



ADB-ASEAN Regional Road Safety Program

Country Report:

CR 10



**Road Safety in
Viet Nam**

Asian Development Bank-Association of Southeast Asian Nations Regional Road Safety Program

Country Report CR 10: Viet Nam

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ABBREVIATIONS

| | |
|--------|--|
| ASEAN | Association of Southeast Asian Nations |
| MOT | Ministry of Transport |
| NTSC | National Traffic Safety Committee |
| UNICEF | United Nations Children's Fund |
| VRA | Viet Nam Road Administration |

NOTE

In this report, "\$" refers to US dollars.

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1 COUNTRY DESCRIPTION

1.1 General

Viet Nam is located in Southeast Asia. The climate is tropical, with four seasons (spring, summer, autumn, and winter) in the North and two seasons (rainy and dry seasons) in the South. The land area is 330,991 square kilometers (km²), with a coastline of 3,200 kilometers, and a population that reached 80 million in 2003. The yearly average population growth rate is 1.32%. The country experienced 30 years of war.

Viet Nam's economy is transitioning from a centrally planned economy to a market-oriented one. The gross domestic product was about \$33 billion in 2001. The gross domestic product growth rate rose to 7.24% in 2003, from 7.04% in 2002, and is expected to reach 7.50–8.00% in 2004. The standard of living has improved greatly since the Doi Moi policy was carried out. The box provides more information concerning Viet Nam's population, area, and economy.

Box: Population, Area, and Economy

Population and Area

| | |
|-------------------------|---------------------------|
| Land Area | 330,991 square kilometers |
| Population (2002) | 79.93 million |
| Population Growth(2002) | 1.35% |

Economic Indicators

| | |
|--|------------|
| Gross Domestic Product Growth Rate (2002) | 7.04% |
| Gross Domestic Product Growth Rate (2003) | 7.24% |
| Expected Gross Domestic Product Growth Rate (2004) | 7.50–8.00% |

Source: 2002 national statistics.

1.2 Road Transport Network

According to the figures given by the Viet Nam Road Administration (VRA) in 2003, the total road network of Viet Nam is 221,115 km. The road density is 24.06 km per 100 km² and 1.0 km per 1,000 people. There are 7,879 bridges of various types, with a total length of 223,818 meters in the road network. Table 1 provides more information about Viet Nam's road network.

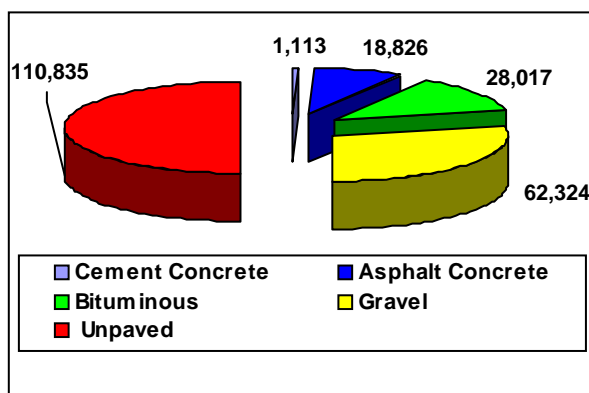
Table 1: Road Network

| Road Type | Total Length (kilometers) | Percent of Total Length |
|------------------------|---------------------------|-------------------------|
| National Highway Roads | 17,295 | 7.83 |
| Provincial Roads | 18,344 | 8.30 |
| District Roads | 39,947 | 17.17 |
| Local Roads | 134,463 | 60.86 |
| Urban Roads | 5,919 | 2.68 |
| Specialized Roads | 6,986 | 3.16 |
| Total Length | 220,954 | 100.00 |

Source: Viet Nam Road Administration.

A majority (78.31%) of the road network consists of gravel and unpaved roads (Figure 1). VRA is responsible for Viet Nam's road network. However, VRA lacks funding for road maintenance.

Figure 1: Road Surface



Source: Viet Nam data.

1.3 Vehicle Population

The number of motor vehicles has greatly increased during the past few years, particularly of motorcycles, which increased by 29.61% in 2001 and 22.80% in 2002. The total number of motor vehicles in Viet Nam was 532,681 in 2001. This was a 9.61% increase over the 2000 total; there were 632,825 motor vehicles in Viet Nam in 2002. There were 8,395,835 and 10,988,543 motorcycles in Viet Nam in 2001 and 2002, respectively (Table 2).

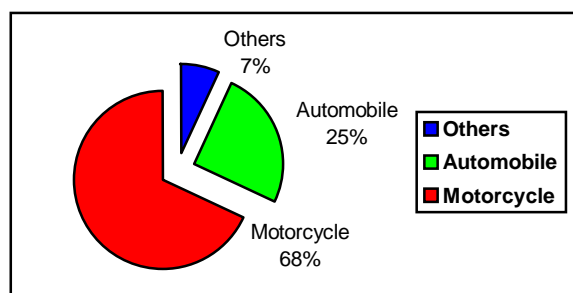
Table 2: Vehicle Population

| Year | Automobiles | Motorcycles |
|------|-------------|-------------|
| 1991 | 256,898 | 1,522,184 |
| 1992 | 270,036 | 1,704,225 |
| 1993 | 292,899 | 2,427,163 |
| 1994 | 307,708 | 3,052,847 |
| 1995 | 340,799 | 3,578,156 |
| 1996 | 386,976 | 4,208,247 |
| 1997 | 417,768 | 4,827,218 |
| 1998 | 443,000 | 5,200,000 |
| 1999 | 456,000 | 5,600,000 |
| 2000 | 486,000 | 6,478,000 |
| 2001 | 532,681 | 8,395,835 |
| 2002 | 632,825 | 10,988,543 |
| 2003 | 675,000 | 11,379,000 |

Source: Viet Nam Road Administration.

Public transport is not well developed in Viet Nam. The Government has made every effort to develop public transport by bus. In Hanoi, the public transport services could meet only 2% of commuters' demand in 2002 but increased to 10% in 2003 (a 3.7-fold increase). Hanoi now has 700 buses and 40 service routes in operation, which moved 173 million commuters in 2003. It is expected that 200 million commuters will use public transportation in 2004. Ho Chi Minh City has 29 bus service routes; public transport services meet 3% only of travel needs. However, the city's public transport services increased by 4.2-fold in 2003. Mixed traffic is a feature of Viet Nam's roads. Up to 15 September 2002, there were 155,169 cars and 2,217,355 motorcycles registered in Ho Chi Minh City, apart from the more than 60,000 tricycles and 2 million bicycles. Means of transport in Viet Nam are examined in Figure 2.

Figure 2: Means of Transport



Source: Viet Nam Road Administration.

1.4 Legislative Framework

The Road Traffic Law came into effect on 1 January 2001. The law governs traffic and development of roads, including drivers' licenses, vehicle licenses and inspections, and traffic signs.

The Government issued Resolution No. 13/2002/NQ-CP, dated 19 November 2002, regarding measures to curb increases in traffic accidents and move toward a gradual decrease of traffic accidents and congestion.

Government Decree No.15/2003/ND-CP (dated 19 February 2003) regulates administrative sanctions on offenses against provisions of road traffic rules, road infrastructure, vehicles in traffic, and vehicle drivers engaged in traffic. Road standards and engineering design and construction follow the road and bridge design standards of the Ministry of Transport (MOT). MOT is responsible for road construction and management in accordance with the Road Traffic Law.

2 ASSESSMENT OF ROAD SAFETY

2.1 Traffic Safety

Traffic accidents have been increasing during the past few years, in number of accidents and fatalities and injuries. In 2002 alone, deaths resulting from traffic accidents rose to 13,186, an increase of 21.4% over 2001 figures. Injuries rose to 30,999, an increase of 5.3% over 2001 figures, while the total number of accidents increased by 2,162, or 8.4%.

Due to rapid motorization, that grows annually at the rate of 14%, traffic congestion occurs daily, mainly in Hanoi and Ho Chi Minh City and particularly during peak hours.

There was considerable change in traffic safety in Viet Nam in 2003. The Government was determined to solve the traffic problem. Positive traffic safety management steps were made in Viet Nam with the introduction of the Government's Resolution No. 13/2002/NQ-CP and Decree No.15/2003/ND-CP. To successfully implement the resolution and decree, great efforts were made to reduce the number of traffic accidents (compared with 2002 figures). For the first 10 months of 2003, accidents decreased by 6,458 (27.1%), compared with the same period in 2002, including a reduction of 904 deaths (8.5%) and 8,916 injuries (33.6%). In 2003, there were 20,690 accidents, down by 7,754 or 27.2%; 11,853 deaths, down by 1,039 or 8.0%; and 20,694 injuries, down by 11,092 or 34.8%, compared with 2002 figures, respectively.

Traffic accidents have decreased greatly, compared with 2002 figures, but the

number of fatalities and injuries is still on the high side, and the results are unstable (Table 3).

Table 3: Traffic Accidents (1990–2003)

| Year | Accidents | Fatalities | Injuries |
|------|-----------|------------|----------|
| 1990 | 5,565 | 2,087 | 4,468 |
| 1991 | 6,864 | 2,395 | 6,846 |
| 1992 | 8,165 | 2,755 | 9,040 |
| 1993 | 11,678 | 3,940 | 12,590 |
| 1994 | 13,118 | 4,533 | 13,056 |
| 1995 | 15,376 | 5,430 | 16,920 |
| 1996 | 19,075 | 5,581 | 21,556 |
| 1997 | 19,159 | 5,680 | 21,905 |
| 1998 | 19,975 | 6,067 | 22,723 |
| 1999 | 20,733 | 6,670 | 23,911 |
| 2000 | 22,486 | 7,500 | 25,400 |
| 2001 | 25,040 | 10,477 | 29,188 |
| 2002 | 27,993 | 13,186 | 30,999 |
| 2003 | 20,690 | 11,853 | 20,694 |

Source: Viet Nam Road Administration, National Traffic Safety Committee.

2.2 Causes of Traffic Accidents

There are many reasons that lead to traffic accidents. The two major reasons bring shortcomings in administration of traffic safety and a low sense of responsibility of road users in complying with traffic rules and regulations.

2.3 Road Traffic Safety

Road Accident Definitions. In Viet Nam, road accidents are classified into various categories: fatal, injury, and property damage only.

A fatal-casualty road accident is one in which a victim dies on the spot or within 24 hours after an accident.

An injury road accident is one in which at least one person is either slightly or seriously injured as a result of an accident.

A serious road accident is an accident that causes at least two deaths or one death and two or three serious injuries.

All reported accidents not involving injuries are classified as property damage only accidents.

Road Accident Reporting. The Staff Bureau, under the Traffic Police Department, is responsible for collecting road traffic accident data. This bureau is responsible for data processing and reporting accident statistics; accident data are collected on a bureau-provided form.

The road traffic accident report form covers accident times, accident locations, fatalities or injuries, vehicle damage, weather conditions, collision types, and accident sketch maps.

Traffic police investigators at accident locations will collect accident data and make reports using the form daily, weekly, and monthly. Completed forms are then sent to the Staff Bureau. For a serious accident, a report will be sent to the Staff Bureau immediately. The accident data reported will be computerized.

Reports made by the Staff Bureau are sent to the Ministry of Public Security, National Traffic Safety Committee (NTSC), and Office of the Government, for their further action. Reports on road traffic accidents by the Staff Bureau are very useful in helping these agencies direct road safety work.

Accident reports by local traffic police are merely statistical reports. Deaths after a certain number of days after an accident are not fully reported. There is no definition for reporting the deaths of victims that occur within 30 days of accidents. Viet Nam should define the period for fatal reports.

No close coordination in road accident reporting exists between the Traffic Police Department and hospitals. This needs to be improved. Not all road accidents are fully reported, particularly minor accidents.

According to a report submitted to the United Nations Children's Fund (UNICEF) on Viet Nam's Multi-centre Injury Survey, which was conducted by the Hanoi School of Public Health in 2003, road traffic accidents were the third leading cause of nonfatal injuries. They consumed large amounts of medical resources, especially in treating teenage victims of high-velocity motorcycle accidents. Road traffic accidents are the leading cause of death among young people 15–19 years of age. An effective prevention program will target this group and include fully enforced programs for helmet use, safe driving behavior, and avoidance of driving while intoxicated. The report submitted to UNICEF also indicated that only 17–30% of those injured in road accidents and hospitalized were reported by the Traffic Police Department. However, this information should be checked again.

There is no reporting system related to the cost of road traffic accidents in Viet Nam that focuses on the costs of damage to property, administration cost, medical cost, output lost, and human costs. Hence, computation of national costs of road accidents has not yet been done.

Data Background. There are sources of road traffic accident data, but the official database is that maintained by the Traffic Police Department. Most reports on fatal and injury road accidents are computed in this database.

Accident Situation. Road traffic safety plays a main role in traffic safety in Viet Nam. To improve the traffic safety situation in Viet Nam, road traffic safety must be improved first, as road accidents account for about 96% of total traffic accidents. Road accidents cause more dangerous damage and loss than other accidents.

Between 1993 and 2002, road fatalities in Viet Nam increased by about 66%, while road fatalities in the Association of Southeast Asian Nations (ASEAN) region were about 22%. The number of motor vehicles, including motorcycles, increased by 75%, with motorcycles accounting for the biggest increase, from 2,427,163 units to 10,273,659 units. During the same period, the population increased by 11.5%. The overall average road fatality risk for this period was 12 deaths per 10,000 vehicles. The road fatality risk per 100,000 people was 6.3 in 1993 and 9.7 in 2000. The number of road deaths was rather high, compared with the number of road deaths in other ASEAN member countries. Road accident details are shown in Table 4.

Table 4: Road Accidents (1993–2003)

| Year | Accidents | | Fatalities | | Injuries | | Fatalities per 10,000 Vehicles |
|------|-----------|--------------|------------|--------------|----------|--------------|--------------------------------|
| | Cases | Increase (%) | No. | Increase (%) | No. | Increase (%) | |
| 1993 | 11,678 | 22.3 | 4,350 | 29.9 | 12,590 | 13.7 | 15.9 |
| 1994 | 13,118 | 10.9 | 4,533 | 4.8 | 13,056 | 10.0 | 13.6 |
| 1995 | 15,376 | 17.2 | 5,430 | 19.3 | 16,920 | 29.5 | 13.8 |
| 1996 | 19,075 | 24.0 | 5,581 | 2.7 | 21,556 | 27.3 | 12.1 |
| 1997 | 19,159 | 0.4 | 5,680 | 1.8 | 21,905 | 1.6 | 10.8 |
| 1998 | 19,975 | 4.3 | 6,067 | 6.8 | 22,723 | 3.7 | 10.7 |
| 1999 | 20,733 | 3.8 | 6,670 | 9.9 | 23,911 | 5.2 | 10.9 |
| 2000 | 22,486 | 8.5 | 7,500 | 12.4 | 25,400 | 6.2 | 10.7 |
| 2001 | 25,040 | 11.3 | 10,477 | 39.6 | 29,188 | 14.9 | 11.7 |
| 2002 | 27,134 | 8.3 | 12,800 | 21.1 | 30,733 | 5.3 | 11.7 |
| 2003 | 19,852 | (28.2) | 11,319 | (9.4) | 20,400 | (35.2) | 9.4 |

Source: Traffic Police Department data.

Road traffic accidents in Ho Chi Minh City are examined in Table 5.

Table 5: Road Traffic Accidents in Ho Chi Minh City

| Year | Accidents | Fatalities | Injuries |
|----------|-----------|------------|----------|
| 1997 | 1,765 | 871 | 2,080 |
| 1998 | 2,259 | 910 | 2,435 |
| 1999 | 2,418 | 912 | 2,657 |
| 2000 | 2,299 | 929 | 2,506 |
| 2001 | 2,519 | 1,224 | 2,738 |
| 2002 | 2,595 | 1,410 | 2,821 |
| Nov 2003 | 1,659 | 971 | 1,776 |

Sources: Traffic Safety Committee HCMC.

The number of road traffic accidents increased significantly in 2002, with a total of 27,134 cases, an increase of 57% over 1993 figures, and resulted in 12,800 deaths and 30,733 injuries.

As a result of the successful implementation of the Government's Resolution No. 13/2002/NQ-CP, dated 19 November 2002, measures taken in 2003 appear to have significantly reversed the road accident trend. Accidents and casualties have decreased noticeably. Road traffic accidents decreased by 28.2% to 19,852 cases in 2003, from 27,654 cases in 2002. There were 11,319 fatalities, down by 9.4%, and 20,400 injuries, down by 35.2%, compared with 2002 figures.

According to NTSC, during 2003 traffic accidents totaled 20,690. Of these, there were 19,852 road accidents, 457 railway accidents, and 381 inland waterway accidents (Table 6). Road accidents accounted for 96.00% of total traffic accidents, 95.50% of total deaths, and 98.58% of total injuries.

Table 6: Traffic Accidents (2003)

| Modes | Accidents | Fatal | Injured |
|-----------------|---------------|---------------|---------------|
| Road | 19,852 | 11,319 | 20,400 |
| Rail | 457 | 247 | 256 |
| Inland Waterway | 381 | 287 | 38 |
| Total | 20,690 | 11,853 | 20,694 |

Source: National Traffic Safety Committee.

The main reasons for the decrease in road traffic accidents in 2003 are discussed in the following paragraphs.

Political Will. The party and the Government showed their determination to curb road accidents, which will help develop the country's economy and social stability. With the timely introduction by the party's secretariat of Directive No. 22-CT/TW (dated 24 February 2003), which focused on strengthening the leadership of the party toward Resolution No. 13/2002/NQ-CP (dated 19 November 2002) and toward related measures designed to curb increases in traffic accidents and gradually decrease the number of traffic accidents and the amount of congestion, an improvement in road safety was achieved, especially in raising awareness of road safety issues among people in general and road users in particular.

Introduction of Related Legal Regulations on Traffic Safety. Three decrees were issued by the Government, and 19 decisions were made by the minister of transport. In addition other documents were produced to guide the implementation of the Road Transport Law. These regulations facilitated the enforcement of road traffic rules.

Enhanced Traffic Police Control, Inspection, and Enforcement. This resulted in significant road users' compliance with road traffic rules, and reduced road accidents.

Enhanced Education and Publicity Campaigns. Highlighting road traffic rules made an effective contribution to raising the level of road user compliance with road traffic rules.

Strengthened State Administration of Road Safety. Control of driver training, testing, and licensing and motor vehicle inspections was particularly beneficial. Public bus transport services grew speedily in Hanoi and Ho Chi Minh City. NTSC was strengthened at the local level.

Active Involvement of Sociopolitical Organizations. The involvement of these organizations in road safety was beneficial.

The number of road traffic accidents was initially curbed. This is an encouraging achievement in road safety improvement by Viet Nam. However, road accidents are still at a high level, and if the work of enforcing, educating the public about, and publicizing traffic rules cannot be done constantly, numbers will rise again. Road users' compliance with traffic rules becomes the most important element in the sustainability of road safety.

Vehicle fleet size and noncompliance with traffic rules by road users are the main features of road traffic in Viet Nam, resulting in a high rise of traffic accidents and traffic jams in cities.

A November 2003 analysis of 1,097 road accidents showed the causes of these accidents (Table 7).

Table 7: Road Accident Causes

| Cause | Accident | % |
|--------------------|----------|-------|
| Road Users | 880 | 80.22 |
| Speeding | 257 | 23.43 |
| Passing | 161 | 14.68 |
| Drinking | 43 | 3.92 |
| Lack of Visibility | 190 | 17.32 |
| Wrong Right-of-Way | 181 | 16.50 |
| Pedestrians | 48 | 4.38 |
| Unsafe Vehicles | 9 | 0.82 |
| Road Facilities | 0 | 0.00 |
| Others | 73 | 6.65 |
| Unclear | 143 | 13.04 |

Source: National Traffic Safety Committee.

Motor vehicle drivers, including motorcyclists, are the main road accident instigators. A November 2003 review of 1,017 accidents shows this clearly (Table 8).

Table 8: Road Accident Instigators

| Instigator | Accident | % |
|--------------------|----------|-------|
| Automobile Drivers | 227 | 22.32 |
| Motorcyclists | 705 | 69.32 |
| Others | 85 | 8.36 |

Source: National Traffic Safety Committee.

From Table 8, it is clear that motorcyclists are major road accident instigators.

With high growth, motorcycles accounted for 95% (10,988,543 units) of the total number of road transport means in 2002. Motorcycles are involved in 70% of all road accidents. According to a Viet Duc Hospital report on traffic accident victims treated during 1998–2001, almost two thirds of the 69,837 road accident injuries (caused by automobiles, motorcycles, homemade trucks, bicycles, and pedestrians) were motorcycle-related (46,296 cases or 66.29%). Reports by the Traffic Police Department showed that motorcycle-related traffic victims accounted for 62.89% of all traffic

accidents nationwide and 73.00% in Hanoi.

The Viet Duc Hospital report also revealed that in terms of gender, out of 46,296 cases of motorcycle-related traffic injuries, there were 33,486 cases (72.33%) involving males and 12,810 cases (27.67%) involving females (Table 9).

Table 9: Gender Distribution of Injured Victims of Motorcycle Accidents

| Year | Male | Female |
|----------------|---------------|---------------|
| 1998 | 7,016 | 3,016 |
| 1999 | 8,081 | 3,004 |
| 2000 | 8,859 | 3,117 |
| 2001 | 9,168 | 3,571 |
| Total | 33,124 | 12,708 |
| % Share | 72.27 | 27.73 |

Source: Viet Duc Hospital report.

And out of 464 fatalities from motorcycle accidents, 72.4% were males and 27.56% were females (Table 10).

Table 10: Gender Distribution of Fatalities of Motorbike Accidents

| Year | Male | Female |
|----------------|--------------|--------------|
| 1998 | 67 | 20 |
| 1999 | 121 | 30 |
| 2000 | 94 | 26 |
| 2001 | 80 | 26 |
| Total | 362 | 102 |
| % Share | 78.02 | 21.98 |

Source: Viet Duc Hospital report.

In terms of age, 83.22% of patients injured in motorcycle accidents were between 16 and 45 years of age (Table 11). The percentage of patients who died as a result of injuries from motorcycle accidents (74.57 %) was also high for this age group. Sixty percent of road traffic accidents happened between 2:00 p.m.

and 10:00 p.m., especially from 4:00 p.m. to 6:00 p.m. (16%).

Table 11: Age Distribution of Hospitalized Victims of Motorcycle Accidents

| Year | 0–15 | 16–30 | 31–45 | 46–60 | >60 | Total |
|----------------|--------------|---------------|---------------|--------------|--------------|---------------|
| 1998 | 446 | 4,483 | 3,916 | 897 | 377 | 10,119 |
| 1999 | 561 | 5,033 | 4,724 | 631 | 286 | 11,236 |
| 2000 | 556 | 4,838 | 5,201 | 1,088 | 411 | 12,096 |
| 2001 | 662 | 5,54 | 4,752 | 1,176 | 710 | 12,845 |
| Total | 2,225 | 19,897 | 18,593 | 3,792 | 1,784 | 46,296 |
| % Share | 4.80 | 42.98 | 40.16 | 8.19 | 3.85 | 100.00 |

Source: Viet Duc Hospital report.

Many studies have clearly shown the benefits of helmet use for motorists. The Viet Duc Hospital report showed that only three of the 464 patients who died wore helmets (0.6%), and 46.5% of the patients not wearing helmets, compared with only 11.8% wearing helmets, suffered serious head trauma. The risk of head injuries was therefore four times greater for those not wearing helmets. This shows the importance of wearing helmets when riding motorcycles. However, according to a survey taken in 2000, only less than 2% of riders used helmets, and 60% of road deaths were caused by head injuries. Hence, helmet use should be compulsory for motorcycle riders.

Road accidents occur largely on highways, where motorists feel free to speed up. The same happens in cities, where there is a dense population of motorcycles. The November 2003 analysis of 1,105 road accidents gives a clear picture of this trend (Table 12).

Table 12: Accident Locations

| Place | Accidents | % |
|------------------|-----------|-------|
| National Highway | 518 | 46.88 |
| Provincial Roads | 153 | 13.85 |
| Urban Roads | 329 | 29.77 |
| Other Roads | 105 | 9.50 |

Source: National Traffic Safety Committee.

Motor Vehicle Inspections. Motor vehicle inspections are carried out by the Viet Nam Register, to ensure technical safety and environment protection. The inspection standards are set for used vehicles, new vehicles, and imported vehicles. Periods required for vehicle inspections vary according to vehicle type. For new trucks and cars, the first period is 24 months, and the regular period is 12 months. For new buses, the first period is 18 months, and the regular period is 6 months. All motor vehicles used for more than 7 years are subject to the regular inspection period of 6 months.

A high percentage of old and badly deteriorated motor vehicles are in use now. Of the total number of vehicles in operation, those less than 10 years old account for 22.9%, those more than 10 years old account for 16.2%, those more than 15 and up to 20 years old account for 4.3%, and those over 20 years old account for 10.7%. Motor vehicles in poor condition have made safety problems more serious. Some serious accidents occurred because of vehicles not being roadworthy. Although motor vehicle inspections are mandated, many vehicle owners are reluctant to have their vehicles inspected. For this reason, there are difficulties in ensuring the roadworthiness of motor vehicles.

Facing this problem, MOT issued Decision No. 4331/2002/QD-BGTVT (dated 24 December 2002) to further require the technical inspection of buses in use for 15

years and trucks in use for over 20 years, with a regular inspection period of 3 months, and ensure environment protection. The Viet Nam Register has done a lot to improve its inspection work, such as modernization of the 80 inspection stations, raising inspectors' sense of responsibility, and eliminating their negativity when performing their duties. As a result, motor vehicle roadworthiness has improved considerably. According to NTSC's road traffic report for November 2003, there were only nine road accidents out of 1,571 that resulted from poor vehicle condition. Vehicle condition accounted for only 0.82% of all accidents.

On 13 January 2004, the Government issued Decree No. 23/2004/ND-CP, prescribing a lifetime for the use of trucks and buses. According to this decree, the lifetime of trucks is 25 years, that of buses is 20 years, and that of vehicles converted into buses is 17 years. This decree will be implemented in phases 1, 2, or 3 years, according to truck and bus type. This decree will increase motor vehicle roadworthiness and eventually help reduce road accidents.

Driver Training and Licensing. Vehicle and driver management plays an important role in road safety efforts. There were 123 driver training centers and 62 testing centers in Viet Nam in 2002. The driving centers are responsible for training new drivers as well as retraining existing drivers.

There is an urgent need to enhance these centers in their teaching programs and equipment, as well as driver's licensing. Improper driver's licensing must be corrected as quickly as possible to avoid related road safety problems. Accidents often occurred on roads because of problems related to long driving work

hours, particularly passenger buses on trunk services and north and south services.

Based on the November 2003 analysis of 1,017 accidents, 227 accidents (22.3%) were due to driver error, and 705 accidents (69.3%) were due to motorcyclists.

Viet Nam has over 11.6 million motorcycles, including 10.4 million motorcycles with engine capacities of more than 50 cubic centimeters, which requires drivers to hold licenses. However, only 54.5% of motorcyclists held licenses at the end of 2002. This is one main factor that gave rise to road accidents, as about 70.0% of accidents each year are caused by motorcycles.

In implementing Government's Decision No. 13/2002/NQ-CP, the MOT issued Directive No. 20/2002/CT-BGTVT (dated 11 November 2002) on the continuation of strengthening the control, training, and testing related to licensing drivers. VRA, in coordination with other relevant agencies, conducted inspections and took positive steps to improve driver training, testing, and licensing. As a result, 4.7 million driver's licenses were issued in 2003. Negative phenomena in licensing were initially eliminated. Investments were made to increase the physical condition and quality of 23 training centers. Enrollment of learners at five training centers was suspended.

Enhancing driver training and licensing and introducing a demerit point system have resulted in good driver conduct on roads. Problems caused by improper driver's licensing were reduced noticeably in 2003. However, further training and education related to drivers' traffic behavior should be done.

Black Spot Treatment. Black spots are attributable to poor transport safety and road-related accidents. Black spot improvement will contribute to road accident reduction efforts. There are 150 black spots on 26 national highways. Highway No. 1, the national trunk, has 11 black spots. VRA has treated a numerous black spots on national highways and plans to improve other black spots and build emergency roads.

Emergency Services. Hospitals provide their own ambulance services to bring accident victims to hospitals.

The response time for ambulances to arrive at accident scenes depends on hospital locations and accident scenes. Normally, the traffic police render assistance to medical personnel.

Commonly, there are not enough ambulance facilities for emergency medical services. It is necessary to have more funding for emergency service equipment procurement.

National Transport Safety Strategy.

The achievements in road traffic safety in 2003 directly resulted from

- integrated and timely promulgation of bylaws on road traffic order and safety;
- enhanced Traffic Police Department patrol and law enforcement;
- enhanced education and publicity campaigns for traffic safety improvement, which contributed to raising awareness on traffic rules by road users;
- mobilized political and social organizations that actively participated in road safety work; and
- improved administration of road safety.

The Government has worked out integrated and drastic solutions to road safety, which include two groups of basic and long-term measures and short-term measures.

The basic and long-term measures consist of

- (i) establishing appropriate strategy for transport development,
- (ii) introducing public transport services while limiting private cars and motorcycles,
- (iii) completing road transport legislation,
- (iv) improving of vehicle quality and transport infrastructure and enhancing publicity campaigns, and
- (v) traffic rules and regulations education.

The short-term measures mainly concentrate on

- (i) strengthened management role of line government agencies and local authorities,
- (ii) appropriate organizing of transport, and
- (iii) strict enforcement of traffic rules.

In the long run, the Government adopted the 5-Year Programme for Traffic Safety, 2000–2004. This program set out

- (i) strategic priorities, which incorporate a public awareness drive;
- (ii) improved driver testing and licensing system and road safety auditing;
- (iii) modern facilities for traffic law enforcement, accident database, and research;
- (iv) first-aid stations for traffic accidents; and
- (v) modernized system for registering motor vehicles.

The 5-Year Programme for Traffic Safety, 2000–2004, set the target for fatalities per 10,000 vehicles at 11 in 2004.

The World Bank provides assistance in the conduct of a road safety study. The outcome of this study will be a road safety strategy to envision a safe management system being in place in 15 years and to determine the pace of developments to achieve this goal. Strategic priorities will be set for each phase, and a package of national programs for traffic safety projects will be identified to launch the first phase.

Intended projects will cover the following:

- (i) strengthening NTSC's leadership role,
- (ii) implementing the Safe Highway project,
- (iii) building a traffic accident database and targeted road trauma reduction strategies,
- (iv) improving the safety design and operation of the road network,
- (v) reviewing driver training, testing, and licensing and vehicle testing systems,
- (vi) implementing coordinated enforcement and public education campaigns, and
- (vii) enhancing emergency medical service and related education and training.

These projects are included in the National Programme for Traffic Safety, 2001–2005.

3 RESPONSES TO ROAD SAFETY

3.1 National Traffic Safety Committee

NTSC was established on 29 October 1997 to coordinate activities of ministries, sectors, and localities in properly performing the work of ensuring traffic order and safety. The functions of NTSC include

- giving advice to the Prime Minister on strategic and policy directions for ensuring traffic order and safety,
- recommending to the Prime Minister intersector measures to ensure traffic order and safety,
- coordinating with relevant agencies and organizations in implementing publicity efforts and disseminating information regarding laws and regulations related to traffic order and safety and explaining the need for strict compliance with these,
- organizing coordination between various sectors and levels to overcome urgent consequences of serious traffic accidents.

Traffic safety committees at the local level oversee traffic safety at the respective localities under the direction of NTSC. Up to the end of 2003, 59 out of 61 provinces and cities in Viet Nam established the Traffic Safety Committee, headed by the chair of the province or city.

3.2 Ministry of Transport

MOT oversees the development and regulation of civil aviation and air transport; maritime transport, including seaports; road transport, including construction and maintenance of roads; railway transport; and inland waterway transport. The functions and responsibilities of MOT are to set strategies and policy directions, and,

through its statutory agencies, to ensure the operations and regulatory functions and duties are being carried out.

Under the road transport portfolio, the VRA and the Transport Department are two statutory agencies.

The Road Transport Law provides that the Government controls administration of road transport and traffic throughout the country and MOT is responsible before the Government to undertake administration of road transport and traffic.

The Government's Decree No.14/2003/ND-CP (dated 19 February 2003) detailing the implementation of the Road Transport Law provides MOT's responsibilities. These include

- creating public road works standards and regulations concerning management, operation, and use of road works (e.g., posting road signs, etc.);
- establishing road motor vehicle quality standards and safety and arranging for vehicles' technical inspection;
- arranging for drivers' examinations and certification;
- coordinating with relevant agencies to educate the public and disseminate traffic rules and regulations on road transport; and
- coordinating with the Ministry of Public Security to follow and analyze serious traffic accidents and work out measures to curb traffic accidents or traffic congestion.

The minister of transport is now the chair of the NTSC of Viet Nam.

Viet Nam Road Administration

VRA administers road transport under MOT. It was established in 1993 to

- formulate strategy, master plan, plans, and programs for construction and development of road transport;

- participate in drafting legislation governing road transport;
- manage and maintain the road network; and
- manage road transport, road vehicles, and training and licensing of drivers.

In the management of vehicles and drivers, there are 123 training centers and schools and 62 testing centers for road motor vehicle drivers under the control of VRA.

VRA is divided in to 13 divisions.

- (i) National Road Traffic Division
- (ii) Local Road Traffic Division
- (iii) Transport Management Division
- (iv) Vehicle and Driver Management Division
- (v) Capital Construction Management Division
- (vi) Engineering and Quality Control Division
- (vii) Science, Technology and International Cooperation Division
- (viii) Planning and Investment Division
- (ix) Financial Division
- (x) Personnel Division
- (xi) Internal Audit and Inspectors Division
- (xii) Administration Office
- (xiii) Road Engineering Center

VRA also has four project management units and four regional road management units.

VRA pays high attention to road safety and reduction of road accidents. It often conducts training courses and shares experience on common safety problems.

Viet Nam Register

The Viet Nam Register, under the purview of MOT, is in charge of motor vehicle technical inspections. Inspections are done against the standards set by MOT. These standards are harmonized with the ASEAN motor vehicle technical inspection. Motor vehicles, new buildings, used

vehicles, and imported vehicles are subject to the inspection in accordance with provisions of the standards. There are 80 inspection stations throughout the country, and all are computerized. The work of motor vehicle inspection has actively contributed to road safety.

3.3 Ministry of Public Security

The Road Transport Law provides that the Ministry of Public Security undertakes administrative duties on road transport and traffic in accordance with the Road Transport Law and other relevant laws and coordinates with MOT to carry out measures ensuring traffic order and safety. The Ministry of Public Security and MOT are responsible for coordinating provision of data on road motor vehicle registration, traffic accidents, and certification and revoking driving licenses.

The Government's Decree No.#14/2003/ND-CP (dated 19 February 2003) also provides the Ministry of Public Security's responsibilities, which include

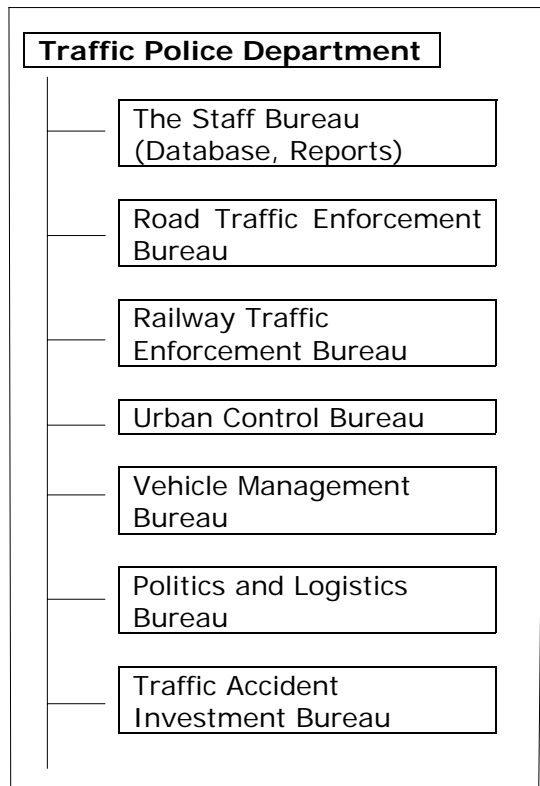
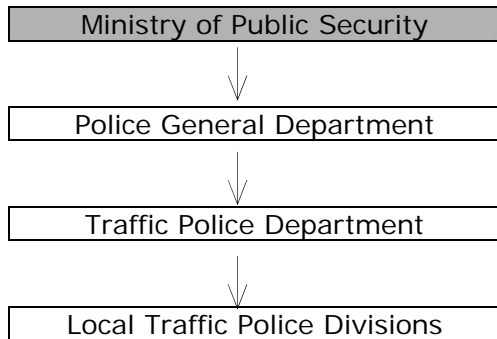
- stipulating and arranging for registration and registration number plates, and revoking these, for road motor vehicles;
- guiding traffic instructions on roads, patrolling, checking traffic, and handling offenses by road users and vehicles on roads;
- arranging for investigation and handling of traffic accidents;
- ensuring good conduct of traffic police on duty;
- helping approve traffic safety of road works before these are put into operation, according to existing laws; and
- coordinating with relevant agencies to educate and disseminate traffic rules and regulations on road transport.

The Traffic Police Department comes under the Police General Department of the Ministry of Public Security. Traffic

police are responsible for maintaining law and order on the roads and promoting road safety by influencing the behavior and skills of road users.

The Traffic Police Department is divided into seven subdepartments (Figure 3).

Figure 3: Traffic Police Organization Chart



Source: Viet Nam data.

The Staff Bureau is in charge of collecting and processing accident data and handling

accident reports, including road accident reports. The accident data collected and the reports are used to improve road safety. The Road Traffic Enforcement Bureau deals with traffic rule offenses, in coordination with local police. There were 61 traffic police divisions in 61 cities and provinces in 2003. They are in charge of local traffic police work. The patrol police consist of about 3,000 people.

Traffic police have intensified traffic patrols, strictly handled offenses on roads, and applied strongly measures on fining traffic rules offenders. According to a report by the Ministry of Public Security, during the first 9 months of 2003, the Traffic Police Department handled nearly 2.6 million offenses. The investigators in the Traffic Investigation Unit initiated investigations in 1,433 cases of traffic accidents and temporarily detained more than 400,000 motorcycles and other vehicles.

In coordination with MOT, the Traffic Police Department applies a system for demerit points for certain offenses, such as speeding. When drivers commit offenses, holes are punched in their licenses. If there is an accumulation of three punches, the driver's license will be revoked. Traffic police also introduced new provisions on limiting motorcycle registration. Every person is entitled to have one motorcycle registered, and each person must hold a driver's permit when applying for registration or must be a permanent resident at the registration place.

The duty of traffic police is to discover and handle offenses on the spot, mainly speeding and overloading. They can stop vehicles to check driver's licenses, vehicle registrations, and vehicle safety or measure a driver's alcohol level. Any offense can result in a vehicle being

detained from 15 to 30 days, and drivers must pay fines. This measure shows efficiency in reducing the number of drivers without licenses and the number of vehicles operating without registration, which often cause traffic accidents. For illegal motorcycle racing, motorcycles will be subject to impounding, and racing drivers can be prosecuted.

The Traffic Police Department is active in public road safety education and campaigns. It works closely with the media to promote road safety for all road users, particularly vehicle drivers.

With the presence of traffic police on roads and their intensification of patrol and strict handling of offenses, road users are conscious of obeying traffic rules, thereby reducing traffic accidents.

The Traffic Police Department increased regular patrols on three heavily traveled national highways and two major cities, where traffic accidents and jams often occur. One patrol car is located every 50 km, to control traffic flows 24 hours a day on three national highways.

3.4 Ministry of Education and Training

The Government's Decree No. 14/2003/ND-CP provides that the Ministry of Education and Training is responsible for compiling textbooks on road traffic rules and regulations; teaching road traffic law in schools and training centers, according to conditions of study levels; educating students on compliance with road traffic laws and orders; ending the practice of students riding motorcycles to schools without licenses or when under the required age.

Starting from the 2003–2004 school year, the Ministry of Education and Training

included road safety education in its curriculum for school students.

3.5 Ministry of Health

The Ministry of Health is responsible for ensuring health care services for the people. MOH's hospital system is active in treating people injured in road traffic accidents.

Main hospitals maintain their own medical records of admitted victims from injury traffic accidents. The responsibilities stated by the Government's Decree No.14/2003/ND-CP include

- coordinating with MOT to formulate health standards of vehicle drivers and arrange for their regular checkup,
- guiding and directly organizing emergency medical services networks on traffic-prone accident roads,
- organizing emergency medical services training for traffic police and inspectors, and
- formulating an emergency medical services information system on traffic accidents.

3.6 Provincial People's Committees

The Road Transport Law requires that provincial people's committees, in their scope of functions and duties, organize the administration of road transport, apply measures to ensure road traffic order and safety, and protect road transport infrastructure within their jurisdictions. These committees play an important role in ensuring road traffic safety at localities.

3.7 Sociopolitical Organizations

The Viet Nam Fatherland Front and its members, such as the Ho Chi Minh Communist Youth League, Viet Nam General Federation of Labour, Viet Nam Women Union, and Viet Nam War

Veterans Association are responsible, within their jurisdictions, for organizing and coordinating with line agencies in convincing and mobilizing people to strictly adhere to traffic legislation.

They are also responsible for supervising their members' compliance with traffic rules.

4 CONSTRAINTS

4.1 Legislation

The Road Traffic Law was promulgated but needs bylaws to guide the implementation in a concerted way.

Education, publicity, and dissemination of road traffic laws, rules, and regulations have not been done well. Individuals and families have not been encouraged to strictly comply with road traffic legislation for road users.

4.2 Institution

Funds and resources are limited in carrying out road safety work.

Driver training, examination, and certification need further improvement.

Due attention is not paid to the planning work to ensure fleet growth commensurate with road transport infrastructure. Public transport services are not well developed to meet commuters' demand.

No effective measures have been taken to limit the motor vehicle population, and compulsory use of helmets by motorists is not enforced strictly.

Over-age road motor vehicles are still in operation, carrying passengers outside bus stations, and substandard trucks are in use without strict control. Therefore, they are potential dangers to road traffic and need to be disposed of in the future.

Noticeably, there are still shortcomings in the administration of road traffic safety and a lack of proper communication and coordination among different agencies involved in traffic safety work.

4.3 Technical Issues

Although the Road Traffic Law provides for road safety auditing, audit regulations were not formulated and actual action was not taken for used roads or new construction.

Many roads are still unpaved or of a class so low that they are not safe enough for traffic. Road maintenance work lacks public financing.

4.4 Road Users' Tolerance

Road users do not adhere strictly to road traffic rules. Drivers do not follow the speed limit and give way on roads, especially when there are no traffic police around. Pedestrians, cyclists, and students have limited awareness of the traffic rules for safe behavior.

Vendors often occupy sidewalks that cause a hindrance to smooth traffic and traffic accidents. The mind-set of all road users must be changed immediately. They must begin to act safely on the roads.

4.5 Database

Road traffic accident data are not reported adequately. This creates difficulties when analyzing the causes of accidents and black spots and introducing appropriate solutions to safety problems. Establishment of an accident database system and accurate report system is needed. Contents of the accident report should be detailed, and accidents should be reported immediately.

4.6 Private Sector Cooperation

The private sector has not been mobilized for road safety work. There is a need to have good cooperation with private sector organizations and nongovernment organizations, locally and internationally, on enhancing road traffic safety. Better understanding of the need for close partnership should be promoted. More joint activities should be undertaken.

5 RECOMMENDATIONS

5.1 Legislation

To make the Road Traffic Law a reality, it is necessary to enact new legislation and amend existing regulations for improving traffic safety. This can be done by amending the Ordinance on Traffic Police and Decree No.15/2003/ND-p governing administrative sanctions against road traffic rules offenses, which will strengthen traffic enforcement, limit the number of private cars, and heighten awareness of road users' responsibilities for traffic safety.

Introduction of a decree by the Government on the life of automobiles in use is a good measure to reduce traffic accidents. An interministerial circular on overseeing road safety reserved land to check its infringement is also needed.

5.2 Institution

Consolidation of traffic safety committees at all levels must be done as quickly as possible.

Further introduction of the public bus transport system should go along with limiting the number of private cars. The work of driver training, examinations, and licensing should be improved further to ensure that only good drivers are on the roads and to minimize the number of motorists riding motorcycles without permits. It is also necessary to improve motor vehicles that are not safe for operation. Use of helmets by motorcycle drivers and passengers should be encouraged and compulsory on highways.

5.3 Technical Issues

The Government should invest more to develop transport infrastructure and solve

the problem of road-rail crossings and at-grade intersections.

Road safety audits should be conducted for existing highways and designs.

More funds should be allocated for upgrading unpaved roads and maintaining roads.

Investment in development of mass transit transport (metro, elevated light rails) should be done as quickly as possible to improve traffic safety and congestion in major cities, such as Hanoi and Ho Chi Minh City.

5.4 Education and Publicity Campaigns

Education on traffic rules and road safety should be done in a serious manner in all schools and universities and for people of all walks of life, particularly young people.

Road safety campaigns should be continuously waged through central and local media to heighten road users' consciousness in complying with traffic rules and to convince people of the importance of road safety. Publicity campaigns for road traffic rules compliance and particularly for helmet wearing when riding motorcycles should focus on young people, males, and motorists. An increase in the percentage of people using helmets when riding motorcycles is a must, to reduce fatalities and serious injuries.

Sociopolitical organizations should participate fully in the work of road safety education and publicity and in making people aware that road safety is their responsibility and duty.

More drastic measures should be taken to eliminate negative acts in driver training

and licensing and vehicle inspection and road safety enforcement.

5.5 Enforcement

Strict enforcement should be enhanced against traffic safety offenses. More measures to make administrative fines effective in educating road users should be carried out, especially for offenses involving speeding, red light running, and compulsory helmet wearing.

Equipment for traffic police, especially for patrol traffic police, should be provided adequately and in a timely manner.

5.6 Traffic Accident Database

There is an urgent need to establish a good traffic accident database for road safety purposes, as activities to promote road safety are based on accident data collected.

Traffic accident reporting system should be improved to show correctly and in a timely manner the traffic accident situation and assist in road safety work, including estimating the cost of accidents and casualties.

Easy access to a database needs improvement. Technical assistance from abroad should be requested for this purpose.

5.7 National Road Safety Strategy

To achieve the objectives of road safety and to save people's lives and social welfare, a national road safety strategy must be formulated and a plan of actions to implement the strategy must follow. The ongoing road safety study by the World Bank will serve this purpose. The ADB-ASEAN Road Safety National Action Plan will be incorporated into this strategy.

6 CONCLUSION

During the past few years, although Viet Nam has made great efforts to carry out radical measures to ensure road traffic order and safety, road traffic accidents have been unceasingly rising, causing heavy losses of life and property and damaging social harmony.

Road accidents are a serious problem that draws the attention of the Government and the people. Road traffic accidents account for 96% of all traffic accidents.

Mixed traffic and noncompliance with traffic rules and regulations by road users are the main features of road traffic safety-related problems in Viet Nam. Road traffic accidents are also attributed to rapid motorization, especially the proliferation of motorcycles and shortcomings in road traffic safety administration.

Road safety is, therefore, a key and urgent issue for the economic and social development of Viet Nam. Realizing the importance of the issue, the Government has set road safety objectives for the time being that are intended to curb traffic accidents and reduce these. Encouraging achievements have been gained, especially in 2003 when for the first time in 10 years road traffic accidents, fatalities, and injuries were noticeably down by 27.2%, 8.0%, and 34.8%, respectively, compared with the previous year. However, much remains to be done for road safety.

Many activities should be undertaken to promote road safety, such as completing road traffic legislation; handling institutional issues and technical issues; and improving enforcement, education, and publicity campaigns.

Promoting people's awareness of road safety, strict enforcement of road traffic rules, and better administration of road

safety plays a vital role in road safety improvement in Viet Nam.

The focus of road safety efforts should be young people, males, and motorcyclists. Helmet use when riding motorcycles must be made compulsory as soon as possible, not only on highways but on all roads.

A national road safety strategy followed by a plan of action will be a good guide for road safety work. Everyone is looking forward to a better life. Road safety is not only the business of government agencies but also the business of all people. The private sector should be mobilized to play an active role in road safety work. To obtain sustainable development of the country's economy and road safety, road users' obedience to traffic rules and regulations is a must, apart from strict enforcement by traffic police. Road safety will help road users value their lives.

To improve road safety, there is an urgent need for technical assistance for road safety initiatives, such as the Transport Safety Strategy Review by the World Bank and the ADB-ASEAN Road Safety Project, which are under way.

7 BEST PRACTICES

7.1 Legislation

Facing serious road traffic accidents, the Government had issued Resolution No. 13/2002/ND-CP and Decree No. 15/2003/ND-CP to detail and guide the effective implementation of the Road Traffic Law. This enabled the strict enforcement of road traffic rules and regulations.

MOT also introduced right decisions to improve driver training and licensing and technical inspection of motor vehicles. Better control of vehicle roadworthiness and driver behavior has been achieved.

7.2 Institution

NTSC is a central body to coordinate and promote safety in Viet Nam. Provincial traffic safety committees are set up to oversee and promote road safety at localities. NTSC is a good tool for the Government to promote traffic safety, including road safety.

The key reasons giving rise to road accidents need to be identified so that the Government can focus on appropriate measures to solve problems. At present, Viet Nam has identified two key reasons: shortcomings in administration of traffic safety and a low sense of responsibility of road users in complying with traffic rules and regulations. In 2003, the Government concentrated on solving these problems and achieved encouraging results, and for the first time in a period of 10 years road traffic accidents, fatalities, and injuries decreased by 27.2%, 8.0%, and 34.8%, respectively, compared with the previous year.

7.3 Road Users' Awareness of Traffic Rules

A change in the mind-set of all road users, resulting in their acting safely on the roads, proved successful in reducing road

accidents in 2003. Promoting people's awareness on road safety plays a vital role in road safety improvement and ensures a sustainable development of road safety.

Road safety publicity campaigns should be continuously waged to heighten road users' awareness of the need to comply with traffic rules and convince people of the need for road safety and make them aware that road safety is their responsibility.