United Nations
Economic Commission for Africa

Road Safety in Ethiopia
Case Study

2009
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# Acronyms

<table>
<thead>
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<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AACRA</td>
<td>Addis Ababa City Roads Authority</td>
</tr>
<tr>
<td>AATBO</td>
<td>Addis Ababa Transport Branch Office (of the TA)</td>
</tr>
<tr>
<td>AACTPO</td>
<td>Addis Ababa City Traffic police Office</td>
</tr>
<tr>
<td>AU</td>
<td>African Union</td>
</tr>
<tr>
<td>COMESA</td>
<td>Common Market for Eastern and Southern Africa</td>
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<tr>
<td>ECA</td>
<td>Economic Commission for Africa</td>
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<tr>
<td>EPE</td>
<td>Ethiopian Petroleum Enterprise</td>
</tr>
<tr>
<td>EMS</td>
<td>Emergency Medical Service</td>
</tr>
<tr>
<td>ERA</td>
<td>Ethiopian Roads Authority</td>
</tr>
<tr>
<td>ETB</td>
<td>Ethiopian Birr</td>
</tr>
<tr>
<td>FPC</td>
<td>Federal Police Commission</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GRSP</td>
<td>Global Road Safety Partnership</td>
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<tr>
<td>MOTC</td>
<td>Ministry of Transport and Communications</td>
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<tr>
<td>NRSC</td>
<td>interim National Road Safety Committee</td>
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<td>NRSCO</td>
<td>Interim National Road Safety Coordinating Office</td>
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<tr>
<td>RF</td>
<td>Road Fund</td>
</tr>
<tr>
<td>RRA</td>
<td>(Regional) Rural Roads Authority</td>
</tr>
<tr>
<td>RRSC</td>
<td>Interim Regional Road Safety Committee</td>
</tr>
<tr>
<td>RRSCO</td>
<td>Interim Regional Road Safety Coordinating Office</td>
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<tr>
<td>RSDP</td>
<td>Road Sector Development Programme</td>
</tr>
<tr>
<td>SNNP</td>
<td>Southern Nations, Nationalities and Peoples (Region)</td>
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<tr>
<td>TA</td>
<td>Transport Authority</td>
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<td>TOR</td>
<td>Terms of Reference</td>
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<tr>
<td>TRL</td>
<td>Transport Research Laboratory</td>
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<td>UN</td>
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<tr>
<td>UNRSC</td>
<td>United Nations Road Safety Collaboration</td>
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<td>VIP</td>
<td>Violence and Injury Prevention</td>
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<td>WHO</td>
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Foreword

The present study was done in Ethiopia in the framework of the Fifth Tranche of the United Nations Development Account project jointly implemented by the five United Nations Regional Commissions. The project entitled: *Improving Global Road Safety: setting regional and national road traffic casualty reduction targets*, is a continuation of efforts to implement the recommendations made in General Assembly resolution A/RES/60/5 on improving global road safety.

The overarching objective of the project was to assist African countries to develop regional and national road traffic casualty reduction targets and provide them with examples of good road safety practices in setting up and monitoring these targets by 2015.

The study was undertaken by Mr Girma Berhanu (consultant), under the supervision of Mme Marie Therese Guiebo and Mr. Robert Lisinge, transport experts at the Economic Commission for Africa (ECA) Headquarter in Addis Ababa, Ethiopia.

The participants of the African Regional Road Safety Seminar, held in Dar es Salaam, Tanzania, from 9-10 July 2009 and organized jointly by ECA and the FIA Foundation, contributed to this study.

Mrs Zewdnesh Mesfin provided the formatting of the document.
Executive Summary

Road traffic accidents are the cause of significant loss of human and economic resources worldwide. About 1.2 million people die and 50 million injured annually. More than 85 per cent of these casualties occur in low- and middle-income countries, imposing a huge economic burden on developing economies, as this can amount to 1-2 per cent of GNP in most countries. Looking at the extent and magnitude of the problem, the United Nations General Assembly has adopted three resolutions, in which it called on member States, WHO, the five Regional Commissions, and international organizations to address the global road safety crisis. In response to this, many road safety initiatives are being undertaken at international, continental, regional, and national levels in order to improve the road safety situation.

In implementing the resolutions of the United Nations General Assembly, the five United Nations Regional Commissions have received funding for a project entitled: Improving global road safety: setting regional and national road traffic casualty reduction targets. The overall objective of the project is to assist low- and middle-income countries to develop regional and national road traffic casualty reduction targets and to provide them with examples of good road safety practice. For the African continent, ECA is undertaking five case studies in different countries representing eastern, western, central, northern and southern African countries. This report presents one of the case studies carried out in Ethiopia and representing eastern African countries.

Ethiopia is a landlocked country located in Eastern Africa with a land area of about 1.13 million sq. km and with a population of about 74 million in 2007. The country has a wide range of topographic features varying between an altitude of 4620 metres above mean sea level to about 120 metres below mean sea level, with a very difficult terrain for the provision of transport facilities. In the context of Ethiopia’s topography and pattern of settlement, transport plays a crucial role in facilitating socio-economic development. With respect to this, Ethiopia has the Addis Ababa-Djibouti railway line, one of the most successful airlines in Africa providing local and international transport services, and a road network on which the country heavily relies for both domestic and international services.

Recognizing the importance of road transport, the Government of Ethiopia has launched a Road Sector Development Programme (RSDP) since 1997 which has focused on upgrading and rehabilitating the existing road network, expanding it and providing regular maintenance. Since then, the condition of roads has improved and
the network which was about 26,550 km at the beginning of the RSDP in 1997 has increased to 44,359 km by the year 2008.

Road traffic accidents remain a critical problem for road transport in Ethiopia, without due consideration. Although the traffic accident death rate per ten thousand motor vehicles (95 in 2007/81) is showing a decreasing trend in recent years, it still puts Ethiopia on the extreme high side of the international road safety scene. In the last Ethiopian fiscal year (2007/8), for example, police reported 15,086 accidents that caused the loss of 2,161 lives. Up to 2005/6, traffic accidents and fatalities increased at 17 per cent and 10 per cent per year respectively, but in recent years there has been a sudden drop. The reliability of the recent drop has to be evaluated over a longer period of time as it could be due to random variation and/or under reporting.

Despite the Government’s huge investment programme on road network expansion and rehabilitation and the extent and severity of road traffic accidents, Ethiopia has no road safety policy, strategy or programme. As a result of this, road safety issues in the country are generally addressed by different agencies in a piecemeal fashion without a legal lead agency. Transport legislation and regulation used in Ethiopia are generally old for the present situation. However, some revised and new transport legislation has been enacted recently. The legal document for the establishment of a National Road Safety Council and other transport legislation were revised and are awaiting approval.

A sectoral road safety study for Ethiopia carried out by TRL in association with Ross Silcock in 2001, proposed a two-year action plan focusing on the following four key areas:

a) **National Management**: Establish interim Road Safety Committees at the federal and regional levels to coordinate road safety activities in the transition period, and establish a permanent National Road Safety Council;

b) **Regional Initiatives**: Organize regional road safety awareness seminars, conduct regional road safety baseline surveys, and produce regional hazardous location maps;

c) **Roads Sector**: Introduce traffic safety into the Road Sector Development Programme (RSDP) and establish traffic safety engineering units in Road Authorities;

d) **Demonstration projects**: Using the Road Fund safety allocations, promote the undertaking of demonstration projects by road safety stakeholders, and monitor and evaluate them. The demonstration projects were expected to serve as a means of developing and sharing experience and lessons learnt so that Ethiopia would build its capacity to develop, manage, and monitor its own road safety programme.

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1 The Ethiopian fiscal year starts on 8 July and ends 7 July in the following year.
In accordance with the recommendation of the road safety study, an interim National Road Safety Committee consisting of the General Directors of the Transport Authority, Ethiopian Roads Authority, Road Fund, and a Commissioner of the Federal Police Commission was established in 2002. Under this committee, an interim National Road Safety Coordination Office was also created. The responsibilities of the interim committee were to develop and approve programmes and project proposals as well as to allocate funding obtained from the Road Fund. The office has served as a secretariat, coordination centre, and a base for promoting cooperation and collaboration between the key road safety organizations. Following this, regional road safety committees were also established in all regional states to plan and promote road safety and to coordinate the collaborative efforts of the concerned stakeholders in their respective regions.

One of the identified areas of focus by the interim committee was to improve road traffic accident reporting and establish a computerized database system. With respect to this, the national coordinating office has prepared a standard traffic accident on-the-spot reporting format and computer software to store and manage an accident database. This was introduced as a pilot project in the city of Dire Dawa in 2005 but implementation has not gone far.

In order to improve traffic law enforcement and accident investigation and reporting, successive seminars and workshops have been conducted, and efforts made to improve the capacity of the traffic police with provision of vehicles, motor cycles and radar speed-controlling devices. As part of the demonstration projects, a study targeting traffic control at accident locations and the main accident causes was conducted. The pilot projects were found to be very effective but the implementation was not sustainable, due mainly to lack of adequate training, professional discipline and capacity, coupled with improper organizational structure.

The plan by the interim committee to introduce traffic safety into the RSDP and establish traffic safety engineering units in Road Authorities has not been realized. Road traffic safety is not an issue explicitly stated in the establishment proclamations of road agencies in Ethiopia. Road safety is only considered as part of the routine of design, as well as construction and maintenance works to post traffic signs and pavement markings. Road safety improvements based on safety audits and detailed accident black-spot studies are generally very limited.

In Ethiopia, there is a mandatory annual vehicle inspection. Inspection of vehicle body changes and imported vehicles are also mandatory before they can be licensed to operate on the road. Currently, the Federal Transport Authority (TA) has revised the vehicle inspection procedure. Transport agencies were authorized to outsource contracting of the annual vehicle inspections and focus on their controlling functions.
In the new procedure, inspecting machines have been introduced. Standard vehicle inspection formats for each vehicle category have been prepared. Contacts between vehicle owners and inspecting technicians are avoided to control corruption.

A revised proclamation on driver training, testing, and licensing was enacted in 2008. The proclamation categorizes driving licenses into seven groups based on vehicle type and services offered by the vehicles.

The system which is being introduced in accordance with the proclamation requires special theoretical and practical training and testing for each category. The theoretical examination is computerized and automated so that candidates can answer examination questions on the computer and know their results instantly. Practical examinations are made without contact between the candidates and examiners with the help of a video camera.

The interim committee and the coordinating office have been coordinating to include safety education in the national basic education up to the grade 8 syllabus. Traffic safety clubs at schools and student traffic policing in urban areas are contributing to improving road safety. Road safety publicity is also being made by mass media organizations through road safety programmes and campaigns. However, road safety publicity has not focused on identified target groups of road users to make the efforts more effective. The participation of the private sector in road safety in Ethiopia, particularly in safety education and publicity, has been very encouraging, but the efforts have not been centrally coordinated to focus on specific road traffic safety targets.

The emergency pre-hospital medical care system is practically non-existent in Ethiopia. Those injured in road traffic accidents are transported to the nearest health centre for emergency medical treatment without any possibility of professional health care at the accident scene or during transportation to a hospital. In the recent reform of the Ministry of Health, provision of emergency medical service was taken as one of the focus areas in hospital reorganization and the gap that exists through lack of pre-hospital care was also identified as a critical problem. However, currently, the Ministry does not have standards or guidelines with respect to provision of pre-hospital care and emergency services in the country.

A new proclamation against third party risks was approved in January 2008. The proclamation prohibits driving a vehicle without third party insurance coverage. The proclamation also included provision for establishment of an Insurance Fund as a permanent financial source to provide for emergency medical treatment. When the proclamation is fully implemented it would help to resolve the problems related to emergency medical treatment.
The tasks identified and listed in the action plan of the interim committee for initiating and promoting research and training in road safety have not been realized. Very little is known in Ethiopia about traffic safety, the attitude and behaviour of road users, the causes of traffic accidents, and their effective counter measures. Detailed and sustainable research is needed in the area of road traffic safety, to address the critical problems in the country. Short- and long-term trainings are also vitally important in improving road safety capacity in the key organizations, so that they can be in a position to implement road safety programmes in a sustainable manner.

When the interim Road Safety Committee started its activities, it set a “national road safety goal” of reducing the benchmark rate (in 2002/03, 136 per 10,000 vehicles) by 60 per cent by the year 2009/10. The target was not, however, approved by the Government. As a result of this, there has not been a well-established system of intervention or an effective institutional management system. Consequently, the target has not been widely advocated and given adequate focus by all road safety stakeholders on how to achieve it.

The results of this case study show that the road safety works and its management system in Ethiopia is not coping with the magnitude of traffic accidents and the worsening situation due to the road network expansion, rising population and increased motorization. The situation requires that the Government and all stakeholders give immediate attention to addressing it in a planned manner. Based on experiences gained from industrialized countries, a ten-year successive plan for the period 2010-2020 has been proposed, under the Road Safety Vision 2020: “Making Ethiopian Roads Safer for Every One”.

The proposed target of Road Safety Vision 2020 is to reduce the fatality rate to 25 fatalities per 10,000 vehicles by 2020 from the current base rate. Along with this main target, sub-targets are proposed. The broad interventions required to attain these road safety targets are listed. The proposal emphasizes the need for dedicated involvement of all road safety stakeholders. It underlines the need for a transparent system of monitoring and evaluation strategies, programmes, measures, and performance.

Based on the findings, the report provides recommendations on the need for clear Government policy, legislation and institutional organizations, and adequate funding to address road safety issues through Road Safety Vision 2020 in Ethiopia. It further points to the focal areas of national road safety strategies and programmes that should be defined in detail by the road safety lead agency and stakeholders to achieve the proposed road safety targets.
I. Introduction

1.1 General

1. According to the World Health Organization (WHO) Report\(^2\), road crashes are the leading cause of death worldwide for children and young people. About 1.2 million people die and 50 million are injured annually worldwide. More than 85 per cent of these casualties occur in low- and middle-income countries. Africa has the world’s highest death rate per population (28.3 per 100,000 of the population\(^3\) when corrected for under-reporting). Road traffic deaths and injuries impose a huge economic burden on developing economies, amounting to 1-2 per cent of GNP in most countries. Unless adequate and timely measures are taken, the situation is expected to get worse.

2. Looking at the extent and magnitude of the problem worldwide, the United Nations General Assembly has adopted three resolutions (58/289, 6015, and 62/244) since 2004, in which it calls on member States, WHO, the five Regional Commissions, and international organizations to address the global road safety crisis. At national and subregional levels, many road safety initiatives are being undertaken by member States and subregional organizations in order to improve the road safety situation in Africa.

3. At the continental level and in response to the United Nations General Assembly’s appeal, the Economic Commission for Africa (ECA) and WHO, jointly with the Government of Ghana organized a Road Safety Conference from 5 to 7 February 2007, and a Ministerial Roundtable discussion on 8 February 2007 in Accra, Ghana. The Conference adopted the Accra Declaration in which the Ministers committed to working together to stop the growing epidemic of deaths and injuries on African roads.

4. At the international level, a United Nations Road Safety Collaboration (UNRSC) has been established under United Nations General Assembly’s resolution A/RES 58/289 on “Improving global road safety”, which invited WHO to work in close cooperation with the United Nations Regional Commissions and to act as coordinator on road safety issues across the United Nations system. Additionally, the Global Road Safety Partnership (GRSP) brings governments and governmental agencies, the private sector, and civil society organizations together, to address road safety issues in low- and middle-income countries.

5. In continuation of efforts to implement the recommendations made in General Assembly resolution A/RES/60/5 on improving global road safety, the five United Nations Regional Commissions have received funding for a project entitled: “Improving Global Road Safety: Setting regional and national road traffic casualty reduction targets”. Road safety targets can be expressed in terms of reductions in deaths or injuries or can be directed at specific groups of road users (e.g. children, pedestrians) or problem areas (e.g. drunk driving, helmet wearing). Such targets are also important in highlighting the extent of a country’s road safety challenge and providing motivation for change.

6. The overall objective of the project is to assist low- and middle-income countries to develop regional and national road traffic casualty reduction targets and to provide them with examples of good road safety practice. For the African continent, ECA is undertaking five case studies in different countries representing eastern, western, central, northern and southern African countries.

7. This report presents one of the case studies carried out in Ethiopia representing eastern African countries.

8. The specific objectives of this study as stipulated in the TOR are to:
   - Examine the road safety situation in Ethiopia including an analysis of the strengths and weaknesses of different aspects such as national policies, institutions, funding, human capacity, and health issues like post accident care (first aid), among others;
   - Identify national road safety targets and indicators if they exist, and propose different types of road safety targets together with measurement criteria; and
   - Formulate recommendations with the view to improving the situation.

1.2 Country perspective

9. Ethiopia is a landlocked country located in Eastern Africa bordering the Sudan, Eritrea, Djibouti, Somalia, and Kenya with a land area of about 1.13 million sq. km and a population of about 74 million in 2007, out of which only about 16 per cent live in urban areas. It has a tropical monsoon climate with wide topographic-induced variation. The country has a wide range of topographical features, varying between an altitude of 4620 metres above mean sea level (Ras Dashen Mountain) to about 120 metres below mean sea level (Danakil Depression) with a very difficult terrain (highlands criss-crossed by numerous river valleys and the Great East African Rift Valley) for the provision of transport facilities.
10. Ethiopia is one of the poorest of the least developed countries in the world. Its economy is based on agriculture, accounting for almost half of GDP, 60 per cent of exports, and 80 per cent of total employment. Coffee is critical to the Ethiopian economy with exports of some $350 million in 2006. The export of oil seeds is also increasing significantly. In recent years, investment in floriculture has been increasing and flowers export is supplementing coffee export. In the last three years, Ethiopia's economy is said to have been growing at over 10 per cent and the GDP per capita was estimated at $US 800 in 2008.

11. In the context of Ethiopia's topography and pattern of settlement, transport plays a crucial role in facilitating socio-economic development. With respect to this, the Addis Ababa-Djibouti railway line is the only railway in the country. Ethiopia has one of the most successful airlines in Africa, providing local and international transport services for passengers and freight. Local air transport services represent only a small fraction of the total transport demand, due generally to unaffordable airfares. Road transport remains the mode of transport on which the country most heavily relies for both domestic and international services.

1.3 Road infrastructure development

12. Recognizing the importance of road transport in supporting social and economic growth and in meeting poverty reduction objectives, the Federal Democratic Republic of Ethiopia has placed increased emphasis on improving the quality and size of the road infrastructure. To address the constraints of the road network coverage and low standards, the Government launched the Road Sector Development Programme (RSDP) in 1997. The programme focused on restoration of the road network to an acceptable condition, targeting (a) upgrading and rehabilitation of main roads, (b) construction of new roads, and (c) implementing regular maintenance of the road network. Since then, the condition of roads has improved and new links have been constructed. Within eleven years of the programme, a total of 102,525 km of roads has been constructed, upgraded/rehabilitated or maintained. The network, which was about 26,550 km at the beginning of RSDP in 1997, increased to 44,359 km by 2008.

13. Figure 1 shows the trend in road infrastructure development in Ethiopia.

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1.4 Characteristics of the national vehicle fleet

Ethiopia is one of the African countries with the least vehicle ownership. According to the available yearly inspected and registered national vehicle-fleet data, motorization per ten thousand of the population has increased from 15 to 22 in ten years (1994/5-2004/5), which is nearly 4 per cent per year. The vehicle fleet sharply increased at an annual rate of 10 per cent in the period 2001/2-2004/5. The increase in station wagons and trailers contributed much to the high growth rate of the vehicle population. The number of private cars has increased annually by 8 per cent. In 2004/5, the vehicle fleet was composed of 37 per cent private cars, 7 per cent station wagons, 9 per cent taxis, 9 per cent buses, 21 per cent small trucks, and 17 per cent trucks and truck-trailers.
Due to the changes in organization of relevant offices at the federal and regional levels, detailed data on the national vehicle fleet are not available since 2004/5, shows the trend in the national vehicle fleet as determined from the available data from 1994/5-2004/5. Accordingly, the vehicle fleet in Ethiopia was estimated at about 250,000 in 2008, which brings the country’s motorization level to 32 vehicles per 10,000 inhabitants.

As in many developing countries, the vehicle fleet in Ethiopia generally consists of very old vehicles operating without adequate maintenance. There is no detailed factual data to substantiate the age of the national vehicle fleet. According to the information obtained from the Federal TA5, on average, vehicles being imported to the country are 20 or more years old and the age of most of the national vehicle fleet is believed to be 30 or more years.

### 1.5 Overview of Road Safety in Ethiopia

Ethiopia stands as one of the worst-performing countries with respect to road safety and traffic accident fatalities per 10,000 vehicles (95 in 2007/8). However, it is one of the best when performance is expressed in terms of traffic accident fatalities per 100,000 populations (2.84 in 2007/8). This has been cited in different local and international studies.

For example, a paper which analysed the trend in traffic accidents over 1968/9-1994/5 in Ethiopia was presented at the Third African Road Safety Congress. In the period of analysis, the fatality rates were between 165 and 233 per 10,000 vehicles. The fatality risks were between 2.2 and 4.0 per 100,000 populations. The paper further identified pedestrians as the most vulnerable road users and buses and trucks as the vehicle types most frequently involved in traffic accidents.

A comprehensive analysis of the road safety problem in Ethiopia and a detailed study in the city of Addis Ababa was also made. The study showed that traffic accident fatalities progressively increased with the growth in population and the number of vehicles. About 56 per cent of the fatalities during 1987/8-1996/7 were pedestrians, which is higher than the corresponding average for African countries (40 per cent) and the average for some developed countries (20 per cent) in the period. The pedestrian fatalities in Addis Ababa are much higher, 88 per cent of fatalities in 1987/8-1993/4.

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20. The study underlined the significant contribution of roads and road environments to road traffic accidents in the country, and pointed to various engineering countermeasures. Considering the severity of the road safety problem and the remarkable infrastructure development, the study recommended safety improvements on existing roads and incorporation of safety considerations at an early stage during planning and design of new roads.

21. An assessment made of the road accidents in Ethiopia highlighted that the country has one of the world's worst accident records, 170 fatalities per 10,000 vehicles. On the other hand, the fatality risk per head of population was one of the lowest, at 3 per 100,000 populations in 1994/5, due to the low level of motorization. The accident cost analysis made during the study gave an estimated economic cost of traffic accidents of between ETB340-430 million, which is 0.8-0.9 per cent of the GDP in 1999. The study further noted that the worsening situation was most likely even more severe due to underreporting.

22. The occurrence of traffic accidents in the country is increasing as the exposure to this risk increases with rapid motorization (without appropriate regulation), rapid population growth, and the increase in the road network, coupled with the poor attitude and safety culture of road users. Although there are activities underway to combat the problem, these are limited and are insufficient to remedy the worsening situation. Section 2 provides detailed analysis of the current level of road traffic safety in the country.

1.6 Structure of the Report

23. The remainder of this report is structured as follows:

Section 2 presents an assessment of progress in road safety in the past few years. The trends and characteristics of road traffic accidents are analysed. Section 3 reviews legislation and the regulations relating to road safety. Institutions and other stakeholders and their roles in addressing road safety issues are explained. Funding of road safety activities is also presented. Section 4 gives a detailed description of road safety works in Ethiopia. It covers road accident reporting and the database management system, vehicle inspection, driver licensing, road safety education and publicity, safety of road infrastructure, the insurance system, enforcement, and emergency and pre-hospital care. Section 5 presents road safety goals up to

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2010. Based on the findings of the preceding sections, the section also provides details of the proposed road safety targets in Road Safety Vision 2020: "Making Ethiopian Roads Safer for Every One". The last section, section 6, provides recommendations formulated in terms of effectively improving the road safety situation in a sustainable manner.
II. Trends and characteristics of road traffic accidents

2.1 Trends in traffic accidents

24. Road traffic accidents in Ethiopia are a cause of significant loss of human and economic resources. In the last Ethiopian fiscal year (2007/8), the Police reported 15,086 accidents that caused the loss of 2,161 lives and over ETB 82 million, equivalent to US$7.3 million (Police cost estimate of property damage). It would be impossible to attach a value to each case of human sacrifice and suffering, add up the values and produce a figure that captures the national social cost of road crashes and injuries.

25. However, the economic costs of road traffic accidents are, evidently, a heavy burden for the national economy. According to the World Health Organization report which nearly corresponds to the findings of TRL and Ross Silcock, the economic costs of road crashes and injuries are estimated to be 1 per cent of GDP in low-income countries such as Ethiopia.

26. Despite having very low road network density and vehicle ownership, the country has a relatively high accident record, one of the worst in the world, as indicated by various authors (Jacobs and Sayer, 1983; TRL and Ross Silcock Partnership, 1991; Downing et al., 1991). shows the alarming increase in the rates of traffic accidents and fatalities standing at 17 per cent and 10 per year respectively, with the vehicle fleet and road network in the country up to 2005/6, but a sudden decrease in the last two years has been noted.

27. The recent phenomenon of the decreasing trend in traffic accidents can be seen positively. However, with the increasing exposure measured indirectly by the increase in population, motorization, and road network expansion in the country, and with the low-level of safety awareness and road safety works, such a sudden drop is not normally expected and its reliability should be evaluated over a longer period of time. One could rather be suspicious if it is due to random variation, underreporting or both. The historical trend shown in clearly demonstrates such random variations over a long period of time.

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Figure 3. Trends of traffic accidents, vehicle fleet, and road network in Ethiopia

Data Source: Federal Police Commission; compiled by the consultant

Table 1. Motor vehicle accidents in Ethiopia, 2003/04 - 2007/08

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<td>Fatal</td>
<td>1,630</td>
<td>1,801</td>
<td>2,029</td>
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<td>Serious Injury</td>
<td>2,072</td>
<td>2,368</td>
<td>2,621</td>
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<td>Light Injury</td>
<td>2,705</td>
<td>2,731</td>
<td>2,653</td>
<td>2,426</td>
<td>2,123</td>
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<td>Property damage</td>
<td>10,569</td>
<td>10,882</td>
<td>11,608</td>
<td>10,170</td>
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<td>Death rate per ten thousand vehicles</td>
<td>145</td>
<td>132</td>
<td>137</td>
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<td>Death rate per hundred thousand population</td>
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<td>Number of deaths</td>
<td>2,111</td>
<td>2,188</td>
<td>2,522</td>
<td>2,517</td>
<td>2,161</td>
</tr>
<tr>
<td>Below 18 years age</td>
<td>435</td>
<td>494</td>
<td>513</td>
<td>506</td>
<td>485</td>
</tr>
<tr>
<td>18-30 years age</td>
<td>858</td>
<td>791</td>
<td>1,139</td>
<td>977</td>
<td>689</td>
</tr>
<tr>
<td>31-50 years age</td>
<td>570</td>
<td>673</td>
<td>592</td>
<td>721</td>
<td>642</td>
</tr>
<tr>
<td>Above 50 years</td>
<td>248</td>
<td>225</td>
<td>278</td>
<td>313</td>
<td>345</td>
</tr>
<tr>
<td>Number of people injured</td>
<td>8,507</td>
<td>8,885</td>
<td>9,394</td>
<td>9,553</td>
<td>7,140</td>
</tr>
<tr>
<td>Below 18 years age</td>
<td>1,552</td>
<td>1,490</td>
<td>1,900</td>
<td>1,884</td>
<td>1,091</td>
</tr>
<tr>
<td>18-30 years age</td>
<td>3,703</td>
<td>4,429</td>
<td>4,352</td>
<td>3,847</td>
<td>3,025</td>
</tr>
<tr>
<td>31-50 years age</td>
<td>2,372</td>
<td>2,238</td>
<td>2,145</td>
<td>2,889</td>
<td>2,130</td>
</tr>
<tr>
<td>Above 50 years</td>
<td>890</td>
<td>728</td>
<td>997</td>
<td>933</td>
<td>894</td>
</tr>
</tbody>
</table>

Data Source: Federal Police Commission; compiled by the consultant
28. Table 1 shows reported accidents by police in recent years for the whole country. The traffic accident death rate per ten thousand motor vehicles is showing a decreasing trend and has reached 95 in 2007/8 from 145 in 2003/4. However, this rate is still high putting Ethiopia on the extreme high side of the international road safety scene, though the fatality risk is as low as 2.84 per 100,000 population in 2007/8.

29. Table 2 shows reported traffic accidents for each regional states and autonomous city administrations. The distributions of the reported accidents can be fairly said to be correlated with the traffic movement. However, the reported traffic accidents in Amhara Regional State (accounting for nearly 14 per cent of all accidents and 26 per cent of fatalities) is quite high compared with that of the Oromia Regional State (accounting for 14.5 per cent of all accidents and 24 per cent of fatalities) which has the highest area coverage and highest traffic movement next to Addis Ababa. Addis Ababa accounts for 54 per cent of all accidents and 18 per cent of all road accident fatalities.

Table 2. Road accidents in Regional States and autonomous City Administrations, 2007/8

<table>
<thead>
<tr>
<th>Regional States/City Administrations</th>
<th>Number of Road Traffic Accidents</th>
<th>Victims of Road Traffic Accidents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fatal</td>
<td>Serious Injury</td>
</tr>
<tr>
<td>Tigray</td>
<td>184</td>
<td>171</td>
</tr>
<tr>
<td>Afar</td>
<td>38</td>
<td>22</td>
</tr>
<tr>
<td>Amhara</td>
<td>427</td>
<td>372</td>
</tr>
<tr>
<td>Oromia</td>
<td>471</td>
<td>510</td>
</tr>
<tr>
<td>Somaliland</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>Benishangul-Gumuz</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>SNNP</td>
<td>226</td>
<td>298</td>
</tr>
<tr>
<td>Gambela</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>Harari</td>
<td>17</td>
<td>42</td>
</tr>
<tr>
<td>Addis Ababa</td>
<td>381</td>
<td>594</td>
</tr>
<tr>
<td>Dire Dawa</td>
<td>18</td>
<td>69</td>
</tr>
<tr>
<td>Total</td>
<td>1,602</td>
<td>2,156</td>
</tr>
</tbody>
</table>

Source: Federal Police Commission; compiled by the consultant.
2.2 Characteristics of accidents

2.2.1. Causes as identified by Police

30. According to the police reports, more than 90 per cent of the traffic accidents are caused by human errors. In these accidents, drivers are indicated as responsible in about 89 per cent of cases. Table 3 shows the causes of traffic accidents as identified during police investigation. Accordingly, the major causes of traffic accidents are failure to give way for pedestrians, followed by over speeding and failure to give way for other vehicles in that order. However, the major causes of fatal accidents in their order of importance are failure to give way for pedestrians, over speeding, failure to respect right hand rule. The causes of driver’s error are many, including inadequate training, driving under the influence of alcohol, drugs or chat, and others. It is important to note here that chat used to be a critical problem in the Eastern part of the country. However, currently, its influence has expanded throughout the country. The traffic accident statistics in 2007/8 also indicate that over 5 per cent of fatal accidents and of total accidents occur when people drive without having a driving license.

Table 3. Causes of road traffic accidents in Ethiopia as identified by police in 2007/8

<table>
<thead>
<tr>
<th>Causes of traffic accidents</th>
<th>Fatal</th>
<th>Serious Injury</th>
<th>Slight Injury</th>
<th>Property damages</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence of alcohol or drug</td>
<td>51</td>
<td>7</td>
<td>17</td>
<td>193</td>
<td>288</td>
<td>2</td>
</tr>
<tr>
<td>Failure to respect right hand rule</td>
<td>110</td>
<td>129</td>
<td>131</td>
<td>856</td>
<td>1,226</td>
<td>8</td>
</tr>
<tr>
<td>Failure to give-way for vehicles</td>
<td>20</td>
<td>65</td>
<td>112</td>
<td>1,507</td>
<td>1,704</td>
<td>11</td>
</tr>
<tr>
<td>Failure to give-way for pedestrians</td>
<td>598</td>
<td>661</td>
<td>728</td>
<td>2,058</td>
<td>4,045</td>
<td>27</td>
</tr>
<tr>
<td>Following too closely</td>
<td>39</td>
<td>77</td>
<td>69</td>
<td>131</td>
<td>346</td>
<td>2</td>
</tr>
<tr>
<td>Improper overtaking</td>
<td>44</td>
<td>52</td>
<td>78</td>
<td>547</td>
<td>721</td>
<td>5</td>
</tr>
<tr>
<td>Improper turning</td>
<td>37</td>
<td>71</td>
<td>98</td>
<td>1,317</td>
<td>1,523</td>
<td>10</td>
</tr>
<tr>
<td>Over speeding</td>
<td>426</td>
<td>436</td>
<td>295</td>
<td>852</td>
<td>2,009</td>
<td>13</td>
</tr>
<tr>
<td>Failure to respect traffic signs</td>
<td>16</td>
<td>27</td>
<td>11</td>
<td>123</td>
<td>177</td>
<td>1</td>
</tr>
<tr>
<td>Driving with fatigue</td>
<td>30</td>
<td>20</td>
<td>20</td>
<td>23</td>
<td>93</td>
<td>1</td>
</tr>
<tr>
<td>Driving without attention</td>
<td>10</td>
<td>18</td>
<td>15</td>
<td>9</td>
<td>52</td>
<td>0</td>
</tr>
<tr>
<td>Improper parking/moving from parking</td>
<td>52</td>
<td>62</td>
<td>81</td>
<td>772</td>
<td>967</td>
<td>6</td>
</tr>
<tr>
<td>Excess loading</td>
<td>76</td>
<td>135</td>
<td>88</td>
<td>43</td>
<td>342</td>
<td>2</td>
</tr>
<tr>
<td>Failure of vehicle</td>
<td>79</td>
<td>73</td>
<td>110</td>
<td>171</td>
<td>433</td>
<td>3</td>
</tr>
<tr>
<td>Defective road environment</td>
<td>12</td>
<td>13</td>
<td>19</td>
<td>62</td>
<td>106</td>
<td>1</td>
</tr>
<tr>
<td>Pedestrian error</td>
<td>34</td>
<td>164</td>
<td>29</td>
<td>17</td>
<td>244</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>81</td>
<td>81</td>
<td>162</td>
<td>340</td>
<td>564</td>
<td>4</td>
</tr>
<tr>
<td>Unidentified</td>
<td>87</td>
<td>65</td>
<td>60</td>
<td>54</td>
<td>266</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,802</strong></td>
<td><strong>2,156</strong></td>
<td><strong>2,123</strong></td>
<td><strong>9,005</strong></td>
<td><strong>15,098</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Federal Police Commission; compiled by the consultant
2.2.2. Severity of accidents

31. Table 4 shows the severity of traffic accidents over the last five years. Of the total traffic accidents occurring yearly, more than 11 per cent are fatal accidents. Over 20 per cent of the total traffic accident injuries are fatalities. The high percentage of fatalities indicates the critical lack of pre-hospital and emergency medical services.

Table 4. Severity of traffic accidents in Ethiopia

<table>
<thead>
<tr>
<th>Ethiopian Fiscal Year</th>
<th>Total Accidents</th>
<th>Fatal Accidents</th>
<th>% of Fatal Accidents</th>
<th>Total Fatalities</th>
<th>Total Injuries</th>
<th>Fatalities as % of Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003/4</td>
<td>15,346</td>
<td>1,630</td>
<td>10.6</td>
<td>2,111</td>
<td>10,618</td>
<td>19.9</td>
</tr>
<tr>
<td>2004/5</td>
<td>17,722</td>
<td>1,801</td>
<td>10.2</td>
<td>2,188</td>
<td>11,073</td>
<td>19.8</td>
</tr>
<tr>
<td>2005/6</td>
<td>18,911</td>
<td>2,029</td>
<td>10.7</td>
<td>2,522</td>
<td>11,916</td>
<td>21.2</td>
</tr>
<tr>
<td>2006/7</td>
<td>17,147</td>
<td>2,047</td>
<td>11.9</td>
<td>2,517</td>
<td>12,070</td>
<td>20.9</td>
</tr>
<tr>
<td>2007/8</td>
<td>15,086</td>
<td>1,802</td>
<td>11.9</td>
<td>2,161</td>
<td>9,301</td>
<td>23.2</td>
</tr>
</tbody>
</table>

Data Source: Federal Police Commission; compiled by the consultant

2.2.3. Road accident deaths by road user types

32. Table 5 shows traffic accident deaths by road user types. On average, about 56 per cent of the road traffic accident fatalities are pedestrians, 36 per cent are passengers, and only 8 per cent are drivers. The figure of pedestrian fatalities rises in built-up areas. For example, in the city of Addis Ababa, pedestrian fatalities are about 90 per cent of the total road accident fatalities in the city. These figures are indicators of the poor safety behaviour of road users and of the lack of pedestrian facilities and respect for them.

Table 5. Traffic accident deaths by road user type

<table>
<thead>
<tr>
<th>Ethiopian Fiscal Year</th>
<th>Drivers</th>
<th>Percent</th>
<th>Passengers</th>
<th>Percent</th>
<th>Pedestrians</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003/4</td>
<td>153</td>
<td>7.2</td>
<td>838</td>
<td>39.7</td>
<td>1,120</td>
<td>53.1</td>
</tr>
<tr>
<td>2004/5</td>
<td>149</td>
<td>6.8</td>
<td>791</td>
<td>36.2</td>
<td>1,248</td>
<td>57.0</td>
</tr>
<tr>
<td>2005/6</td>
<td>179</td>
<td>7.1</td>
<td>961</td>
<td>38.1</td>
<td>1,382</td>
<td>54.8</td>
</tr>
<tr>
<td>2006/7</td>
<td>210</td>
<td>8.3</td>
<td>926</td>
<td>36.8</td>
<td>1,381</td>
<td>54.9</td>
</tr>
<tr>
<td>2007/8</td>
<td>195</td>
<td>9.0</td>
<td>682</td>
<td>31.6</td>
<td>1,284</td>
<td>59.4</td>
</tr>
</tbody>
</table>

Source: Federal Police Commission; compiled by the consultant
2.2.4. Involvement of vehicles in accidents

33. Table 6 shows the types of vehicles and their involvement in road traffic accidents in 2004/5. Without looking into the mileage travelled of the different types of vehicles, it appears clearly that taxis are accident prone vehicles followed by buses, both of which are public transport. Nearly half of the fatal accidents involve trucks, including Isuzu trucks, which are well known for their accident proneness by the public nationwide. Taxis and buses again are highly involved in fatal accidents.

Table 6. Accident involvement of vehicles in 2004/5

<table>
<thead>
<tr>
<th>Types of vehicle</th>
<th>No. of inspected &amp; registered vehicles</th>
<th>Fatal accident</th>
<th>Total accidents</th>
<th>Risk per 100 vehicles</th>
<th>% involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number % age</td>
<td>Number % age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car</td>
<td>71,672 43</td>
<td>362 20</td>
<td>6,786</td>
<td>9</td>
<td>38</td>
</tr>
<tr>
<td>Taxi</td>
<td>14,504 9</td>
<td>259 14</td>
<td>2,707</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Bus</td>
<td>14,152 9</td>
<td>204 11</td>
<td>2,373</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Trucks</td>
<td>61,710 37</td>
<td>859 48</td>
<td>5,363</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>Others</td>
<td>4,271 3</td>
<td>117 6</td>
<td>493</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>166,309 100</td>
<td>1801 100</td>
<td>17,722</td>
<td>11</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Federal Police Commission; compiled by the consultant
III. Legislations, institutional organizations, and funding

3.1 Legislations related to road safety

34. Ethiopia has no defined transport policy. However, the Government of Ethiopia has defined a long term strategy and developed huge investment programmes for the road network expansion and rehabilitation. Accordingly, it has been taking actions since 1997 to establish the foundations of a competitive road transport market. However, despite road traffic accidents being a very critical problem to the road transport sector, the country has no road safety policy, strategy or programme to tackle this problem. TRL in association with Ross Silcock\(^{11}\) underlined the absence of government policy regarding road safety that has resulted in its low prioritization by road safety government agencies. The report indicated that greater attention was being given to road safety but that the input is insufficient compared to the scale of the problem.

35. Some of the reasons why the country has no road safety policy are:
   - The presence of other pressing economic and social issues of priority to the Government;
   - The economic effect is not fully appreciated by decision-makers because much of this involves indirect government expenditure, and more of the cost is borne by society in general;
   - Lack of awareness, knowledge, and experience on how road safety can be improved; and
   - Constraints of funding.

36. Transport legislation and regulations used in Ethiopia are generally old for the current situations. A study on road transport regulations\(^{12}\) identified important constraints to road traffic safety in terms of the applicable road transport legislation, among which were:

   a) Misinterpretation and misunderstandings with regard to definition of the powers and duties of federal and regional transport organs; and

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b) Amendments, deletions and replacements of old legislation and regulations without systematic compilation.

37. Legislation governing road transport activities in Ethiopia can be categorized into the following groups:
   - Identification, registration, and inspection of motor vehicles;
   - Motor vehicle operators (driving) licensing;
   - Traffic control (road code);
   - Vehicle sizes and weights; and
   - Vehicle insurance against third party risks.

38. The current Ethiopian Traffic Control Regulations (road code) is based on the Transport Amendment Regulations (No. 279/1963) enacted in 1963. The regulations provided comprehensive regulation of traffic operations and safety precautions for that time but are inadequate for the traffic requirements of today. For example, there are provisions for controlling vehicle emissions, noise, drunk driving, pedestrians' priority on pedestrian crossings, pedestrian road use, and carrying passenger on trucks. However, the levels of emissions, noise, and alcohol are not defined and implemented. Some of its inadequacy for today's road traffic safety includes lack of provision for the use of seat belts, child restraints, helmets, and for prohibiting the use of mobile phones while driving.

39. Ethiopia's Speed Limit Regulation (No.361/1969), which is still in use, was enacted in 1969. According to the regulation, the maximum speed limits are 100, 70, and 60 km/hr for private cars and motorcycles, 80, 60, and 50 km/hr for commercial vehicles, 70, 50, and 40 km/hr for motor vehicles and trucks with semi-trailers and trailers on primary, secondary, and feeder roads respectively outside urban areas. Within urban areas, the speed limits are 60, 40, and 30 km/hr for private cars and motorcycles, single unit trucks with maximum gross weight of 3,500 kg and public transport vehicles, and single unit trucks exceeding 3,500 kg and trucks with trailers respectively.

40. The regulation also states that these speed limits shall be reduced where public safety requires for any or all vehicles on any particular roads by the Road Authority or local municipality. Although, the speed limits are reasonably low, the regulation is not enforced and operating vehicle speeds are much higher than what are stated in the regulation.

41. The Study on Road Transport Regulations\(^\text{13}\) underlines that Ethiopia has never signed the various United Nations Road Traffic International Treaties, which started

with the 1949 Geneva Convention and was revised by the 1968 Vienna Convention. A comparison made in this study between the Conventions on Road Traffic signed in Geneva in 1968 and the Ethiopian Road Code marked important differences. The study further noted that Ethiopia being a member of COMESA (since 1994) had adhered to the COMESA Road Transport Treaty on harmonization of driving licensing, axle load standardization, notification plate, road user charges and third party insurance, but most of the agreed items have still to be implemented in Ethiopia, as in other countries in the region.

42. In the last decade (1991-1994), Ethiopia signed bilateral road transport agreements with all neighbouring nations (Eritrea, the Sudan, Kenya and Djibouti). More recently, new agreements have also been signed with Djibouti and with Somaliland.

43. After critically studying road transport regulations in Ethiopia, the Consultant proposed enactment of the following regulations and proclamations for covering current road safety requirements:
   - A road transport administration proclamation;
   - A motor vehicle identification, registration, and inspection regulation;
   - A commercial vehicles regulation;
   - A motor vehicle and special mobile equipment operators (driving) license regulation;
   - A axle load regulation;
   - A road traffic control regulation (the road code);
   - A speed limit regulations; and
   - National road safety council legislation.

44. Following the recommendations of the study, a proclamation to provide for regulation of transport was enacted in August 2005 (Proclamation 468/2005). This demarcated the roles and responsibilities of the federal and regional transport government agencies. The proclamation empowers the Federal TA (which used to be the Federal Road Transport Authority) to follow up on provision of safe transport services to the public and to harmonize and standardize the nation’s road transport system.

45. In line with Proclamation 468/2005, proclamations on vehicle insurance against third party risks and driver qualification certification licensing have also been issued recently. The legal document for establishment of a National Road Safety Council and other transport legislation such as the Road Traffic Control (Road Code) and Standardization of Importing Vehicles revised in line with Proclamation 468/2005, are in the pipeline awaiting approval.

14 Ibid.
46. Under the national minimum standard requirements, Regional States and Autonomous City Administrations have also provided regulations. Accordingly, the Addis Ababa City Administration established its Road Traffic Safety Council in 2003 and set penalties in 1998 which were amended in 2004. The Oromia Regional State was one of the first to make wearing seat belts mandatory.

3.2. Institutions

47. Road safety issues in Ethiopia are generally addressed by different agencies in a piecemeal fashion without a legal lead agency. Legislation and regulations related to road safety are consequently, linked to the powers and duties of different government bodies both at the federal and regional levels. The main government bodies at the federal and regional levels concerned with road safety are the Ministry of Transport and Communication, the Transport Authority, the Ministry of Works and Urban Development, the Ethiopian Roads Authority, the Road Fund, the Ministry of Federal Affairs, the Federal Police Commission, Regional Rural Road Authorities, Regional Transport Bureaus, Regional Police Commissions, and City Administrations, shows key stakeholders and the interim road safety management organizations.

48. As pointed out in section 3.1, the legal document for establishing a National Road Safety Council is not yet approved; there is also no institution appointed to take lead responsibility for traffic safety. Normally, road safety is perceived as the responsibility of the Transport Authority, Ethiopian Roads Authority, and the Federal Police Commission at the federal level, and Regional or City Roads Authorities, Transport Bureaus, and Police Commissions.

49. Organization of road safety is complicated not only because it involves many different organizations, but also by the fact that it is given too low a priority and there coordination of efforts is lacking. Road maintenance takes precedence for the Roads Authorities, while driver licensing and vehicle registration and inspection are the focus of the TA and Transport Bureaus. Crime prevention and investigation take precedence for the Police.
3.2.1 Key stakeholders of road safety

50. Looking at road traffic system components, it is logical to think that each public authority responsible for these components assumes the attached legal responsibility of ensuring safety. The following sections review the duties, responsibilities and activities of the main road safety stakeholders. It is important to note here that Ethiopia is a federal country with regional states and consequently the government structures follow the federal system without direct hierarchy.

3.2.1.1 Transport Authority

51. The Transport Authority (TA), accountable to the Ministry of Transport and Communications, is responsible for regulating transport services (road, rail, and water transport) in the country. According to Proclamation 468/2005, the TA has the power and duty to follow-up on provision of safe transport services to the public.

52. Specifically, the same Proclamation 468/2005 has defined the responsibilities of the Federal TA, supported by transport bureaus in regional states but without direct legal relationships as:

- Determination of the operation and capacity of vehicles using the road and issuing of approval certificate for registration;
- Registration and annual technical inspection of motor vehicles;
- Standardization of the importation or manufacture of motor vehicles;
- Certification of the technical competence, licensing, and grading of garages engaged in the repair and maintenance of vehicles; and
- Licensing of drivers, driving schools and instructors.

53. It is very clear from the list that TA responsibilities concentrate on vehicle safety and driver training and licensing. Recently, the TA has gone through business process re-engineering and has reformed its organizational setup to give increased consideration to its road safety responsibilities. Its organizational structure includes directorates that undertake vehicle inspection and registration, driver training and licensing, and road traffic safety. This organizational setup will enable the Authority to give overall guidance and help harmonize and standardize the transport system nationwide, road safety activities in particular.

3.2.1.2 Regional Transport Bureaus

54. The organization of regional transport bureaus differs from regional state to regional State. Some come under trade and industry and others are organized independently. However, they are the main government bodies in the regional states functioning without any authority link with the Federal TA that undertakes and controls vehicle inspection, registration and licensing, driver training and licensing, management of road transport operations, and general provision of safe and reliable transport services to the public.

55. They work very closely with the federal TA, which coordinates, harmonizes, and sometimes controls, to ensure that the federal laws are uniformly interpreted and implemented and that the country is practicing uniform and standard transport operations nationwide.

56. The regional transport bureaus are also reforming their organizational setup, benchmarking the Federal TA reform. Some have created road safety units. The organizational structure of the larger Regional states has reached down to Wereda and Kebele levels, tapping the potential for strengthening community-level participation in road safety.

3.2.1.3 Road Authorities

57. The Ethiopian roads authority (ERA) under the Ministry of Works and Urban Development assumes the duty of expanding and maintaining the federal road network to an acceptable standard and condition. The ERA formation proclamation does not explicitly state its road safety responsibilities. However, its vision is to "provide safe, comfortable, reliable, and adequate road infrastructure to support the socio-economic development of the nation and satisfy road users".
58. The regional rural road authorities that come under the respective regional states assume responsibility for expanding and maintaining rural roads in the respective regions. Their establishment proclamations do not explicitly give responsibility for road safety. The city road authorities in autonomous City Administrations have similar duties and responsibilities in their respective jurisdiction.

59. ERA has an environmental monitoring and safety branch under the planning and programming division in the regulatory department. The branch has no trained personnel in safety engineering. Its activities focus on consideration of environmental issues and on traffic engineering in contract documents during road planning and design. It also has a separate section responsible for road signing and pavement marking.

60. The Addis Ababa City Roads Authority (AACRA) has a section mainly responsible for traffic signals, road signs, and pavement markings. The head of the section is also a member of the committee responsible for road signing on existing roads together with members from the Addis Ababa Transport Branch Office (AATBO), and Addis Ababa City Traffic Police (AACTP). The signing and marking of new roads come with the design and the contractor furnishes them as part of the contract.

61. Generally, because traffic safety is not an issue of primary importance in the establishment proclamations of roads authorities, there is very low commitment to ensuring safety in the planning, design, and operational management of road infrastructure in the country. As a result, the road authorities do not have strong safety engineering units that take responsibility for undertaking road improvement works for safety reasons.

3.2.1.4 Traffic police

62. Similar to the government bodies concerned with transport and road infrastructure, the Police are also organized at the federal and regional levels without any hierarchical links. At the federal level, there is a Federal Police Commission accountable to the Ministry of Federal Affairs. At the regional level, there are Regional Police Commissions in Regional States and autonomous City Administrations.

63. The traffic police in Ethiopia play a twofold role in traffic safety. They primarily take responsibility for improving safety by enforcing the traffic regulations. Secondly, they carry out accident investigation and reporting mainly for own use in documenting evidence required for court rulings. They also help to identify priorities and plan enforcement strategies.
64. Enforcement and accident investigation and reporting are done through local police stations. The monthly and yearly aggregated traffic accident data are then reported to the next higher police station in the designated hierarchy that is topped by the Regional Police Commission Office. Each Regional Police Commission sends the regional aggregate traffic accident data to the Federal Police Commission Office which then compile and issue the national aggregate traffic accident statistics.

3.2.1.5 Other institutions

65. Road safety issues are multisectoral. For example, the Ministry of Health at the federal level and Health Bureaus at regional level are responsible for providing emergency medical treatment to victims of traffic accidents. One of the key issues in road safety in Ethiopia that needs urgent addressing is the inadequate facilitation of post-accident emergency services and medical care.

66. Non-governmental organizations such as the Ethiopian Red Cross Society have significant roles in providing emergency transport services for the injured to reach emergency medical centres. However, emergency pre-hospital care is critically lacking.

67. The Police in Ethiopia indicate that the major cause of traffic accidents is road user error. This is true virtually in all countries. This indicates that safe road user behaviour in children and adults is essential. This directly implies the role of the Ministry of Education at the federal level and Education Bureaus at the regional level in creating traffic safety awareness from childhood, providing basic safety education to children at school, through to adulthood.

3.2.2. Interim road safety management system

68. In 2001, a sectoral road safety study was carried out by TRL in association with Ross Silcock\textsuperscript{15} with assistance from the European Commission. The key output of this study was originally proposed to be development of a Five-Year National Road Safety Programme. By the end of the study, it was recognized that a short-term Two-Year (2002-2003) Action Plan was necessary. The TRL report included a Five-Year Programme but focused on the Two-Year Action Plan, targeting four key areas:

a) **National Management:** Establish interim working groups for developing and establishing interim Road Safety Committees (with members from the Ethiopian Roads Authority (ERA), the Office of the Road Fund (RF), Federal Police Commission (FPC) and Federal TA), establish and resource an interim Road Safety Office to serve as a focal point (secretariat of the

board) for road safety activity, and establish the permanent National Road Safety Council;

b) **Regional Initiatives:** Establish interim Regional Road Safety Committees, organize regional road safety awareness seminars, conduct regional road safety baseline surveys, and produce regional maps of hazardous locations;

c) **Roads Sector:** Introduce traffic safety into the Road Sector Development Programme (RSDP) and establish traffic safety engineering units in each Road Authority; and

d) **Demonstration projects:** Clarify and standardize the RF safety allocation disbursement procedures and promote the undertaking, monitoring and evaluation of demonstration projects. The demonstration projects are expected to serve as a means of developing experience and sharing lessons and best practices.

69. According to the action plan of the study, it was intended that by the end of five years of road safety investment, Ethiopia would have the capacity to develop, manage, and monitor its own road safety programmes. Following the recommendation of the study, an interim National Road Safety Committee (NRSC) consisting of the General Directors of TA, ERA, and RF, and the Commissioner of FPC, was established in 2002.

70. Under this, an interim National Road Safety Coordination Office (NRSCO) was created. The responsibilities of NRSC were to develop and to approve programmes and project proposals. NRSCO was established to serve as a secretariat and to coordinate and promote road safety. The TA chairs the board and provides financial and administrative assistance to NRSCO. Funding for covering expenses related to road safety activities are covered from the RF.

71. NRSCO objectives are to:
- Prepare the legal document for establishment of the permanent council;
- Promote cooperation between the key road safety organizations; and
- Implement short-term road safety programmes.

72. NRSC and NRSCO, financed by RF, commenced activities by preparing a Two-Year Action Plan, under which establishment of regional committees was considered a priority programme. The first activity made by the national interim body to establish the Regional Road Safety Committees was to conduct awareness-raising workshops in almost all regions, in which all concerned government and non-government institutions and selected individuals participated. The objectives of the Regional Road Safety Committees are to plan and promote road safety awareness and to coordinate the collaborative efforts of the concerned governmental and non-governmental organizations in their respective regions.
73. Currently, all Regional States and autonomous City Administrations (Addis Ababa and Dire Dawa) have formed interim Regional Road Safety Committees (RRSC) with members normally from the respective regional transport, health, and education offices, the Police Commission, and the Rural Roads Authority. Regional Transport Bureaus act as their respective Regional Road Safety Coordinating Offices (RRSCO). Regional Committees have been trained in how to write, implement, and evaluate road safety projects. Some of the regions have formed zonal Road Safety Committees; in others, the structure has gone down to the lowest administration units (that is, *wereda* and *kebele* levels). Implementation of road safety activities differ from region to region.

74. In the Addis Ababa City Administration, the Road Traffic Safety Council established by Proclamation No. 7/2003 comprises members from the City Administration and representatives from relevant associations. The Council is accountable to the City Cabinet. The General Manager of the City Transport Authority (now a branch of the TA) is in charge of the Council’s secretariat. This is led by a Coordinator assigned by the Council upon the recommendation of the General Manager of the City Transport Branch.

75. After the establishment of NRSC and NRSCO, central coordination of road safety works has been improved, with the help of funding from the RF. Experiences from some of the regions (Afar, Tigray, and Amhara) and the city of Addis Ababa indicate that road safety is being promoted effectively by the transport offices and traffic police, with emphasis being given to awareness creation. However, the interim Regional Road Safety Committees are not strong enough to shoulder responsibilities in a sustainable manner. The Addis Ababa City Road Safety Council is also not strong in undertaking its comprehensive road safety functions, due to reshuffling of members.

76. In the interim road safety management system, the road safety financing obtained from the RF is managed and transferred to the federal and regional road safety stakeholders by NRSC and NRSCO. Normally, the requests for road safety yearly budgets are forwarded to NRSCO. Then, NRSCO aggregates the annual national budget and forwards the request to the Road Fund Board after getting the approval from the interim Road Safety Committee. The fund is then distributed to the regions from NRSCO as per the requirements of the respective road safety action plans. When the fund is short of the requested budget, NRSCO uses previous performance and the planned road safety works as criteria for the budget allocation.

77. When the legal document for the establishment of a National Road Safety Council is approved, the interim road safety management organs are expected to be substituted with legal permanent institutions at all levels. The responsibilities and functions of the interim road safety committees at federal and regional levels (down
to kebele level) are expected to be undertaken with full commitment and dedication by the legal institutions.

### 3.3 Funding

78. The RF was established in 1997 by Proclamation 66/1997 under the Ministry of Works and Urban Development with the objective of providing finance for maintenance of roads and road safety measures. RF sources include:

- The budget allocated by the Government;
- A road maintenance fuel levy;
- An annual vehicle license renewal fee based on axle load;
- Overloading fines;
- Transit fees; and
- Any other road tariffs as may be necessary.

79. In practice, however, the value-added tax on fuel is collected by the Ethiopian Petroleum Enterprise (EPE) and remitted directly to the RF as part of the budget allocated by the Government. The value-added tax on fuel accounts overwhelmingly for the major part of total RF funds available. The only other funding source used to date comprises transit fees of $US 15 per vehicle paid by foreign vehicles entering Ethiopia, but this has not yet accounted for even 1 per cent of RF revenues.

80. The Road Fund Board generally allocates about 3 per cent of its collections for road safety works annually. However, its actual allocation is based on budget requests from the interim National Road Safety Committee. As described in section 3.2.2, the allocations are then distributed to federal and regional government offices through the interim National Road Safety Committee and the Regional Road Safety Committees, shows the yearly RF budget allocation for road safety activities and its disbursement. The funding is used for road safety projects as proposed by governmental institutions through the regional and federal interim Road Safety Committees. As clearly shown in figure 4, funding for road safety activities in Ethiopia has not been a critical problem at least in the past few years. The key constraints to carrying out road safety works in the country remain lack of political commitment, weak institutional organization, and lack of road safety experience and technical skills.
Table 7. National road safety budget allocation and disbursement

<table>
<thead>
<tr>
<th>Year</th>
<th>Allocation (ETB)</th>
<th>Disbursement (ETB)</th>
<th>Utilization (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002/3</td>
<td>9,000,000</td>
<td>Not disbursed</td>
<td>0.0</td>
</tr>
<tr>
<td>2003/4</td>
<td>10,448,500</td>
<td>6,268,900</td>
<td>60.0</td>
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<tr>
<td>2004/5</td>
<td>10,500,000</td>
<td>4,632,160</td>
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<td>10,500,000</td>
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<td>12,261,310</td>
<td>100.0</td>
</tr>
<tr>
<td>2008/9</td>
<td>10,000,000</td>
<td>Not disbursed</td>
<td>0.0</td>
</tr>
</tbody>
</table>

16 Faruk Ali (May 29, 2009), Finance Officer, Office of the Road Fund.
IV. Assessment of road safety works in Ethiopia

81. After establishment of the interim NRSC and NRSCO, the following road safety issues were identified in preparation of the Two-Year Action Plan:
   - Driver capacity and behaviour;
   - Failure to give the right of way to pedestrians;
   - Over-speeding;
   - Transporting passengers with freight vehicles;
   - Excess loading;
   - Violating traffic regulations;
   - Unsafe behaviour of pedestrians;
   - Animals and carts using the road;
   - Inadequate capacity to control the road worthiness of vehicles;
   - Inadequate enforcement of traffic regulations;
   - Inadequate safety consideration in road planning and construction; and
   - Inadequate emergency medical services.

82. With respect to the identified causes of road traffic accidents, the following tasks were listed in the Two-year Action Plan:
   a) National management: Establishment of a technical committee, preparation and approval of the legislation to form the permanent National Road Safety Council, and make it operational;
   b) Demonstration projects: Development of the accident reporting and database system and the accident data analysis system, training of the Police, provision of software and computers, accident data application on enforcement, road safety improvements by roads authorities, and production of annual accident reports;
   c) Traffic law enforcement: Identification of training needs, development of traffic police training programmes, training of trainers courses, training evaluation and revision training programmes. Targeted enforcement includes: needs identification, plan development, conducting targeted enforcement operations and carrying out annual reviews. Management of equipment and patrol vehicles also requires needs assessment, procurement, pilot introduction, evaluation and expansion;
   d) Driver Training and Testing: Revise testing procedure; revise training procedures for examiners and instructors, upgrading TA training centre facility;
e) **Vehicle Inspection:** Revise vehicle inspection procedures, introduce roadside vehicle inspection, procure vehicle inspection equipment, and improve inspection buildings and sites;

f) **Traffic safety education for children:** Introduce traffic safety education at schools, strengthen traffic clubs, campaign on how to walk on busy routes to schools, and create safety awareness by producing road safety drama;

g) **Road safety publicity:** Conduct research on pedestrian safety awareness, identify target groups, and design and conduct campaigns. Create safety awareness among transport company workers, and conduct mass media campaigns and, community road safety campaigns;

h) **Emergency medical service:** Introduce trauma management, develop proposals and obtain funding to improve communication and ambulance services, research and advocacy; introduce a computerized system of road accident patient recording, introduce first aid training to police, drivers, and transport operators and, further, introduce victim support;

i) **Research:** Identify research needs, conduct research in pedestrian safety, drunk driving and blood alcohol content, and accident costs;

j) **Motor insurance:** Introduce mandatory third party insurance and claims guidelines;

k) **Regional initiatives:** Carry out regional road safety baseline studies, regional accident maps, safety awareness seminars, establishment of regional safety committees, regional safety plans, and effective coordination; and

l) **Road safety engineering:** Introduce road safety in the RSDP, establish road safety engineering units, train safety engineers, identify black-spots and their counter measures, and general road safety improvements. Additionally, introduce road safety auditing and pedestrian management.

83. Information obtained from various stakeholders during this study indicated that the activities of the interim NRSC and NRSCO have been focusing on some of the issues. The following sections present detailed assessment of road safety works in Ethiopia.

4.1 **Road traffic accident reporting**

84. As in most countries in the world, the Police are responsible for traffic accident investigation and reporting in Ethiopia. According to the Ethiopian transport regulation (Negarit Gazeta, 1963, which is still in use with amendments), a driver of a vehicle involved in a road accident shall notify the nearest police station immediately if the accident involves personal injury and within twenty-four hours if it involves property damage only. According to the regulation, all accidents are reportable.
85. In practice, however, the police are notified only when the accident involves serious injury, agreement cannot be reached between parties involved or if a police accident report is required for insurance. Because of this, the reporting of non-fatal accidents is uncertain. The under-reporting of road accidents in Ethiopia is expected to be quite considerable.

86. Normally, in response to notification of an accident, a traffic police investigator goes to the scene of the accident. Based on the information obtained from observations, the parties involved in the accident, and other evidence, the police prepares a factual report and makes a sketch of the site on a plain sheet of paper. The police, who are inadequately equipped and trained, understandably see their role as taking action if the law has been broken and they give much attention to getting evidence for the prosecution rather than to investigating the many factors involved in the accident.

87. On return from the accident site, an account of the accident is recorded in a daily report book at the local police station. The accident recordings in the daily recording book form the basis of Ethiopian road accident statistics. Periodic summaries of aggregate road accident records are made and sent to the immediately higher police department. They finally reach the Federal Police where the national road accident statistics are compiled.

88. The content of road accident reporting, as it exists now, misses relevant details of the type of accident report required for road safety improvement works. The reporting form in the daily report book is not designed to include details of each vehicle and road user involved in an accident. The report, further, does not contain details of the road section and precise location of an accident. The location of an accident is reported broadly by Kebele and Woreda or by the name of the surroundings. Besides, because a plain paper is used on the spot, the investigating policeman is unlikely to remember all the required accident details and, as a result, the form available at the local traffic police office is never completely filled.

89. The information recorded is generally adequate for routine police work but it is of limited use to other bodies requiring information for identifying the causes and taking appropriate remedial measures. It is primarily inadequate in determining the exact location of accidents and the factors involved. Moreover, accident reporting lacks a significant level of consistency. The terminology of accident details does not have a uniform definition even among the staff at a police station. Significant variation also exists in accident reporting in the different Regional States.

90. In addition to the indicated limitations of accident reporting, there is no established system of computerized accident data bank to store detailed information.

17 Kebele is the lowest local administration unit in Ethiopia and Woreda is the one above.
on individual road traffic accidents occurring in the country. This is another handicap for the efficient management of the reported traffic accident data. Moreover, there is no system of periodic road traffic accident analysis and dissemination system to give information on road traffic accident trends and on specific accident problems so that stakeholders are aware and can aim to improve the situation.

91. NRSCO has prepared a traffic accident reporting standard format that contains necessary information for all users. The development of accident coding computer software to store and manage an accident database is also completed. However, the software has no facility for accident mapping. The training of traffic police on the use of this accident reporting format has also been given. The use of the on-the-spot standard reporting format and the accident software were also introduced at a pilot level in the city of Dire Dawa in 2005. However, implementation has not gone far due to the weak organizational structure of the police.

92. The accident statistics, although not complete and with all sorts of limitations, can be used by interested stakeholders to make a broad accident analysis for various purposes. Moreover, the existing data can be used to create awareness, define policy and mobilize human and financial resources towards alleviating the problem.

4.2 Traffic law enforcement

93. After the establishment of the interim NRSC, successive seminars and workshops have been conducted to train traffic police trainers from all regions. Those trained have also trained their colleagues in their respective regions on traffic law enforcement and accident investigation and reporting. Efforts were also made to improve the capacity of the traffic police to enforce traffic laws, with the provision of vehicles, motor cycles, and introduction of radar speed-measuring devices procured through the road safety funding. Training on radar speed measurement has been given to traffic police. The police college has also revised and strengthened road safety courses in its traffic law enforcement courses.

94. Traffic law enforcement focusing on sections where traffic accidents are high and on vehicles that are said to be highly involved in traffic accidents has been introduced. As part of the demonstration projects, targeted traffic control at accident locations and on main accident causes was conducted in Oromia Regional State and in Addis Ababa in 2006. The project had encouraging results. Based on the results obtained, Oromia has conducted workshops to implement targeted traffic control on injury accident causes throughout the region. However, its implementation is not effectively pursued.
95. Over-speeding has been controlled a pilot measure on the Addis Ababa-Awassa road using radar guns. The result has indicated that they are very effective in enforcing speed limits. According to the NRSCO Report\(^8\), the NRSC is taking the necessary steps to acquire more radar equipment for distributing to priority zones.

96. Traffic law enforcement on pedestrian priority and pedestrian road use has been more focused in recent years with the assistance of student traffic policing in several Regional States and in Addis Ababa. In addition to the publicity made in the mass media, special campaigns targeting rural communities have been conducted by the police with support from RRSCO, with very good results in Amhara Regional State. Such campaigns to increase the safety awareness of the rural communities are now expanding coverage nationwide. The campaign is made at market places, on ceremonial occasions, at community gatherings, and in places of worship. As a result of this safety campaigning, pedestrians from rural communities are now using the road more safely than do the pedestrians in urban areas.

97. The traffic police in Ethiopia generally make a good contribution to safety awareness and traffic law enforcement. However, there is a general lack of adequate training, professional discipline, and capacity, coupled with improper organizational structure. The available and implementable traffic regulations such as speed limits, pedestrian priority on crossings, and driver lane discipline are not fully enforced. Although pilot projects show encouraging results in controlling over-speeding using radar guns, implementation is not sustainable so far.

98. In most Regional States, traffic police is organized under Crime Prevention and Investigation. This organizational structure does not give the required level of focus and capacity in terms of traffic law enforcement and traffic accident investigation and reporting.

99. The inadequacy of the current organizational structure of the traffic police is recognized and under discussion at federal and regional levels. Some Regional States have already started reorganizing traffic police under their respective Transport Bureaus. Tigray Regional State has approved a regulation for reorganizing the traffic police under the Transport Bureau and is preparing for implementation. SNNP Regional State has organized traffic police under the Transport Bureau in some administration zones as a pilot implementation phase.

100. Alternative forms of organizations such as organizing traffic police under a Board and giving them more autonomy are being discussed. With the current level of recognition of the bottleneck problems with respect to traffic law enforcement

\(^8\) National Road Safety Coordinating Office, February 2008; Overview of the Road Safety in Ethiopia.
and traffic accident investigation and reporting, there is a high expectation that the constraints will be effectively addressed when the legal document to establish the National Road Safety Council is approved and the Council is established.

4.3 Vehicle inspection

101. In Ethiopia, there is mandatory annual technical inspection nationwide. Imported vehicles and vehicles that undergo body changes also have to pass through mandatory technical inspections before they are licensed to operate on the road. Transport Bureaus of Regional States, undertake annual technical inspection for vehicles whose plate numbers have the respective regional codes. The Federal TA undertakes technical inspections for imported vehicles and body changes as well as annual inspections for vehicles whose plate numbers cannot have regional codes (such as United Nations, African Union, Embassies, etc.) because of their type of service. However, as indicated by the results of the survey\(^\text{19}\) made in 2002, the technical inspection of vehicles was not harmonized nationally. The standard of the technical inspection was also not satisfactory with respect to the requirements of road traffic safety.

102. The Federal TA has revised and strengthened the procedure for the technical inspection and has organized to have all the regions comply with the new procedure. The new procedure has enabled the transport agencies to contract out the annual technical vehicle inspection and strengthen and focus on the controlling functions. The new procedure has been implemented since 2005. Accordingly, about 90 per cent of the annual vehicle inspections nationwide have been outsourced to private organizations. Transport agencies make sudden inspections of private organizations undertaking annual inspections with detailed evaluation of sample inspected vehicles. They also receive detailed monthly reports from these organizations.

103. Special directives have also been introduced for public transport owners, associations, operators, and drivers to check the safety of buses at bus terminals and on the road. Every association is supposed to establish a road safety unit. Along with this, some spot-checking on the road and at bus stations has been practiced in most regions and by the Federal TA.

104. Following the recent reform (2008) of the Federal TA, the annual technical vehicle inspection and registration of imported vehicles and body changes has been taken as one of the focus areas and is organized under one directorate. In the reform, weak points were identified and strengthened for the second time. A new procedure is set by which contacts between the vehicle owner and the inspecting technician are avoided, to deter corruption. The owner has to hand over his/her vehicle’s key and the

\(^{19}\) National Road Safety Coordinating Office, Federal Transport Authority; (February 2008): Overview of Road Safety Activities in Ethiopia; Addis Ababa.
necessary documents to the inspecting office. The inspector collects the key with a
vehicle code, inspects the vehicle and provides a report on his findings. If the owner of
the vehicle is not convinced by the findings and applies for re-inspection, the vehicle
can be inspected again by a team of three technicians.

105. The business process re-engineering has also reduced the steps to be followed for
the annual vehicle inspection so that time is saved for both the vehicle owner and the
service giver. The implementation of this new procedure has started at the federal level
on imported vehicles. The implementation of the procedure nationwide in 2009/10 is
now under preparation to employ private organizations that have a technical capacity
to undertake annual vehicle inspections with the help of inspecting machines such as
brake tester, light tester, and exhaust tester.

106. Standard formats of annual vehicle inspection specific to public transport, dry
freight transport, wet freight transport, and light vehicles have been improved to suit
inspection by both observation and by machines, and these have been introduced in
all regions. The following are lists of the main vehicle inspection items related to safety
requirements:

- Machine-based inspections: lights; windscreen wiper and washer; content
  of vehicle exhaust (CO and HC); brakes and conditions of clutch, brake and
  fuel pedals; and
- Inspections by observation: external and internal body condition; condition
  of tyres and spare tyre, jack; first aid kit; fire extinguisher; exhaust gas and
  silencer condition; reflector; and condition of the suspension system.

4.4 Driver training, testing, and licensing

107. The survey made\(^\text{20}\) by the Federal TA (the then Road Transport Authority) in
2002 indicated that driver training, testing, and licensing was not harmonized and
standardized nationally, according to the federal standards and procedures in existence
at the time. Previous studies have also identified that the national driver training
standard is weak and the screening and licensing system is open to fraud. As a result,
drivers generally lack the required skills and safety awareness.

108. Following the 2005 transport regulation, the driver training and testing
procedures have been reviewed and revised and the Federal TA has prepared and
distributed the necessary training manuals, books, and video films. In order to
standardize the quality of driver licensing, it has evaluated the facilities and capacities
of all transport agencies that issue drivers licenses and determined the license grades to

\(^{20}\) National Road Safety Coordinating Office, Federal Transport Authority; (February 2008): Overview of Road Safety Activities in Ethiopia; Addis Ababa.
be issued in accordance with their capacity. Lessons in defensive driving are given to professional drivers. In Addis Ababa, the theoretical test has also been computerized.

109. In recognition of the incidence of traffic accidents that occur due to the deficiencies in driver licensing and of the need to establish a uniform, standard and effective system of driver licensing free from corruption and bureaucracy nationwide, a new proclamation (Proclamation No. 600/2008), revised in line with Transport Regulation 468/2005 and improving on the shortcomings, was enacted. The new proclamation has given the Federal TA the powers and duties to:

- Set detailed standards;
- Supervise and issue recognition certificates to the licensing body;
- Prepare a curriculum jointly with the appropriate technical and vocational training agency for driver training institutions;
- Determine the quality, content, and form of the driver qualification and certification license book free from forgery; and
- Supervise implementation of the provisions of the proclamation.

110. The new proclamation categorizes driving licenses into seven groups. Each requires special theoretical and practical training and testing for each category and also has provision for the holder of a lower driving qualification to change to a higher qualification within the same category:

a) Motor cycle driver with two or three wheels;

b) Automobile driver with up to 12 seat capacity and light trailer;

c) Taxi drivers:
   - Category T1: motor cycle taxi with three wheels; and
   - Category T2: motor vehicle taxi with a capacity of up to 12 seats.

d) Public transport vehicle drivers:
   - Category P1: motor vehicle with a capacity of up to 24 seats; and
   - Category P2: motor vehicle with a capacity above 24 seats.

e) Truck drivers:
   - Category D1: truck up to 7,000 kg gross weight;
   - Category D2: truck up to 28,000 kg gross weight with light trailer; and
   - Category D3: truck above 28,000 kg gross weight with trailer.

f) Tanker drivers:
   - Category F1: tanker with loading capacity of 18,000 litres; and
   - Category F2: tanker with trailer or semi-trailer loading capacity above 18,000 litres.

g) Special equipment drivers:
   - Category S1: special mobile equipment with weight up to 5,000 kg;
• Category S2: special mobile equipment with weight up to 10,000 kg; and
• Category S3: any special mobile equipment.

111. Accordingly, preparation for implementation of the provisions is currently underway. The Federal TA has prepared standards for licensing bodies and driver training institutions. Theoretical and practical training curricula and examinations for each driving license category have been prepared with the help of the Ministry of Education. The quality, content, and security codes of driving license certification are set.

112. The theoretical examination is computerized and automated so that candidates answer examination questions on a computer and know their results instantly. Practical examinations are also made without contact between candidates and the examiners. A prospective driver is made to drive on her/his own throughout her/his practical examination after an examiner gives a go sign at the start. The manoeuvring by the examinee throughout the practical examination is evaluated by examiners with the help of a video camera.

113. The system has made it very easy to trace any complaints about the theoretical and practical examinations in a database on a server and with a video recorder. The Federal TA has already tested the system. The transport agencies in the regional states of Amhara, Oromia, SNNP, and Tigray and the autonomous City Administrations of Addis Ababa and Dire Dawa have started to implement the new system.

4.5 Safety education and publicity

114. Since the establishment of the interim committees at the federal and regional levels, safety education and publicity activities nationwide have been encouraging. Road safety has been included in the national basic education up to the 8 grade syllabus, by integrating with other subjects since 2005. According to a NRSCO report\(^\text{21}\), supporting reference materials, books and video films have been produced to assist the efforts taken to improve road safety education in schools. The Education Bureau of Addis Ababa City Administration has prepared reference books usable from kindergarten up to grade 8. In 2004, curriculum guidelines for promoting road safety education in schools were also issued by the Ministry of Education for all the Regional Education Bureaus to follow.

115. Consequently, traffic safety clubs and student traffic policing have been contributing to improved safety awareness of students and been assisting traffic police

in traffic management on busy roads. Traffic road safety clubs at schools, about 1,500 in 2008, are promoting awareness through drama, competition and mini-media. Student traffic police are also participating in community road safety awareness programmes.

116. The mass media is making good progress in broadcasting information about road safety programmes and campaigns. Road safety publicity is made regularly on national and Addis Ababa TV since 2003 and 2004 respectively. Radios with national and local coverage are broadcasting road safety programmes and campaigns including online interactive discussions with public telephone participation. According to the NRSCO report, the airtime allocated for road safety programmes and campaigns by national and local TV and radios is estimated to be about 530 minutes a week. Newspapers also give coverage to road safety issues.

117. Raising safety awareness is also being done by the traffic police, Federal TA, and regional transport agencies on various occasions, including special public gatherings and “Road Safety” weeks. Local traffic police conduct community campaigns in most of the regions. NRSCO and the Federal TA issue magazines and bulletins containing hot road safety issues. Transport associations also address road safety in their publications.

118. However, road safety publicity using mass media could be more effective if coordinated and organized by a lead agency focusing on identified groups of road users.

4.6 Emergency and pre-hospital care

119. A pre-hospital emergency medical system is practically non-existent in Ethiopia. A comprehensive emergency medical system includes not only health facility-based care for emergency cases but also functional pre-hospital care that gives primary treatment for injuries at the accident scene and while transferring victims to the health facilities. Road traffic accident injuries are normally transported to the nearest health centre for emergency medical care without the care of a health professional at the scene of the accident or during transportation to the health facility.

120. Transportation of the accident victims is often made by the vehicle involved in the accident (if the vehicle is operational), or by a volunteer driver, or ambulance (such as Red Cross Ambulance) if there is any around the accident scene. There is little or no medical care during transportation even when using ambulances, for various reasons including lack of medical professionals. Further, the emergency medical care at health facilities is also not well organized. Consequently, the death rate is very high; about 20 per cent of the total number injured end up as fatalities.
121. A one-year (July 2005-June 2006) retrospective, descriptive audit of injuries\textsuperscript{22} in the public health facilities of Addis Ababa showed that: motor vehicle accidents were the second overall cause of injuries (first in the age group 15-44 years) and accounted for 34 per cent of all injuries. They were the leading causes of injury-related admissions (61 per cent), and 52 per cent of injury-related deaths. In another study cited in the strategy document, with findings from the trauma patients in Tikur Anbessa Hospital, Addis Ababa, road traffic injuries accounted for 41 per cent of all cases, and of these, 93 per cent were pedestrians.

122. Setting up an emergency medical and pre-hospital care system needs a clear national strategy and strong government commitment. With respect to this, a Task Force for preparing a long-term national strategy and action plan on Violence and Injury Prevention (VIP) and Emergency Medical Services (EMS) was established under the coordination of the Ministry of Health in which road traffic accidents form an important component. NRSCO is a member of this Task Force. The Task Force has prepared the draft national strategy and action plan for approval, but because the Ministry of Health has been undertaking a business process re-engineering (BPR) study, approval of the strategy is delayed.

123. Implementation of the reform of the Ministry of Health is now underway and EMS is taken as one of the focus areas in hospital re-organization. Accordingly, the objective is that emergency medical care at hospitals will be re-organized, with specialized medical professionals and adequate facilities (equipment and pharmacy), so that road traffic injuries are prioritized and get immediate medical treatment. According to the current practice, accident injuries have to undergo registration before they get any medical treatment and may have to go out from the hospital for examination or for the pharmacy. The new reform of the Ministry of Health\textsuperscript{23} has addressed many of these shortcomings.

124. Following the reform of the Ministry of Health, the gap that exists in pre-hospital care has been identified as a critical problem and various discussions take place about how to fill the gap. In the City of Addis Ababa, a legal document to re-organize the Fire and Emergency Service is awaiting the approval of the Cabinet. Approval of the legal document would mean reorganizing and reinstating the emergency dispatch centre of the city, which was organized for celebration of the Ethiopian Millennium, with three-digit telephone service and ambulance service, to a sustainable and coordinated scale able to deliver pre-hospital care and emergency medical service to the city.

\textsuperscript{22} Ministry of Health of Ethiopia: National Multisectoral Three-year Strategic Plan for Violence and Injury Prevention and Emergency Medical Services Strategy 2008/9-2010/11

\textsuperscript{23} Dr. Abraham Endeshaw, Assistant Director, Medical Service Directorate, Ministry of Health (May 21, 2009)
125. The Federal Ministry of Health is responsible for setting national standards, providing guidelines, giving assistance, and building the capacity of Regional Health Bureaus. Currently, the Ministry does not have standards or guidelines with respect to pre-hospital care and emergency service in the country. According to the information obtained, the lessons learnt from the model experience that the Ministry will get from implementing the Addis Ababa pre-hospital care and emergency medical service will help it to expand the system to the Regional Health Bureaus.

126. During preparation of this case study, a newly established private ambulance service, known as Tebta Ambulance Services has started, providing pre-hospital care and ambulance service to accident injuries. It is also providing training on pre-hospital care for traffic police. “First Aid Training” has also been incorporated into the revised professional driver training.

127. The third party mandatory vehicle insurance law which was enacted in January 2008 will help to materialize the emergency medical service in such a way that injured people get emergency medical care in advance of any payment, which will be covered under the Insurance Fund (details are described in section 4.8).

4.7 Road safety in road infrastructure

128. The road agencies in Ethiopia, namely, the Ethiopian Roads Authority, Regional Rural Road Authorities, and City Roads Authorities, generally consider safety in road design, construction, and maintenance works as their routine task of making allowance for designing road elements, posting road signs and pavement markings. The Two-Year Action Plan with respect to introducing road safety in the road sector has not been realized. Road safety improvement works based on detailed accident black-spot studies are also very limited.

129. Thus, it can be said that the road infrastructure in Ethiopia lacks due consideration of safety. One can easily observe unsafe sections of the road network due to lack of appropriate safety considerations during design, construction, and/or maintenance. Consequently, the contribution of an unsafe road environment to causing road traffic accidents or worsening the severity of traffic accidents is significant. A research study conducted in Ethiopia\(^\text{24}\) on the effects of road and traffic factors on road safety has underlined the significant contribution of unsafe road infrastructure.

130. Safety audits of existing and new roads are very essential. These help to raise awareness of safety considerations during the design stage for new roads and to ensure provision of such safety features as barriers, traffic signs and markings, pedestrian facilities, self-enforcing, speed-controlling devices and others, wherever required on

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existing roads. A draft road safety audit has been prepared by ERA, but this has not been finalized and implemented. Safety improvement works for existing roads can also be made with detailed black spot studies. This, however, requires an improved traffic accident reporting and data management system.

131. NRSCO has undertaken accident black spot studies on Addis Ababa-Dilla, and Shashemene-Arbaminch roads, and roads in Addis Ababa\(^{25}\) as part of the demonstration projects. The results of the study were used for pilot study of enforcement using radar speed-controlling devices. The study was not carried out with the involvement of road agencies and black spots identified were not detailed due to the nature of the available accident data. Therefore, the results were not utilized for improving safety on the roads.

132. Recently, for the first time, ERA has employed consultants for the design and construction supervision of periodic maintenances of Addis Ababa-Nazareth and Modjo-Awassa roads, which includes accident black spot study and improvement works. The accident black spot studies in these projects would be good examples for demonstrating the importance of road traffic accident reporting and of a computerized database with detailed information on the exact location of each accident.

133. Road transport in urban areas, particularly in the main cities, is characterized by high traffic congestion and accidents due mainly to inadequate traffic management and the unsafe road network infrastructure facilities, with a poor planning control and hierarchical system. As a result of inadequacy in controlling urban master plans, major developments are made linearly adjacent to the arterial road network without any form of access control and considerations of pedestrian and parking facilities. The capacity of the existing road infrastructure is not optimally availed due to improper use, misuse, and abuse.

134. Although a huge investment is being made to expand and upgrade the road infrastructure, poor traffic management coupled with inadequacies in controlling the master plan and the existing road network has made Addis Ababa a city with increasing traffic congestion and accidents.

135. There are three key government agencies which have responsibility for road safety in the city: the Addis Ababa Transport Branch Office (AATBO) under the Federal TA which undertakes the responsibilities of the Authority in the city; the Addis Ababa City Roads Authority (AACRA) and the Addis Ababa Police Commission under the Addis Ababa City Administration. The institutional organization in Addis Ababa is representative of most of the main cities in Ethiopia, with minor differences.

136. AACRA is responsible for expanding and maintaining the road infrastructure. The city has no traffic engineering unit, neither under AATBO nor under AACRA, and coordination between the two is generally poor as they are accountable to different bodies. Under the Addis Ababa Police Commission, there are Police Offices under the Sub-city Administrations and one central traffic police office, Addis Ababa City Traffic Police Office (AACTPO).

137. Each Police Office under the respective sub-cities has traffic police officers responsible for traffic management and enforcement. AACTPO undertakes traffic accident investigations and accident recording as well as patrolling of the whole city. Traffic police, generally, critically lack the capacity to enforce all the traffic rules and regulations.

138. One of the main problems with respect to the safety of road infrastructure in Ethiopia is that main roads pass through built-up areas with little or no safety considerations. According to ERA design standard, the typical urban cross-section is four lanes (the outer lanes for parking). Commonly, this is provided without any physical means of delineating parking lanes and sidewalks from the travelled ways.

139. Such a wide cross-section without any type of self-enforcing physical means of reducing speed encourages the through traffic to pass urban areas with a speed higher than the speed limits. This unsafe road environment creates conflicts between the through and local traffic which, when coupled with the unsafe attitude and behaviour of road users, creates the worst traffic safety situation in built-up areas.

140. The safety awareness of the rural community in Ethiopia is generally increasing through the safety awareness creation campaigns. ERA undertakes overloading control on freight transport vehicles through weighbridge stations nationwide. The Federal TA and Regional Transport Bureaus control excess loading on public transport. Traffic police also oversee excess loading on public transport. This requires close coordination to be more effective.

4.8 Insurance system against third party risks

141. Acknowledging the social problem created due to the loss of lives, injuries, and property damages caused by road traffic accidents and to establish a system for facilitating provision of emergency medical treatment, the proclamation against third party risks (Proclamation No. 559/2008) was approved in January 2008. The proclamation prohibits driving a vehicle without third party insurance coverage. However, the Ministry of Transport and Communication is given the mandate to determine which vehicles can operate on the road without needing compulsory insurance coverage.
142. The proclamation limits the amount of third party compensation, to not exceed:
- ETB 40,000 in the case of death;
- ETB 15,000 in the case of injury as determined by a medical board; and
- ETB 100,000 in the case of damages to property.

143. However, it indicated the right for any person to claim from the ensured person above the limits in accordance with other relevant laws.

144. The proclamation has also provided for establishment of an Insurance Fund under a Board accountable to the Ministry of Transport and Communication, as a permanent financial source to provide for emergency medical treatment to any traffic accident injuries and compensation to a third party victim of an accident inflicted by an uninsured or unidentified vehicle. The financial source of the Insurance Fund will be the insurance tariffs, the rate of which will be determined by the Government on the basis of studies conducted by the Board.

145. According to this proclamation, any injured person by a road traffic accident is entitled to emergency medical treatment costing up to ETB 1,000 whether he/she is a third party or not as defined by the proclamation. Any medical institution shall have the duty to provide the emergency medical treatment to a victim and claim its fee directly from the insurer or the insurance Fund. However, the proclamation is not fully implemented and the insurance Fund is not yet established.

4.9 Participation of the private sector in road safety

146. The participation of the private sector in road safety in Ethiopia is very encouraging. However, their efforts have not been coordinated centrally to focus on specific road traffic safety targets. According to the NRSCO26, the British Council has assisted the road safety programme by conducting "Project Cycle Management" courses for over 40 participants from all the regional states and related federal offices. The International Road Safety Academy has also assisted by offering the Radar Operators Course to over 40 participants.

147. The intensive efforts being made by the mass media in promoting road safety has been financed by the private sector. Shell Ethiopia and Ethiopian Insurance Agency have been promoting public road safety awareness programmes nationally through Ethiopian Television for the last three years.

26 National Road Safety Coordinating Office, Federal Transport Authority; (February 2008); Overview of Road Safety Activities in Ethiopia, Addis Ababa.
148. The Ethiopian Insurance Association has contributed by organizing road safety workshops and sponsoring, with several other private firms, the Road Safety Week successfully celebrated throughout the country in June 2006. The transport associations and organizations have participated in promoting road safety by conducting awareness programmes for their drivers and workers as well as by assisting Road Safety Day celebrations in the regional states. The Ethiopian Red Cross Society has also contributed towards this effort by training professional drivers in giving first aid. Many others have assisted in road safety improvement efforts.

4.10 Research and training

149. Safety interventions are identified through scientific research and development. Very little is known in Ethiopia about the knowledge, attitude and behaviour of road users, or about traffic characteristics, apart from police reports and observations. Detailed and sustainable research is needed in the area of road traffic safety, addressing the critical problems specific to the country.

150. Although the Interim Committee and NRSCO had planned to identify research needs and to conduct research in pedestrian safety, drunk driving and blood alcohol content, and accident costs in the Two-Year Action Plan, the efforts made by this interim body have never been successful. Research activities in road safety have been limited to the research work done by academic staff members and thesis researchers in higher education institutions.

151. Short- and long-term training is critically important in improving road safety capacity in the key organizations so that they will be in a position to implement road safety programmes. However, this has not been successfully implemented in the Two-Year Action Plan. The Department of Civil Engineering, Addis Ababa University, has started a M.Sc. Programme in Road and Transport Engineering in which one of the courses is on road safety. The capacity at the Department has the potential to be utilized with respect to carrying out research projects and building capacity through short-term training.
V. National road safety targets and indicators

152. Road safety targets represent the desired road safety results which a country or jurisdiction wishes to achieve over a given timeframe. The European Road Safety Observatory\textsuperscript{27} provides detailed information on why and how to set and monitor quantitative road safety targets. In the late 1980s, road safety targets were fairly unique, found in only a few developed countries. The well-documented success, both quantitatively and qualitatively, of target-setting initiatives in countries such as Great Britain has made the practice of adopting targets a necessity for improving the level of road safety in many countries. Today, most advanced countries have either a road safety vision or targets or a combination of both in place to make road travel safer.

153. Road safety quantitative targets provide the focus for the national road safety strategy used at the level of key institutional management decisions about coordination, legislation, funding and resource allocation, promotion, and monitoring and evaluation needs. They are also needed to guide research, development and knowledge transfer. Research and experience indicate that long-term goals and interim targets lead to:

- Increased political will and stakeholder accountability for road safety;
- Closer management of strategies and programmes, better safety programmes and better safety performance;
- Better use of public resources; and
- Increased motivation of stakeholders.

154. Current good practice in national road safety strategy involves a combination of top-down long-term goals as well as bottom-up interim targets (usually of 7-10 year duration), which are soundly related to interventions, and their likely effectiveness. Top-down, long-term goals are set based on an idealistic objective with little prior consideration of how the target is to be reached. Bottom-up interim targets are set on the basis of forecasting long-term future trends related to achievable outcomes for a specified package of measures within a given timeframe. Targets that are soundly related to the stated measures and their likely effectiveness provide both clear motivation for stakeholders and meaningful yardsticks against which progress with implementation of the strategy can be measured.

155. Road safety targets are generally proposed by a lead agency and/or the coordination body and are then submitted for Ministerial/Cabinet and/or Parliamentary approval. The activity is driven by the lead agency which reviews safety performance, identifies priorities and organizes the other key government stakeholders to consider and approve proposed outcomes and outputs. Developing countermeasures and action

\textsuperscript{27} European Road Safety Observatory (2006): Quantitative road safety targets, retrieved 13 February 2008 from www.ero.eu
plans at national, regional and/or local levels are integral to formulation of road safety targets.

In good practice road safety management, ‘a results focus’ is the overarching institutional management function. It determines the country’s level of ambition for road safety and takes into account the interventions and institutional arrangements which need to be put in place to realize it. The process generally involves:

- Appraising current road safety performance;
- Adopting a far-reaching road safety vision or goal for the longer term;
- Analysing what could be achieved in the shorter term;
- Agreeing targets; and
- Ensuring accountability across the road safety stakeholders.

156. In this section of the report, the current national road safety goal is presented and a new road safety target is proposed together with safety performance indicators and monitoring mechanisms. The proposed new road safety target is based on the results of the review and assessment of the existing system of managing road safety issues, relevant laws, institutional organizations, funding, road safety works, and trends and characteristics of road traffic accidents.

157. It is very important to note here that the proposed target is made based on idealistic objectives with little prior knowledge of the extent of the commitment of the Government of Ethiopia. The proposal is based on the assumption that the Government of Ethiopia at the federal and regional levels will adopt the target and formulate a detailed road safety strategy and programmes to reach the targets.

5.1 The national road safety goal

158. The NRSCO report\(^\text{28}\) referred to the target which was envisaged in the Road Safety Study\(^\text{29}\) to stabilize the increasing traffic accident death rate in the two-year period of the action plan. The report also noted that the reduction of traffic accident death rates in the period 2002/03-2004/05 from 136 to 128 per 10,000 vehicles as the success of the envisaged goal.

159. Following the Road Safety Study and establishment of the interim National Road Safety Committee, a two-year road safety action plan, in which road safety tasks are listed, was prepared. In the implementation phase, the interim NRSC and NRSCO set a “national road safety goal” to reduce the benchmark rate (the rate in


2002/03, 136 per 10,000 vehicles) by 60 per cent by the year 2009/10. This goal has also been accepted by the RRSCs.

160. The target was not approved by the Government of Ethiopia at both the federal and regional levels. As a result of this, there has been little government commitment, and no well-established system of intervention through an effective institutional management system. Consequently, the target has not been widely advocated or given adequate attention on how to achieve it.

161. The trend shown in Table 1 shows a real decrease of death rates per 10,000 vehicles and absolute decreases in the total road traffic accidents and fatalities in recent years. Based on this, there is a strong belief among road safety stakeholders currently that road traffic accidents and fatalities are decreasing in Ethiopia and the national target will be met at the end of 2009/10.

5.2 Proposal for “Road Safety Vision 2020”

162. Recognizing the importance of road transport for socio-economic development of the country, the Government of Ethiopia has been implementing specific Road Sector Development Programmes since 1997. The assessment made in this case study of the existing institutional organization and safety performance in the country shows that the road safety works and management system are not coping up with the magnitude of traffic accidents and the worsening situation related to the rate of road network expansion, population, and motorization. This requires that the Government and all stakeholders should start taking measures immediately to address the problem in a sustainable way.

163. Based on experiences gained from industrialized countries which effectively addressed road safety, it is proposed that a ten-year successive plan be established for the period 2010-2020, under the Road Safety Vision 2020: “Making Ethiopian Roads Safer for Every One”. A ten-year time frame would provide the Ethiopian road safety community with an overriding theme for a sufficiently lengthy period to permit the development and implementation of new or enhanced strategies and programmes to help it achieve its goal.

164. The proposed target of the Road Safety Vision 2020: “Making Ethiopian Roads Safer for Every One” is to reduce the fatality rate to 25 fatalities per 10,000 vehicles by 2020 from the current base rate. The intermediate target in 2015 is to reduce the fatality rate by half. The target should be related to road safety interventions, closely monitored, and adjusted if necessary at the midpoint, in 2015.
Based on the findings of the study, the following sub-targets are also proposed:

a) Improve the safety of pedestrians and cyclists through enhancing their safety awareness, effective enforcement of traffic regulations, and providing safer roads:
   - Bring behavioural change among pedestrians and cyclists by 85 per cent to their safety using the road through education and road safety publicity;
   - Bring behavioural change among drivers by 85 per cent to respect and give the right of way to pedestrians and cyclists at crossings, through training and publicity;
   - Provide safe road infrastructure by giving due consideration of the safety of pedestrians and cyclists. Provide sidewalks/cycle lane, crossing, segregating, and other facilities and take traffic-calming measures on all roads as appropriate; and
   - Enforce traffic laws for pedestrian and cyclist safety.

b) Reduce over-speeding by 85 per cent through effective enforcement of traffic laws, creating awareness among drivers that over-speeding is a killer, providing self-enforcing speed-reduction devices on vehicles, as well as taking measures on the road as appropriate, through accident black-spot studies;

c) Reduce violation of traffic regulations, particularly those which are highly related to traffic accidents, by 40 per cent through effective enforcement and enhancement of driver safety awareness. These include but are not limited to driving without a license; over-speeding; driving under the influence of alcohol, drugs or chat; driving without respecting the right hand rule; failure to give way to other road users; following too closely; improper overtaking, turning, and parking; failure to respect traffic signs; and excess loading;

d) Reduce the involvement of commercial vehicles (public transport vehicles and trucks) by 30 per cent through improving their road worthiness (standards), providing safer roads, controlling excess loading, controlling over-speeding, prohibiting driving while fatigued, and improving the safety awareness of drivers;

e) Reduce the severity of road traffic accidents by 20 per cent through the use of seat belts and helmets, providing a safe road environment (through safety audits and black-spot studies), improving the standards of vehicles, and providing pre-hospital care and emergency medical treatment;

f) Introduce and increase compliance with mandatory seat belt and helmet use, by a minimum of 85 per cent;

g) Improve the safety of road infrastructure for all road users by 75 per cent, through safety audits and black-spot studies:
h) Improve the safety standards of vehicles and their roadworthiness by 50 per cent, through revising existing legislation and effectively and sustainably implementing the newly introduced vehicle inspection system;

i) Implement driver training, testing, and licensing in compliance with the proclamation;

j) Create, recognize, promote, and strengthen the private-sector partnership in road safety.

166. Road Safety Vision 2020 should be undertaken with a clear Government policy commitment, lead agency, legal framework, and involvement of all road safety stakeholders. It has to build upon the strengths of the road safety works being carried out by the different stakeholders including the interim Road Safety Committees at the federal and regional levels. All weaknesses should be identified and corrected. Road Safety Vision 2020 should effectively fill gaps and strengthen road safety works in the areas identified in this study.

167. A clear road safety strategy and programmes should be defined, in which all road safety stakeholders implement their share in a coordinated manner under the lead agency. The accountability of each road safety stakeholder should be closely monitored in the implementation of road safety programmes.

168. Table 8 provides the proposed list of broad interventions related to the proposed safety target that should be undertaken by road safety stakeholders. The political will and commitment of the Government is crucial to devising a policy, setting the necessary legal framework, establishing a road safety lead agency, and providing the required funding. With these elements in place to create an enabling environment, all stakeholders can work effectively for the improvement of road traffic safety, under the coordination of the lead agency.

169. It is important that the government agencies agree to the road safety targets and an understanding is reached about ensuring the systematic follow up required for determining the success or failure of specific actions. In this process, under the umbrella of the national road safety targets, strategies and programmes, each government agency at federal and regional level has to develop a strategic plan outlining its goals and the means of achieving them. This activity represents the cornerstone of the road safety performance assessment system. The lead agency for road safety has to coordinate this activity.

170. Systematic and transparent quantified monitoring of the implementation of road safety strategies and progress towards meeting the targets is essential both for maintaining the motivation of stakeholders (and hence the effectiveness of implementation) and for updating of the strategies and targets in light of experience.
The road safety agency should take the responsibility for coordinating and systematically monitoring implementation and updating the strategies and targets.

### Table 8. List of proposed interventions related to the proposed road safety target

<table>
<thead>
<tr>
<th>No.</th>
<th>Interventions</th>
<th>Time frame</th>
<th>Responsible body</th>
</tr>
</thead>
</table>
| 1   | Policy and legislations  
- Defining clear road safety policy: Make road safety a political priority  
- Approval of legal document to establish lead agency; give it adequate resources, and make it publicly accountable  
- Revised Traffic Control Regulation (Road Code) which addresses: the use of seat-belts, child restraints, use of motorcycle and bicycle helmets, drug and alcohol-impaired driving with maximum limits (including prevention of the influence of chaat chewing), and the use of mobile phones when driving. Set appropriate fine limits.  
- Revise road safety-related proclamations such as speed limits and vehicle safety standards. | 2009 | Government |
| 2   | Road Safety Vision 2020: “Making Ethiopian Roads Safer for Every One”  
- Adopt “Road Safety Vision 2020”  
- Develop a multidisciplinary national road safety strategy and programmes to achieve the road safety targets under Road Safety Vision 2020.  
- Coordinate the implementation and closely monitor, and if necessary adjust implementation plan and sub-targets | 2010 | Road Safety Lead Agency |
|     |               | 2010-2020 |                  |
| 3   | Introduce on-the-spot traffic accident reporting using a standard format containing all information required by a multidisciplinary, computerized traffic accident data recording and management system. | 2010 | Lead Agency & Police |
| 4   | Provide adequate resources and build the capacity of traffic police with adequate training, equipment, and discipline for effective traffic management, enforcement, and traffic accident investigation, reporting, and computerized data management. | 2010 | Federal and Regional Police |
| 5   | Provide legal framework, resources, and manpower for the implementation and the sustainability of the vehicle inspection system devised following the reform of the Federal TA being introduced. | 2009-2020 | Federal & Regional Transport Agencies |
| 6   | Provide resources and staff for the implementation of sustainable driver training, testing, and licensing system as per Proclamation 600/2008. | 2009-2020 | Federal Transport Authority |
| 7   | Establish traffic and safety engineering units under road agencies to give due considerations to road safety in the planning, design, construction, and maintenance of road infrastructure: “Safer roads for all road users”.  
- Set appropriate design standards, ensure that road safety considerations are embedded in the planning stage of new road projects, and manage infrastructure to promote safety for all  
- Introduce road safety audits for new and existing roads to make the road infrastructure safer for every road user  
- Improve the safety of the existing road infrastructure through accident black spot identification and selecting low-cost and cost-effective mitigation measures | 2009-2020 | Road Agencies |
<table>
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<th>No.</th>
<th>Interventions</th>
<th>Time frame</th>
<th>Responsible body</th>
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<tbody>
<tr>
<td>8</td>
<td>Coordinate, strengthen, and focus on targeted road user groups to make road safety education and publicity more effective. Promote safer road use through publicity.</td>
<td>2009-2020</td>
<td>Lead &amp; Transport Agencies</td>
</tr>
<tr>
<td>9</td>
<td>Provide a legal framework and adequate resources to institute effective emergency and pre-hospital care for road traffic accident victims. Build capacity.</td>
<td>2009-2020</td>
<td>Government &amp; Ministry of Health</td>
</tr>
<tr>
<td>10</td>
<td>Implement Proclamation 559/2008 fully so that third party risks are covered and the Insurance Fund is established for any traffic accident victim to get immediate medical treatment</td>
<td>2009</td>
<td>MOTC, TA &amp; concerned bodies</td>
</tr>
<tr>
<td>11</td>
<td>Promote, support, and coordinate capacity building and road safety research to effectively reduce the occurrence of road traffic accidents and victim fatalities</td>
<td>2009-2020</td>
<td>Road Safety Lead Agency</td>
</tr>
<tr>
<td>12</td>
<td>Coordinate and motivate the involvement of non-governmental organizations and the private sector in road safety works.</td>
<td>2009-2020</td>
<td></td>
</tr>
</tbody>
</table>

171. The European Road Safety Observatory\(^\text{30}\) suggests that monitoring and updating should be integral parts of implementation and requires appropriate collection, processing and publication of reliable data for:

- Continuous monitoring of targeted and other safety performance indicators;
- Establishing the effectiveness of specific road safety measures by carrying out before and after studies;
- Reviewing and updating of policies and measures with re-distribution of resources towards more cost-effective measures;
- Identifying delays in implementation requiring corrective action; and
- Establishing the level of public support for interventions.

172. The Observatory document further cites that most countries that are active in road safety have a comprehensive set of databases across transport, health and justice sectors to inform road safety problem analysis, target-setting, and the monitoring and evaluation of programmes, measures and performance. The data requirements and the level and type of disaggregation are closely linked to the details of the road safety plan.

173. Safety performance indicators or intermediate outcome data for monitoring “Road Safety Vision 2020” for Ethiopia should include but be not limited to:

- Government commitment to defining road safety policy, establishing a lead agency, and providing the required legal framework and resources;
- Adopting “Road Safety Vision 2020” and defining a national multisectoral road safety strategy and programmes, including building capacity in coordinating and monitoring;

- Modernized traffic accident reports and computerized traffic accident data by police, casualty data in hospitals and insurance records;
- Process and system indicator information on the effective implementation of the new vehicle inspection procedure, driver training, testing, and licensing, insurance system and establishment of Insurance Fund, emergency and pre-hospital care, and safety education and publicity;
- Behavioural indicators from survey data on drunk driving, changes in speed or seat belt and helmet use regulations, and drivers violating traffic regulations;
- Process and system indicator information on safety compliance with pedestrian and cyclists safety requirements on road infrastructure, the number of road safety audits made on existing and new roads, the number of black-spot studies undertaken, the number of hazardous locations treated, the number of junctions improved for safety; and
- Before and after studies on safety awareness of road users, standards and road worthiness of vehicles, violations of traffic laws, over-speeding, private-sector partnership, and others.
VI. Recommendations

174. This case study has reviewed the road safety management system, road safety works, and road traffic accident problems, and is proposing ideal road safety targets for Ethiopia. The assessment generally indicates that road safety has not received enough government prioritization in the past but that this may be changing. Road traffic accidents are causing heavy loss of human and economic resources despite the relatively low road network and motorization level. The risk is increasing with the increase in population, the road network expansion sometimes with little consideration of safety, the increase in motorization and with the vehicle fleet generally in poor condition. Considering the severity and frequency of traffic accidents, the importance of road transport in this country and the rate at which the road network is expanding, road safety is a vital issue to be addressed urgently.

175. After the TRL and Ross Silcock Road Safety Study and the establishment of the interim Road Safety Committee at the federal level and Road Safety Committee in the regions, road safety activities have been undertaken with funding from the RF. The institutional organization and coordination remains weak due to the lack of capacity and the absence of an effective, well-resourced lead agency mandated to take full responsibility for improving road safety. The absence of a road safety policy in the country should be remedied as this results in lack of commitment to road safety in the key agencies.

176. In order to avert increasing loss of human and economic resources caused by road traffic accidents, it is vital that road traffic safety issues be dealt with adequately at an early stage in the development of road transport infrastructure and services. This can sustainably be achieved through the ambitious Road Safety Vision 2020 “Making Ethiopian Roads Safer for Every One”. The specific road safety target over the ten-year period, 2010-2020, is to reduce the fatality rate to 25 per 10,000 vehicles from the current base rate. The proposed Road Safety Vision 2020 also has numerous sub-targets listed in section 5.2.

177. The recommendations that follow are made based on the findings of this case study. The recommendations are general but call for fundamental interventions that will be defined in detail by the lead road safety agency and all stakeholders, in the form of the national road safety strategy and programmes.

178. It has been demonstrated from the experiences of other countries that the presence of political commitment and policy directions are fundamental requirements for tackling road safety problems effectively. Thus, a comprehensive national road safety policy must ensure the commitment of the government and of all other stakeholders at all levels.

179. The establishment proclamation for the National Road Safety Council, which has been awaiting approval, needs immediate attention and approval, to establish a lead agency at the federal level, fully responsible for instituting sustainable road safety. Similarly, lead agencies should also be established at regional level.

180. It is essential that the establishment of the proclamations for Road Authorities and other key and relevant government agencies be revised to clearly state and define their road safety responsibilities and to incorporate safety concerns adequately in the expansion and upkeep of road infrastructure. Horizontal and vertical legal linkages between the relevant public agencies at all levels (federal and regional) should be established.

181. Relevant transport legislation needs to be revised or established, to provide the legal framework for safer transport operations and enforcement. This should include but be not limited to introduction of laws to institute the use of seat belts, helmets, child restraints, and to prohibit and monitor driving under the influence of alcohol, drugs or chat and use of mobile phones while driving. Along with the introduction of these laws, levels of penalties should be fixed to enable effective enforcement.

182. Although the current financial requirement for road safety is satisfied from the RF, in the long-term, funding is expected to be a bottleneck. It is very important, therefore, to identify possible sustainable sources of funding such as a percentage of penalties from traffic violations, compulsory third party insurance premiums, and private sector funding.

2 National road safety strategy and programmes

183. The road safety lead agency should adopt Road Safety Vision 2020: “Making Ethiopian Roads Safer for Every One” and get the approval and support of central and local Government. The safety target should link clearly with the multidisciplinary national road safety strategy and programmes. The lead agency should closely coordinate and monitor all road safety stakeholders to ensure that they are effectively involved and implementing their share of assigned tasks. The main recommended areas of focus include but are not limited to:
a) **Organization and capacity of the traffic police:** It is vital that the traffic police be given adequate priority and reorganized so that they shoulder their responsibility efficiently in managing the safe operation of traffic and accident investigation and reporting. Enforcement of road safety legislation such as over-speeding, failure to give way for pedestrians and other vehicles, risky driving discipline, non-use of seat belt, driving under the influence of alcohol and drugs, non-use of helmets, and others can only be effective through results-based organization, adequate training, necessary equipment, and professional discipline;

b) **Road traffic accident investigation, reporting, and a computerized database:** The establishment of a standardized accident reporting procedure and database system is a fundamental requirement of any type of road safety activity. Efforts being made in this area should be consolidated and a way for its fast introduction throughout the country has to be devised;

c) **Road safety engineering:** With the revision of the road traffic proclamation, Road Authority responsibilities include road safety, and a strategy should be devised so that such road safety engineering activities as road safety audits, black-spots identification, accident reduction engineering measures, and road planning design, and operations management, with due consideration of vulnerable road users, are undertaken as routine tasks for the upkeep of a safe road network;

d) **Road safety education, training, and publicity:** One of the main reasons for the unsafe road transport system and its low prioritization is the critical lack of road safety knowledge at all levels. Safety education for children in schools, appropriate training for all stakeholders (politicians, managers, road safety workers, and road users), and publicity should be given adequate importance and means and resources must be found. Road safety publicity should target the identified road user groups that are most involved in road traffic accidents;

e) **Vehicle safety standard and annual inspection:** A national strategy on vehicle standards is needed, based on multiple factors including the savings benefits from traffic accidents and injuries and pollution as well as improvements in traffic operations to reduce congestion. The provision of an adequate legal framework, resources, and staff training is critically important for the sustainable implementation of the new vehicle inspection system being introduced by the Federal TA;

f) **Driver training, testing, and licensing:** Driver's error is the major cause of traffic accidents in Ethiopia. In order to improve this, the provision of adequate resources, and skilled and dedicated staff for sustainable implementation of the driver training, testing, and licensing system in compliance with Proclamation No. 600/2008, is fundamental;
g) Pre-hospital care and emergency medical service: The study findings indicated that pre-hospital care is lacking and emergency medical facilities are not providing adequate, timely treatment for traffic accident victims. The provision of a legal framework, adequate resources, a national strategy to improve communication, pre-hospital care, ambulance and other emergency medical services are absolutely needed to address the critical post-accident scenarios and the number of deaths;

b) Insurance system: It is fundamental to provide immediate and adequate resources and staffing to implement the mandatory insurance system against third-party risks effectively and to establish the Insurance Fund for emergency medical treatment for road traffic accident victims; and

i) Research and training: The need for research is fundamental to adapt proven and promising road safety methods and technology, as well as to identify appropriate solutions for unique national and local road traffic situations. Clearly, training is needed to improve the acute shortage of staff. A national strategy to create, promote, support, and coordinate research and training should be defined and capacity and an enabling environment should be developed so that the road safety problem in Ethiopia is addressed systematically and in sustainable ways.
References


