should prepare a financing and funding strategy based on the adopted national plan of action. 15. Establish Zimbabwe Road Safety Trust Fund benchmarked to regional good practices.	Ministry of Transport and Infrastructure Development/ Department of Roads TSCZ

	Priority area	Recommended priority interventions	Responsible entity
3	Strengthening the traffic and road safety legislation	1. Conduct a comprehensive review of Zimbabwe's principal pieces of legislation and standards and align them to the United Nations Road Safety Conventions. These include: (a) Roads Act 13:12; Road Traffic Act 13:11; (b) Statutory Instrument (S.I.) 309 of 1985 (Road Traffic Regulations, 1985); (c) Road Motor Transportation Act: 13:15; (d) Vehicle Registration and Licensing Act 13:14; (e) Toll-Roads Act 13:13, and (f) Traffic Safety Council Act 13: 17, and (g) Traffic Safety Council Act No. 20 of 1999. 2. Create business case for expanding of road traffic functions to local authority level (benchmarking against regional good practices). 3. Establish an effective mechanism to curb corruption.	Ministry of Transport and Infrastructure Development/ Department of Roads TSCZ Urban Councils
4	Establishing and implementing a road crash data base system	1. Carry out user needs and requirements assessment and specification study on road crash database system.	Ministry of Transport and Infrastructure Development
	II. Safe road infrastructure		
5	Improving implementation of road safety audits and assessments, especially in urban areas, to address the safety of vulnerable road users	1. Develop standardize road safety audit manual to create a national level road assessment programme. 2. Harmonize signs and signals with regional and international convention and launch a programme of national and municipal replacement to enhance safety. 3. Conduct traffic safety audits on infrastructure plans (traffic safety studies are carried out as part of approval of all new township and infrastructure planning approval process). 4. Conduct road safety design assessment and audit before construction work starts on new roads and those being rehabilitated. 5. Carry out periodic safety inspection of roads in operation, including risk mapping. 6. Introduce safety measures when safety conditions of a road deteriorate such as to decrease travel speed, and safe detours during rehabilitation period.	Department of Transport/ MITD. District Development Fund Urban Councils Rural District Councils ZINARA

	Priority area	Recommended priority interventions	Responsible entity
III. Safe Vehicles			
6	Improving vehicle safety, including through periodic and mandatory vehicle inspection	1. Amend the law to include vehicle inspection and certification of vehicle roadworthiness for non-PSVs. 2. Transpose international and regional vehicle safety regulation into domestic practice. 3. Introduce legislation that regulates speed for all PSVs. 4. Develop a co-ordinated approach for the regulation and enforcement on the carriage of dangerous/hazardous substances.	Ministry of Transport and Infrastructure Development
IV. Safe Users			
7	Improving road safety education and awareness	1. Conduct all-year-round road safety campaigns and education programmes. 2. Strengthen standards for assessing impact of education and awareness-raising. 3. Include road safety issues in curriculum for primary, secondary and tertiary institutions. 4. Partner with private sector and NGOs to close funding gaps for education programmes.	TSCZ Ministry of Education NGOs
8	Improving driver training	1. Introduce standard Certificate of Professional Competence before professional drivers can drive different vehicle types like articulated vehicles. 2. Make the Defensive Driver Certificate (DDC) compulsory for all drivers and not only for drivers of PSVs.	TSCZ Ministry of Transport and Infrastructure Development
9	Improving driver testing	1. Review to improve implementation of the driver testing regulations and evaluate computerized driver testing system to determine effectiveness.	TSCZ Ministry of Transport and Infrastructure Development

	Priority area	Recommended priority interventions	Responsible entity
V. Effective post-crash response			
10	Strengthening and expanding Emergency Medical Services (EMS)	1. Identify a lead agency to coordinate and enforce standards on EMS. 2. Conduct an Emergency Care System Assessment (ECSA) in conjunction with WHO to identify gaps in EMS care, recommend remedial measures and to implement priority actions. 3. Develop an EMS policy in line with WHO Guidelines. 4. Introduce trauma register and adoption of international best practice standards, medical checklist and protocols recommended by WHO, record data electronically with case-based linkages between disciplines. 5. Provide legal framework to protect the injured after a crash as well as the bystander help through "a good Samaritan law". 6. Establish a 3-digit national emergency call number, routed through a national call centre with public awareness about its use. 7. Establish a national call centre to cooperate with already established call centres, reflecting trained operators. 8. Provide standardized curriculum for and database of training professionals on emergency care. 9. Set standards for first aid education for the public. 10. Enforce standards of rescue equipment for rescue vehicles. 11. Establish multi-disciplinary crash investigations as well as training of investigators and certification. 12. Establish regulation linking third-party and passenger liability insurance for care of the injured and rehabilitation. 13. Simplify claims process and increase pay-out quantity in line with inflation. 14. Legislate for emergency centres staffing standards, classification and distribution along traffic corridors. 15. Legislate for guaranteed payment for emergency care providers. 16. Provide policy for pre-stocking and replacement of equipment and consumables utilised post-crash at emergency centres.	Ministry of Health and Child Welfare.

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Annexes

Annex 1: Road Safety Management Actors and Roles

Sector	Organization/ Institutional Actor	Role
Government		
1	Ministry of Transport and Infrastructure Development (MITD)	• National Roads and Safety Authority • Legislation and Standards Regulation • Road safety leadership and champions • Legislation review and drafting for International Treaty and Conventions and Agreements for party contracting by Ministry of Foreign Affairs and Office of President and Cabinet
	Department of Roads (DOR)	• National Roads Management and Safety Audit Authority • International standards benchmarking • Road safety leadership
	Traffic Safety Council of Zimbabwe (TSCZ)	• National Lead Agency & Coordinator • National Road Safety Code and Driver Training Standards • Civic Education and Awareness • Road safety coordination
	Vehicle Inspection Department (VID)	• Vehicle Technology Safety Standards, Inspectorate, Compliance Enforcement and Training • Driver Testing &Licensing and Database
	Central Vehicle Registry (CVR)	• Vehicle Registration/ Deregistration and Records Database Management
	Central Mechanical and Equipment Department (CMED)	• Government Fleet Management; Driver Training
	Zimbabwe Road Motor Transport Services (RMTS)	• Public Vehicle Licensing and Permitting Management
	Zimbabwe National Roads Administration (ZINARA)	• Vehicle Licensing, Roads Administration and Funding and Database Management

Sector	Organization/ Institutional Actor	Role
2	Ministry of Home Affairs	• National Policing
	Zimbabwe Republic Police (ZRP)	• Road Traffic Enforcement & Control; National Data and Statistics; Road Crash Management & Investigations • Road Accident/ Incident and conditions Information reporting/ Sharing • National Data and Statistics Sharing and Reporting
3	Ministry of Health and Child Care (MOHCC)	• Post-Crash Emergency Health Care Services and Data Management • Post- Crash Safety Health Services Standards • Health Services Training and Licensing
4	Ministry of Finance and Economic Development	• Road Infrastructure Finance • Registrar of Vehicle Insurers
5	Ministry of Justice, Legal and Parliamentary Affairs	• Legislation and legal drafting • Prosecution and Penalty Framework and Enforcement
6	Ministry of Local Government, Public Construction and National Housing	• Road and Traffic Safety Planning Legislation and Standards Management and Enforcement • Road Disaster Management and Civil Protection Services
7	Local Authorities	• Road and Traffic Planning Legislation and Regulations and Safety Enforcement Authorities • Civic Engagement and Information
8	Office of the Cabinet and President	• United Nations / International Treaties and Conventions Signatory
	District Development Fund (DDF)	• Rural District Roads Infrastructure and Safety Authority
9	Ministry of Primary Education	• Education in Schools
10	Ministry of Foreign Affairs and International Trade	• Treaties and Conventions and Agreements Contracting/ ratification for Ministries and Office of the President and Cabinet

Sector	Organization/ Institutional Actor	Role
Private Sector	Automobile Makers Association (AMA)	• Vehicle Technology Innovation and Manufacturing
	Insurance Companies	• Vehicle Third Party Insurance
	Health and Emergency Rescue Services Providers	• Post-Crash Emergency Care
	Crash Rescue Services	• Crash Rescue Services
International, non-governmental and other organizations	World Health Organization (WHO)	• United Nations Road Safety and Health Authority
	United Nations Development Programme (UNDP)	• United Nations Road Safety Development Assistance
	UNECA	• African Union Road Charter Country Support
	UNECE	• United Nations Secretary General's Special Envoy for Road Safety Support to member countries
	Research and Development Institutions	• Technology research, innovation, and invention
Civil Society		• Road Safety Engagement
	Automobile Association of Zimbabwe (AAZ)	• International Driver Permitting • Information Needs of Motorists
	ZUDAC	• Driver and conductor training
	Youth 4 Safer Cities	• Urban youth road safety engagement
	Individuals	• Technology Innovation and invention • Advocacy

Source: Zimbabwe RSPR, 2019

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Annex 3: Checklists

Checklist 1: Pillar 1 (Safe Road Mgt.) Stakeholder review findings

SECTION A – MANAGEMENT ACTION – STAKEHOLDER SITUATIONAL ASSESSMENT, PRIORITY ACTION, AND RECOMMENDATIONS ON MANAGEMENT ACTION
1. Set road safety targets (fatality reduction, accident reduction, serious injury reduction) linked to the implementation of National Action Plan.
2. Ensure vertical and horizontal coordination between action taken by designated authorities across road safety pillars and areas.
3. Ensure coordination with other country priorities and policies especially with land use planning and mobility policies.
4. Review performance based on the monitoring of action and make adjustment to interim targets and to National Action.
5. Designated Coordinator.
6. Ensuring enough funding.
7. Establishment of National Action and linking with time – bound targets.
8. Establishing a comprehensive multi-sectoral national road safety action plan with time-bound targets by 2020.

SECTION B – MONITORING ACTION
1. Maintain common road safety crash database or integrate databases maintained by appropriate designated authorities for specific road safety action. A common database may be maintained by a lead agency if such was established.
2. Calculate and share indicators linked to actions of National Action Plan, among them, such indicators

Checklist 2: Pillar 2 (Safe Road) Stakeholder review findings

SECTION A – LEGISLATION (STANDARDS FOR ROAD DESIGN, CONSTRUCTION, MAINTENANCE, AND SIGNAGE)
1. Put in place road classification including for urban streets that meet the safety needs of all road users.
2. Put in place adequate standards for geometric and design characteristics per classified road (No. of lanes, separation of lanes, width of lanes, curve radii, horizontal and vertical alignment, cross-sections, overhead clearance, intersections, tunnels, level-crossings, roundabouts, roadsides, etc.).
3. Adopt general prescriptions and related standards for infrastructure for non-motorized traffic, crossings, and separation with motorized traffic of bicycle lanes and pedestrian paths and sidewalks.
4. Adopt internationally harmonized signs and signals.
5. Establish national standards on safety facilities (including enough numbers of rest areas and adequate emergency lanes) and devices (such as traffic separation devices and fence).
6. Designate authorities responsible for implementation including inspection/auditing and enforcement of the existing standards as well as for their further development, as necessary.
7. Assess effectiveness and completeness of standards (completeness of standards benchmarked against international regulatory framework).

SECTION B – ENFORCEMENT (AUDIT, ASSESSMENT, AND INSPECTION BY QUALIFIED TEAMS)
1. License and accredit road assessment, inspection, and audit organizations.
2. Conduct traffic safety audits of new infrastructure plans.
3. Conduct new road safety design assessment and audit before construction work starts.
4. Conduct new road safety audit before opening it to traffic.
5. Carry out periodic safety inspection of roads in operation, including risk mapping.
6. Introduce safety measures if safety conditions of a road deteriorate (e.g. decrease travel speed, close road as an extreme case).
7. Assess effectiveness of road enforcement activities by use of appropriate indicators.
8. Ensure sufficient budget for road assessment, inspection, and audit.

SECTION C – EDUCATION (AWARENESS-RAISING FOR ROAD MANAGERS, USERS, AND TRAINING FOR INSPECTORS)
1. Carry out campaigns to build public support to construction and maintenance of safe roads as well as their proper usage.
2. Provide engaging public outreach experiences through temporary street and intersection redesigns and develop community awareness of the benefits of road safety interventions.
3. Train road designers, construction engineers, inspection, and audit organizations to perform high-quality work, when possible by developing local road safety assessment, inspection, or audit programmes.
4. Assess effectiveness of education activities by use of appropriate indicators.
5. Ensure adequate budget for awareness raising and training.

SECTION D – TECHNOLOGY
1. Use equipment, materials and technologies for design and construction of forgiving, self-explaining roads including elements such as lane separation devices, emergency lanes, positioning, school zones, design, and protection of traffic sign stayers.
2. Use equipment, materials and technologies for design and construction of urban streets including elements such as separation of pedestrian areas, speed humps, traffic calming equipment, cycling lanes, parking areas, school zones, lanes for individual transport and lanes for public transport, information systems for road users.
3. Use equipment and technologies to measure, benchmark and report on safety performance of roads.
4. Use equipment and technology and support development of new technology to measure objectively the safe performance of road design.
5. Support development of intelligent cost-effective road system (VMS, systems to increase user attention, infrastructure to vehicle communication systems).
6. Introduce intelligent traffic management system based on sensor data and traffic forecasts with intelligent speed managements, re-routing, etc.

SECTION E – INTERNATIONAL REGULATORY SUPPORT (BENCHMARKING NATIONAL LEGISLATION FOR DEVELOPING ROAD STANDARDS WITH UNITED NATIONS TRANSPORT CONVENTIONS)
1. 1968 Convention on Road Signs and Signals.
2. 1975 European Agreement on Main International Traffic Arteries.
3. Intergovernmental Agreement on the Trans-Africa Highway.
4. United Nations Consolidated Resolutions on Road Traffic. 1969.
5. United Nations Consolidated Resolutions on Road Signs and Signals.
6. International Road Assessment Programme, with standards for road assessment and standards for risk mapping.
7. Technical recommendations from global organisations like PIARC.
8. ISO road construction standards.

Checklist 3: Pillar 3 (Safe Vehicle) Stakeholder review findings

SECTION A – LEGISLATION (RULES AND STANDARDS FOR ADMISSION OF VEHICLES TO TRAFFIC)
1. Adopt rules for registration of vehicles that include strict vehicle inspection scheme.
2. Adopt rules on vehicle's identification mark.
3. Establish vehicle's minimum safety requirements for admission to traffic, both for new and/or imported second-hand vehicles.
4. Put in place a regime for vehicle certification for both new and/or imported second-hand vehicles with requirements for the certification processes, designation of technical services and/or inspectors.
5. Put in place a regime for periodic technical inspection of vehicles in use (registered) with requirements of scope, frequency of.
6. Designate authorities responsible for implementation including enforcement of the rules and regulations put in force as well as for their further development.
7. Introduce effective penalties scheme for incompliance with vehicle requirements.
8. Introduce vehicle requirements and certification for carriage of dangerous goods.
9. Assess effectiveness and completeness of legislation (completeness of regulatory framework benchmarked against international regulatory framework).

SECTION B – ENFORCEMENT (CERTIFICATION AND INSPECTIONS BY QUALIFIED INSPECTORS)
1. Authorize inspection centres, which may include privately operated workshops, for technical Inspections and supervise and audit inspection centres.
2. Carry out roadside technical checks including load securing (police and technical inspectors, enforcement technology e.g. mobile testing stations, portable inspection tools).
3. Establish and interlink databases for vehicle registration, periodic technical inspection, and technical roadside inspections.
4. Undertake import/export control on new and used vehicles.

SECTION C – EDUCATION (AWARENESS-RAISING FOR USERS AND TRAINING FOR INSPECTORS)
1. Carry out targeted campaigns for specific groups of users (e.g. equipment for safe transport of children in vehicles, motorcycle helmets).
2. Train, re-train, and test inspectors to carry out high quality inspection and technical checks.
3. Assess effectiveness of education activities by use of appropriate indicators.
4. Ensure adequate budget for education and training.
5. Effectively apply penalties for use of vehicles with expired certificates.
6. Effectively apply penalties to inspection centres and use anti-corruption mechanism.
7. Assess effectiveness of vehicle enforcement activities by use of appropriate indicators.
8. Ensure sufficient budget for inspection, supervision, and audit.

SECTION D – TECHNOLOGY (SUPPORTIVE TECHNOLOGY AND EQUIPMENT AND COMPLIANCE REMINDERS)
1. Support developers to bring to market automated technologies reminding vehicle owners to renew technical inspection or registration.
2. Support developers to bring to market technologies making vehicles safer and provide higher protection for other road users especially vulnerable ones.

SECTION E – INTERNATIONAL REGULATORY SUPPORT (BENCHMARKING NATIONAL LEGISLATION FOR ENSURING SAFE VEHICLE WITH UNITED NATIONS TRANSPORT CONVENTIONS)
1. 1968 Convention on Road Traffic – Provision regarding vehicle admission to traffic.
2. 1958 Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts.
3. 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspections.
4. 1998 Agreement concerning the Establishment of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be fitted and / or used on Wheeled Vehicles.
5. United Nations Consolidated Resolutions on the Construction of Vehicles.
6. United Nations Consolidated Resolution on the Common Specification of Light Source Categories.
7. United Nations Consolidated Resolution on Test-equipment, Skills and Training of Inspectors, Supervision.
8. United Nations Consolidated Resolution on Road Traffic.
9. Mutual Resolution No. 1 of the 1958 and 1998 Agreements concerning the Description and Performance of Test Tools and Devices necessary for the Assessment of Compliance of Wheeled Vehicles, Equipment and Parts.
10. Mutual Resolution No. 2 of the 1958 and 1998 Agreements Containing Vehicle Propulsion System Definition.
11. Special Resolution No. 1 of the 1998 Agreement (Common Definitions of Vehicle Categories, Masses and Dimensions).
12. Global New Car Assessment Programme.

Checklist 4: Pillar 4 (Safe User) – Stakeholder review findings

SECTION A – LEGISLATION (TRAFFIC RULES, DRIVERS OF VEHICLES (INCLUDING CYCLISTS) AND PEDESTRIANS)
1. Put in place a comprehensive system of signs, signals, and instructions to be observed on the road.
2. Adopt strict rules for drivers and specific rules for professional drivers.
3. Adopt adequate rules for pedestrians and cyclists and their interactions with drivers and behaviour of drivers towards pedestrians and cyclists with appropriate liability for drivers.
4. Put in place effective rules on position on carriageway, manoeuvring, overtaking, passing of traffic, change of directions, slowing down.
5. Adopt rules for intersection, level-crossings and giving way.
6. Regulate reasonable speed and distance management.
7. Strictly regulate driving under fatigue and the influence of substances that negatively affect the driving capacity.
8. Put in place rules on the compulsory use of safety equipment (safety belts, child restraint systems, helmets).
9. Regulate the use of lamps.
10. Regulate strictly loading of vehicles and carriage of passengers and put in place specific regulations for cargo securing for road transport and for carriage of passengers by buses and coaches.
11. Put in place adequate rules on behaviour in case of accident.
12. Adequately regulate distraction during driving and walking due to use of infotainment systems, portable electronic devices, or mobile phones.
13. Put in place regulations relating to public transport vehicles and rail-born vehicles.
14. Regulate adequately standing and parking on road, opening of doors.
15. Put in place special regulations for motorways and/or tunnels.
16. Put in place special rules applicable to cyclists, moped and motorcycle drivers.
17. Designate authorities responsible for implementation including those for enforcement of the rules and regulations put in force as well as for their further development, as necessary.
18. Introduce effective penalties scheme for offending rules of road.
19. Adopt compulsory liability insurance system for driving motor vehicles.
20. Adopt specific rules for carrying dangerous goods by road and define such goods, their classification, labelling or packaging.
21. Assess effectiveness and completeness of legislation (completeness of regulatory framework benchmarked against international regulatory framework).

SECTION B – ENFORCEMENT (ENSURING LAWFUL BEHAVIOR ON ROADS THROUGH POLICE AND INSPECTORS)
1. Carry out road-side checks on compliance of traffic rules for drivers, pedestrians and cyclists as well as overloading of cargoes and passengers (police and other inspectors, use of enforcement technology, e.g. speed cameras, other monitoring high-resolution cameras for detecting offences, breath analysers).
2. Carry out other checks (e.g. inspection at enterprises, - driving-rest times of professional drivers).
3. Prevent public spaces – sidewalks and cycle lanes from being appropriated from vehicles or commercial activities.
4. License and inspect driver training organizations and supervise examinations.
5. Apply penalties effectively and use anti-corruption mechanism.
6. Enable multiple offence enforcement mechanism (e.g. speed – technical inspection – liability insurance) by interlinking and providing access of enforcement authorities to databases on vehicle technical inspection, vehicle registration, driver permit.
7. Support development of and implement more sophisticated technology for identifying and monitoring offences by users.
8. Assess effectiveness of user enforcement activities by use of appropriate indicators.
9. Ensure sufficient budget for enforcement activities.

SECTION C – EDUCATION (AWARENESS-RAISING, TRAINING, AND EXAMINATION FOR USERS)
1. Start road safety behaviour awareness raising and teach minimum basic road safety rules to children (as of 5 years old) with focus on safe street crossing and navigation.
2. Train bicycle riders at earliest stage (children as of 10-12 years old).
3. Train drivers according to categories applied for and verify their driving skills and behaviour through examination before issuing driving permit.
4. Provide special training for professional drivers and test their (driving) skills and behaviour before issuing Certificate of Professional Competence in addition to driving permit.
5. Provide special training and certification for driving instructors.
6. Provide periodic retraining for professional drivers, particularly drivers driving vehicles carrying dangerous goods.
7. Introduce changes to training and examination following technology progress and changes to driving.
8. Enhance awareness on rules of the road beyond drivers by road safety programmes at schools and by targeted awareness raising campaigns.
9. Train enforcement authorities – roadside check authorities – to educates on the rules of the road while enforcing them.
10. Assess effectiveness of education activities by use of appropriate indicators.
11. Ensure adequate budget for education and training.

SECTION D – TECHNOLOGY (SUPPORTIVE TECHNOLOGY AND EQUIPMENT AND RULES REMINDERS)
1. Support developers to bring market technologies that would keep road users attentive in following road traffic rules.
2. Support developers to bring to market equipment and technologies for vehicles and for infrastructure that would assist drivers and other road users in dangerous situations and in avoiding or mitigating road crashes.

SECTION E – INTERNATIONAL REGULATORY SUPPORT (BENCHMARKING NATIONAL LEGISLATION FOR ENSURING SAFETY OF USERS WITH UNITED NATIONS TRANSPORT CONVENTIONS)
1. 1968 Convention on Road Traffic.
2. 1968 Convention on Road Signs and Signals.
3. 1957 European Agreement concerning the International Carriage of Dangerous Goods by Road and on-going amendment as a global agreement.
4. 1970 European Agreement concerning the International Carriage of Dangerous Goods by Road and on-going amendment as a global agreement.
5. United Nations Consolidated Resolution on Road Traffic.
6. United Nations Consolidated Resolution on Road Signs and Signals.
7. United Nations Resolution on the deployment of highly and fully automated vehicles in road traffic.

Checklist 5: Pillar 5 (Effective post-crash response) review findings

SECTION A – LEGISLATION (STANDARDS FOR POST-CRASH RESPONSE AND FOR CRASH INVESTIGATION)
1. Introduce legal requirement for anyone to perform first-aid activities within his/her capacity.
2. Introduce standards for post-crash professional emergency response.
3. Introduce framework for rehabilitation programmes.
4. Establish a link between liability insurance and financing of care for crash victims and rehabilitation programmes.
5. Enable multi-disciplinary crash rescue operation and investigation.
6. Introduce a clear framework for crash investigations and data collection.
7. Designate authorities responsible for implementation including enforcement of the existing standards.
8. Assess effectiveness and completeness of standards benchmarked against international regulatory framework.

SECTION B – ENFORCEMENT (OVERSIGHT OF RESCUE SERVICES, INVESTIGATORS INVESTIGATING CRASHES)
1. License (if private run) or review application of standards for emergency response (if state run) to improve the response, maintain compliance and avoid complacency.
2. Oversee rehabilitation programmes and trauma centres.
3. Ensure sufficient budget for emergency response.
4. Carry out multidisciplinary crash rescue and investigations (MDCIs).
5. Produce, analyse, and publish data and indicators on accidents and their consequences (Number of fatalities and serious injuries by type of user).
6. Assess through multidisciplinary crash investigations (MDCIs) gaps in national road.
7. Assess effectiveness of post-crash enforcement activities by use of appropriate indicators.

SECTION C – EDUCATION (FIRST AID AND RESCUE SERVICE TRAINING, INVESTIGATORS TRAINING)
1. Carry out campaigns to build public understanding to call professional emergency services to the crash scene and to provide first aid by everyone within his/her capacity.
2. Provide general training for users to be capable to provide first aid and take care of victims until professional emergency services arrive.
3. Provide regular training and certification for professional emergency services.
4. Provide training and certification for rehabilitation organisations and trauma centres.
5. Provide training and certification for investigators in MDCIs.
6. Assess effectiveness of education activities by use of appropriate indicators.
7. Ensure adequate budget for awareness raising and training.

SECTION D – TECHNOLOGY (SUPPORTIVE TECHNOLOGY AND EQUIPMENT)
1. Support development of intelligent systems supporting the work of emergency response centres, rehabilitation centres and facilitating victims support.
2. Support development of technology facilitating MDCIs.

SECTION E – INTERNATIONAL REGULATORY SUPPORT (CONSOLIDATED RESOLUTION, INTERNATIONAL STANDARDS, WP.1 SC.1
1. United Nations Consolidated Resolution on Road Traffic with a set of good practices on effective post-crash response, on the conduct of MDCIs and on setting up liability programme.

Road Safety Performance Review Zimbabwe

As a consequence of road traffic crashes, an estimated 1.35 million people die and more than 50 million people are injured each year on the world's roads. Most road traffic fatalities and injuries occur in low- and middle-income countries, and there has been no reduction in the number of road traffic fatalities in any low-income country since 2013, according to the World Health Organization (WHO). Zimbabwe is no exception: according to the Traffic Safety Council of Zimbabwe (TSCZ), road crash fatality rate has been increasing over the years to an average of 5 deaths per day in 2019. WHO estimates that country-reported figure could be three times higher.

Despite being an important sustainable development issue, road traffic safety is not allocated sufficient funds and institutional arrangements remain inadequate in less developed countries. Recognizing the need to support Member States in urgently addressing road safety challenges, the United Nations Secretary-General's Special Envoy for Road Safety is collaborating with the United Nations Economic Commission for Africa and the Economic Commission for Europe to initiate road safety performance reviews, for requesting governments. The reviews assist African countries in strengthening their national road safety management capacities and improving their national road safety records.

How exactly does a Road Safety Performance Review work? It assesses the road safety status of a particular country, helps the Government identify the most critical safety aspects and recommends actions to be taken. Then, when the priority needs have been identified, capacity-building seminars and workshops are organized for national road safety stakeholders. The project thus lays down the core issues that require the urgent attention of political leaders and other stakeholders. It also assists the stakeholders in setting important targets for national road safety strategies and action plans as well as determining specific measures to reach these targets.

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