The Road Safety Situation in Vietnam
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Abstract – Traffic accident is one of the most dangerous disasters to human kind over the world, especially to the developing countries like Vietnam due to the facts that the poor transport infrastructure, sub-standard traffic transport, insufficient road traffic law and poor traffic culture.

This paper presents the situation and analysis on the road traffic accidents in Vietnam, with the annual death rate from 10,000 to 12,000, which makes up approximately 94% in comparison with other traffic accidents. Furthermore, this paper also discusses about traffic policies and traffic accident prevention strategies in the future.

Keywords - Vietnam, road transportation, road safety, road traffic accident (RTA).

I. INTRODUCTION

Vietnam is a full member of ASEAN, with the land area of 331,698 km² (occupies 7.3% of ASEAN), the total population of 92.5 million (attains 16.3 % of ASEAN), and high population growth rate of 1.5%. The GDP of Vietnam achieves US$ 138 billion in 2012, and the GDP per capita is at US$ 1,491. Thus, Vietnam stands at the 4th place of the land area, the 3rd place of the population, and occupies the 7th place of the GDP per capita.

Vietnam has the geography of an S-shape with the north-to-south distance of 1,650 km and major cities locating along the coastlines. Therefore, the inland traffic routes such as roads, railways, airways are mainly going in the North-to-South direction.

The road transportation plays an important role in the traffic system of Vietnam, which has an annual growth rate of 10%. The total length of the road system is 280,905 km, including 91 km of express ways and 17,646 km of national ways. The road transport accounts 91.4% for passengers’ transportation and 70.6% for goods transportation in 2010.

The total number of the existing vehicles in Vietnam attains 38.62 million which includes 0.771 million of passenger cars, 0.849 millions of buses and trucks. Moreover, there are a huge number of 37 million motorcycles. Consequently, Vietnam has the private vehicle proportion of 2.55 users per vehicle (including motorcycles), accounting 77 users per car and 2.64 users per motorcycles. Indeed, motorcycle has the highest number of possession globally.

In fact, the loss of the traffic accidents in Vietnam can be accounted for 2.5% of the annual GDP.

II. THE ROAD TRAFFIC ACCIDENT SITUATION IN VIETNAM

A. Road Traffic Accident Occurrence

In Vietnam, the road traffic accident is the number one factor that causes thousands of traffic terrible injuries and fatalities every year among other traffic accidents. In 2011, the percentage of road accident accounted for 94.22% (over 30,000 traffic crashes and 10,000 traffic accidents causing 10,979 fatalities and 10,049 injuries; the railway accident stands the 2nd place for 4.04% and waterways at the 3rd place (Fig. 1).

![Fig.1. Road traffic accident types](Image)
The situation of the road traffic accident in the period of 2000 – 2011 is shown in Fig. 2. Every day, there is an average of 30 – 35 traffic fatalities caused by road accidents. The significant number of road accident has increased from 2000 to 2002 but has the tendency to decrease from 2003 up until now. Even though the number of road accidents has declined, the number of road traffic death has not reduced yet, which has shown up the fact that the damage loss in road traffic accident becomes highly destructive. The rate of deaths per road traffic accident in Vietnam is incredibly very high; in 2011, this rate increased up to 0.83. The overall rate of road traffic death/residents was estimated to be 11 to 12/100,000.

**2. Road Traffic Accident by Vehicle Types**

Based on the aforementioned statics, the number of motorbikes and other vehicles has rapidly increased alongside with the slow development of traffic infrastructure, which leads to the major cause of road accidents. This number has increased by 24.6 times in 2011 since 1990. The number of motorcycles has incredibly increased. In 1990, there were a total number of 1,000,000 motorcycles spreading over the whole country. In 2012, this number reached over 30,000,000. The average number of person per motorcycle was 3.75 in 2007, 2.86 in 2009, and 2.59 in 2011. The urban public transport is no other than the bus system on the crowded streets, and only meets 10 – 14% of the transport demand. As a result, the growing use of private vehicle is inevitable.

According to the road accident analysis of the Police Department of Road and Railway, the road accidents in 2011 were mainly caused by motorbikes, with the increasing number of motorbikes that reached the highest percentage of 69.38% from 2007 to 2011, while the percentage of road accident that involved cars decreased and stayed at 22.29% (Fig. 4). The occurrence of road accident has not changed since 2007 to 2011. Specifically, in Ho Chi Minh City, there are a huge number of motorcycles, reaching 5.4 million motorcycles with the population of 8 million citizens. Therefore, the motorbike usage occupies nearly 79% of the traffic transport flow on the streets, where roughly 71% of the traffic accidents relating to motorcycle crash.
3. Road Accidents by Roads System

The road network in Vietnam has a total length of 280,905 km. The road density is slightly low and the road quality is actually not up to standard whereas the communal roads account for 57.36%. The national road has only 42.58% in good quality, 37.04% in accepted quality and 20.38% in the bad and very bad quality. For material of both the national and provincial ways, the area of asphalt occupies up to 32.17%, 1.66% of cement concrete, 44.38% of stone asphalt and 21.79% of graded gravel. In 2008, the Government established the master plan of 22 express ways routes with a total length of 5,873 km. However, only 3 routes have been constructed, 91 km in total length, (1.55%) which is a very small number for the increasing express ways need.

In the statistics of the road accidents by road types, the road accidents on urban roads increased from 22.28% (2007) to 34.6% (2011) (Fig. 5) while the length of the urban roads only occupies for 6.08% in the total length of the entire road network. Therefore, the urban road accident is an urgent issue which needs great deal of attention and vital resolution.

4. Road Accident by Driver Consciousness

According to the analysis on all the road accident cases in the recent years, the road accidents have been mainly caused by the drivers of the vehicles. In the statistics from 2009 – 2011, the leading cause of road accidents was the lack of driver consciousness with the highest percentage of 61.78% in 2009, and increased up to 79.2% in 2011, in which, 31.44% of driving in the wrong lane, followed by 17.70% of dangerous overtaking, 19.40% of speeding, and 5.1% of drunk driving (Fig. 6).

5. Road Accident by Management

A majority of local authorities at the foundation level do not specifically pay enough attention to the road safety. The number of violation cases of corridor road safety have not been monitored promptly and treated properly. The missions of patrolling, controlling, and treating traffic violation of the traffic police and traffic inspectors are limited, and worsen by weak police force, and the facilities are not fully synchronized.

In rural areas, the propagation and education on road traffic law are essentially weak. The number of road traffic accident cases and the road traffic fatalities mainly involve young adults, students and pupils with a great number [2, 3]. Mixed traffic situation on roads (truck, bus, car, motorcycles, bicycles even the ox-cart) moving on the same lane on national way is still a major traffic conflict and affects the road safety.

III. CONCLUSION

Vietnam is a developing country with medium-level development in the ASEAN region. Hence, there are a lot of deficiencies in the current road infrastructure and other problems related. Moreover, the citizens are heavily dependent on motorcycles, whereas the driving consciousness is still lacking.
Furthermore, the bases of law and traffic management also have shortcomings.

All these negative factors can affect the driver’s safety of road transport, passengers and other road users. Indirectly, these factors also essentially affect the socio-economic development of the country.

The Government of Vietnam has developed several strategies to ensure road traffic safety by 2020 and a vision to 2030, which was presented at the International Conference in 2011 in coordination with the act of striving to reduce the rate of road accidents, with the overall target of only 8 traffic fatalities/100,000 residents in 2020 and only 4 – 6 traffic fatalities/100,000 residents in 2030.

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