

4 SAFE DRIVING AND VEHICLE SAFETY DEVELOPMENT PLAN

The following are the sector programs for implementation in the next 5 years:

- 1) Basic License Renewal System
- 2) License Renewal System based on Traffic Violation
- 3) Promotion of M/C Driver Licensing in the Rural Areas
- 4) Comprehensive Program for Driver Training and Testing
- 5) Safe Driving Management System for Transport Companies
- 6) Vehicle Registration Renewal System
- 7) Technical Inspection for M/C
- 8) Strategies to Improve Vehicle Condition for People with Disability
- 9) Human Resource Development for Driving Instructors

The detail contents of action program are described below.

4.1 Basic License Renewal System

1) Introduction

(i) Background

The road traffic situation is dramatically changing due to rapid motorization. To address this changing environment, road users will be required to learn new traffic rules and regulations based on the revised road traffic law and the characteristics of road traffic accidents. In addition, they will be encouraged to upgrade their knowledge and skills and behave in accordance with a safe traffic society.

Another important aspect is Vietnam's driver licensing system. There is at present a renewal system for license holders of B1 class, but there is no system in place for A1-4 class license holders. However, with Vietnam's rate of motorization, it is extremely necessary to implement a periodic license renewal system which shall target M/C drivers (A class) that can ensure the successful implementation of a comprehensive license database management and effective driver education. As it is, licensed drivers are not compelled to take driving-related courses so a periodic refresher course system is being proposed. In particular are M/C drivers who make up the majority of road users at present.

(ii) Goal

This basic license renewal system is aimed at ensuring the efficient management of licensing system and to enhance prevention of dangerous and delinquent driving behaviors through periodic and compulsory driver education.

(iii) Target

This will not be limited to the B1 class and above but will also target the A1 to A4 classes, particularly those in the rural areas.

2) Implementation Strategy

(i) Car License (More than B1 class)

The renewal period will be set as it is: B1 class license shall be renewed every 5 years and above B2 class license shall be renewed every 3 years. In addition, all car drivers whose licenses are being renewed will be required to attend a refresher class on the revised road traffic law and the proper driving behavior. The refresher class will be a lecture of around 30 minutes to an hour, with the PDOT as the responsible agency.

(ii) M/C License (A1 to A4 class)

The renewal period will be set every 5 years, taking into consideration the road traffic situation in near future. Since the number of M/C license holders is significantly higher compared with that of car license holders, a practical driver education system is necessary. It is therefore recommended that in lieu of a refresher course, a comprehensive textbook which will have the same content as that of the refresher course will instead be distributed to all M/C license holders when they renew their license.

3) Program Components

The basic license renewal system has the following program components:

(i) System Design and Textbook Development

(1) System Design

The following should be prepared at the very start of this program component:

- Organization for license renewal system for M/C: It is necessary to assess and examine how to effectively manage the expectedly voluminous M/C license database.
- Guideline for textbook development: VRA should designate some private entities which have the technical expertise to develop and print the required textbooks.
- Content of refresher course for car license holders: The content of the refresher course should be consistent and in accordance with the guidelines set for M/C textbook development.

(2) Textbook Development

The textbook should contain the important road traffic laws and guidelines for proper traffic behavior for both car and M/C drivers, though should be presented in simplified and practical format. The textbook should be periodically updated and should contain at least the following topics:

- Summary of revised road traffic law
- Summary of traffic accident situation and its characteristics
- Safety driving manual

Both car and M/C license holders will be required to purchase this textbook upon renewal of their license.

(ii) Training for Instructor

The DOT may require additional staff at the provincial levels that will be tasked to conduct the refresher courses for car license holders. In case this is not feasible, DOT can subcontract this work to an accredited driver training center. Regardless of arrangement, training for instructors will be very important.

(iii) Law Enactment

In order to implement this system effectively, it is proposed that the enactment of the following new laws be considered by the GOV:

- (1) M/C license holders (A1-4 class) will be required to renew their licenses.
- (2) Car license holders (B1 class and higher) shall be required to attend a refresher class upon renewal of their license
- (3) Both M/C and Car license holders will be required to purchase the textbook upon renewal of their license.

(iv) Implementation

The car license renewal system will be operated as it is, with the addition of the compulsory attendance to the refresher class. The M/C renewal system will be operated at the district office level to effectively manage the volume of license holders. Additional staff will therefore be required to manage both the M/C license renewal system and refresher class for car license holders.

4) Implementation Plan

Preparatory works should be completed by 2010 and implementation will start from 2011.

Table 4.1.1 Implementation Schedule and Milestone of Basic License Renewal System

Program	Program Components	Target (Milestone)		2008-2010	2011-2012
		2010	2011		
Basic License Renewal System	System design & Textbook development	Setup of System Completion of textbook			
	Training for Instructors	Completion of Instructor Training			
	Law enactment	Issue of Decision			
	Implementation		Start of Implementation		

Source: JICA Study Team

5) Cost Estimation

The cost estimation for basic license renewal system is approximately USD21.9 million for the 5-year period, as shown in Table 4.1.2.

Table 4.1.2 Cost Estimation for Basic License Renewal System

Unit: (000 USD)

Program	Program Components	Cost Item	2008	2009	2010	2011	2012	Total	Remarks
Basic License Renewal System	System design & Textbook development	Technical Expertise		200				200	Experts for developing textbooks
		Equipment		1,245	1,245			2,490	Database system and other office equipment
		Office Construction		8,291	8,291			16,583	
	Training for Instructor	Workshop		160	160			320	
		Training Fee			365			365	
	Law enactment	Consultants' Fee			100			100	Technical experts
	Implementation	Operation Cost				933	933	1,866	Additional staff for Instructor and data-base manager
	Total	-	0	9,896	10,161	933	933	21,923	

Source: JICA Study Team

4.2 License Renewal System Based on Traffic Violation

1) Introduction

(i) Background

Close collaboration between driver licensing system and traffic enforcement can expectedly result in effective re-training of delinquent drivers who are the major threats to a safe traffic society. Although there is no conducted study yet on the direct relationship between traffic accidents and drivers' characteristics in Vietnam, based on experience from other countries, driver characteristics can generally be classified into *safe* and *risk-takers*. On Vietnam's national highways, traffic accidents are usually caused by skilled but reckless drivers. Thus, adequate training and re-training on safe driving is very important.

Equally important is the training for beginner drivers since their driving skills are still expectedly low.

(ii) Goal

This program is aimed at providing adequate and appropriate driver education and training for frequent violators and beginner drivers.

(iii) Target

Car license holders who are frequent traffic violators and beginner drivers (B1 class and higher)

2) Implementation Strategy

Content of the refresher course and renewal period will be developed based on traffic violations committed by the driver, as shown in Figure 4.2.1. It is suggested that the license renewal system by driver type will be classified into three (3):

(i) Beginner Driver & Frequent Violator

Beginner drivers and frequent violators should take lecture classes on proper and acceptable driving behavior and safe driving skills more frequently than average drivers.

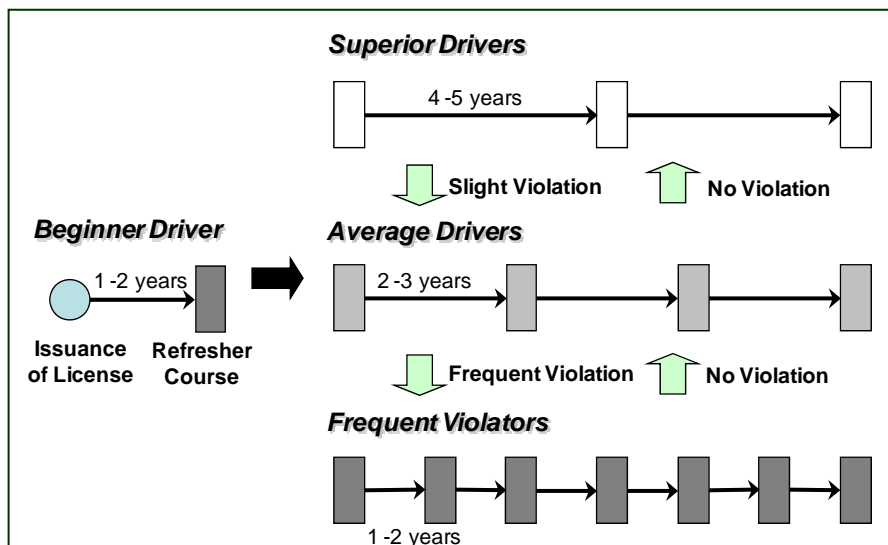
(ii) Superior Driver

Although the driver training is generally targeting violators and beginner drivers, encouraging superior drivers to also take periodical refresher course and training is very important. All drivers should in fact be encouraged to achieve this driver type which is regarded to be of high social status in the traffic society.

(iii) Normal Driver

In the case of license holder of B1 class and up, periodical renewal is proposed to be every 2 or 3 years, depending on road traffic situation and traffic laws.

Figure 4.2.1 Renewal System for Driving License Holders



Source: JICA Study Team

3) Program Components

This traffic violation-based license renewal system shall require preparatory works, database and textbook development, instructors training, and law enactment. It should be noted management of driver license data and personal traffic violation data will be uniformly managed.

(i) Development and Establishment of Database

To ensure access sharing between concerned agencies in-charge of managing driver license information and personal traffic violation data, a data center and computer system should be installed in each police office. In addition, training on database management and operation and related manuals will also be required. The magnitude of cost for this component therefore is expectedly higher than other components.

(ii) System Design and Textbook Development

The content of the refresher class should be appropriate to the common traffic violations committed and based on the result of traffic accident analysis.

The textbook shall be basically the same as that developed for the basic license renewal system. It will however include the content of the refresher course which focuses on appropriate traffic behaviors to correct commonly committed traffic

violations. In addition, this textbook should also be required for all drivers (including M/C drivers) to increase their understanding of traffic safety.

(iii) Coordination with Concerned Organization(s)

Coordination between MOPS and VRA will be critical, particularly on their shared responsibility on driver database management. Therefore, it will be necessary to clarify areas of responsibility on database management for each organization.

(iv) Training for Instructor

The DOT may require additional staff that will be tasked to conduct the refresher courses and training for frequent traffic violators.

(v) Law Enactment

In order to implement this system effectively, it is proposed that the enactment of the following new laws be considered by the GOV:

- (1) The refresher class by driver type will be required for all Car License holders (B1 class and up).
- (2) VRA and MOPS shall jointly manage the driver license and traffic violation database which will be accessible to staff of both agencies.

4) Implementation Plan

While it will be difficult to introduce this system within the 5-year action program period, preparatory works, particularly database development and establishment, may be started during this period, but target implementation is in the medium-term (by 2015).

Table 4.2.1 Implementation Schedule and Milestone of License Renewal System for Traffic Violation

Program	Program Components	Target (Milestone)		2008-2010	2011-2012
		2010	2012		
Basic License Renewal System	Database development and establishment	Development and establishment of Database System			
	System design & Textbook development		Start system setup and textbook development		
	Coordination with Concerned Organization(s)		Establishment of committee		
	Training for Instructors		Start of training		
	Law enactment		Issue of Decision		

Source: JICA Study Team

5) Cost Estimation

The cost estimation of the preparatory works until 2012 for the license renewal system based on traffic violation is approximately USD7.0 million for the 5-year period, as shown in Table 4.2.2.

Table 4.2.2 Cost Estimation for License Renewal System for Traffic Violation

Unit: (000 USD)

Program	Program Components	Cost Item	2008	2009	2010	2011	2012	Total	Remarks	
License Renewal System based on Traffic Violation	Database Development and Establishment	Workshop		5	160		160	325	2 kinds of workshop	
		Technical Expertise		200	200	200		600		
		Equipment				3,622		3,622	Database system and other office equipment in data center and police office	
		Installation				485		485		
		Manual				49		49		
		Training				1,051		1,051		
	System design & Textbook Development	Technical Assistance		200				200		
	Coordination with Concerned Organization(s)	Budget for PMU		15	15	15	15	60		
	Training for Instructors	Workshop			320			320	Provincial workshop	
		Training Lesson Fee				116		116		
	Law enactment	Consultants' Fee				150		150		
		Total		0	420	695	5,687	175	6,977	

Source: JICA Study Team

4.3 Promotion of M/C Driver Licensing in the Rural Areas

1) Introduction

(i) Background

Given the economic growth and rapid motorization in Vietnam, license demand for M/C drivers has been significantly increased not only in the urban areas but also in the rural areas. Despite recent efforts of increasing the number of driver training centers in the country, it is difficult to fully cover the rural areas, particularly in areas with minority groups. Therefore, as a temporary scheme, this proposed mobile driver training and testing centers intend to address this situation by targeting unlicensed M/C drivers in the rural area.

(ii) Goal

The program is aimed at promoting M/C driver licensing in the rural areas.

(iii) Target

M/C drivers in the rural areas, including those from the minority groups

2) Implementation Strategy

This program shall provide mobile driver training and testing centers which will target unlicensed M/C drivers in the rural areas. Instructors and necessary training equipments will be brought to the target rural areas where training and testing will be provided prior to licensing by the PDOT.

The presence of some minority groups in the rural areas necessitates that the content of the theory examination be simplified, and the M/C driver license be issued by PDOT. On the other hand, since road traffic environment in the urban areas are more

complicated, this necessitates that the coverage of usage of the driver's license issued to these minority groups be limited. In addition, this will be a temporary scheme with caravan service and shall be implemented only up to 2015 and will be discontinued in the future when they enhance their literacy skills and receive formal school education.

3) Program Component

The program for promoting M/C driver licensing in the rural areas has the following program components:

(i) Preparatory Works

A mobile training and testing center has to be equipped with the necessary equipment (e.g. computer for M/C license database management) and materials which will be used for driver training and testing. During this 5-year action program period, the target is for each region to have 5 sets of the mobile training and testing centers.

(ii) Instructor Training & Program Implementation

The DOT may require additional staff that will be tasked to operate this mobile training and testing center in each region that shall require adequate training.

4) Implementation Plan

The preparatory works and instructor training will be completed by 2010 and implementation will start from 2011.

Table 4.3.1 Implementation Schedule and Milestone of Promotion of M/C Driver Licensing in the Rural Areas

Program	Program Components	Target (Milestone)		2008-2010	2011-2012
		2010	2012		
Promotion of M/C Driver Licensing in the Rural Areas	Preparatory works	Preparation of required equipment and materials			
	Training for Instructors	Completion of training for instructors			
	Implementation		Start of Implementation		

Source: JICA Study Team

5) Cost Estimation

The cost estimation for this program is approximately USD1.8 million for the 5-year action program period, as shown in Table 4.3.2.

Table 4.3.2 Cost Estimation for Promotion of M/C Driver Licensing in the Rural Areas

Unit: (000 USD)

Program	Program Components	Cost Item	2008	2009	2010	2011	2012	Total	Remarks
Promotion of M/C Driver Licensing in the Rural Areas	Preparatory works	Equipment		600	600			1,200	Including vehicle, computer and materials for driver training and testing
		Budget for PMU		5	5	5	5	20	
	Training for Instructors	Training Lesson Fee		175	175			349	Additional staff in charge of data management and training of drivers
	Implementation	Operation Cost				96	96	192	
	Total		0	780	780	101	101	1,761	

Source: JICA Study Team

4.4 Comprehensive Program for Driver Training and Testing

1) Introduction

(i) Background

With the road traffic situation dramatically changing due to rapid motorization and the amendment of the road traffic law, updating and modification of the driver training and testing curriculum is necessary to include safe interaction among all types of road users. Thus, a comprehensive program for driver training and testing is proposed during this 5-year action program period.

(ii) Goal

The program is aimed at providing an adequate driver training and testing contents which are appropriate to existing road traffic conditions.

(iii) Target

All driver license holders

2) Implementation Strategy

This program shall revise and update the design and content of driver training and testing curriculum to include safe interaction among all types of road users. In particular, it is expected that the core component of this program is the periodic updating and development of textbooks as well as the design and method of instructor training. In addition, addressing of training needs for special driver groups, such as professional drivers or driver of traction vehicles, will also be required.

3) Program Component

This comprehensive program has the following program components:

(i) Preparatory Works

In order to update the overall driver training and testing curriculum and contents, a further study of should be conducted on the existing road environment conditions and institutional systems in Vietnam. In addition, experiences from other countries should also be taken into consideration.

(ii) Coordination with Concerned Organization(s)

Headed by MOT and VRA, coordination mechanism with NTSC and MOET and some other concerned agencies shall be established.

(iii) Textbook Development

To appropriately respond to the rapidly changing road traffic environment in Vietnam, the textbooks should be periodically revised and updated at least every 5 years. MOT (through the VRA) shall be responsible in developing the guidelines for textbook updating and a private company (after careful selection through bidding) will be contracted to revise and update the textbooks.

(iv) Development of Manual for Professional Drivers

Serious accidents have occurred on the national highways which were caused by bus and trucks owned and operated by private companies. Therefore, a safe driving manual should be developed and distributed to them to serve as guidelines.

(v) Development of an Instructor Education System

With rapidly changing traffic environments as well as available driving techniques and technology, driving instructors of training and testing centers must be given the opportunity to periodically upgrade their knowledge and skills. Therefore, a system that will ensure continuing instruction education will be developed.

(vi) New content materials for training and testing for Traction Vehicle

Appropriate driver license class and adequate driver training program will be required since this kind of vehicle has different characteristics compared with other vehicles. Therefore, technical expertise on content preparation and training of specialized instructors will be required.

(vii) Adequate Financial Support to Ensure Sustainable Operation

The financial operation of both driver training center and testing center is highly dependent on changing economic factors. Particularly in the case of Vietnam, factors such as its rapidly growing economy and rising fuel prices in the world market, among others, have not so far resulted in the adjustment of training and testing fees. The government should therefore develop an efficient and practical approach in ensuring their sustainable operation.

4) Implementation Plan

As shown in Table 4.4.1, all program components shall commence at the start of the 5-year action program period.

5) Cost Estimation

The cost estimation for this comprehensive program is approximately USD4.3 million during this 5-year action program period, as shown in Table 4.4.2

Table 4.4.1 Implementation Schedule and Milestone of Comprehensive Program for Driver Training and Testing

Program	Program Components	Target (Milestone)		2008-2010	2011-2012
		2010	2012		
Comprehensive Program for Driver Training and Testing	Preparatory works	Establishment of committee			
	Coordination with concerned organization(s)				
	Textbook development	Development of textbook for driver training			
	Development of Manual for professional drivers	Development of Manual for professional drivers			
	Development of an Instructor Education System		Training for instructor		
	New content materials for training and testing of traction vehicle drivers	Textbook development for traction vehicle driver			
	Adequate financial support to ensure sustainable operation	Reexamination of regulation			

Source: JICA Study Team

Table 4.4.2 Cost Estimation for Comprehensive Program for Driver Training and Testing

Unit: (000 USD)

Program	Program Components	Cost Item	2008	2009	2010	2011	2012	Total	Remarks	
Comprehensive Program for Driver Training and Testing	Preparatory works	Technical expertise		100				100		
		Workshop 1		5				5	WS in Hanoi & HCMC	
		Workshop 2		160				160	Provincial WS	
	Coordination with concerned organization(s)	Budget for PMU		15	15			30		
	Textbook development	Technical expertise		200	200			400	Development of guidelines	
	Development of Manual for professional drivers	Technical expertise			793			793		
	Development of an Instructor Education system	Technical expertise			200	200			400	
		Technical Workshop 1				3			3	TWS in Hanoi & HCMC
		Technical Workshop 2				96			96	Provincial TWS
		Budget for PMU			15	15			30	
		Instructor training				658	658	658	1,973	
	New content materials for training and testing of traction vehicle drivers	Technical expertise				200			200	
		Instructor training				66			66	
	Adequate financial support to ensure sustainable operation	-							0	
Total	-		0	695	2,246	658	658	4,257		

Source: JICA Study Team

4.5 Safe Driving Management System for Transport Companies

1) Introduction

(i) Background

Traffic accidents on the national highways are usually caused by overloading (both of cargo and passenger), over speeding and driver errors (due to driver fatigue resulting from extended driving hours) by buses and trucks which are owned and operated by transport companies. It is therefore expected that safe driving management system can contribute to the adequate driver education and management in transport companies.

(ii) Goal

The program is aimed at promoting safe driving and management of professional drivers of trucks buses which are owned and operated by transport companies.

(iii) Target

Professional drivers of transport companies

2) Implementation Strategy

Introduction of this system to transport companies shall require an experimental period, particularly in large-scale transport companies. And if the system will be deemed successful, transport companies will be obliged to adopt the system. In addition, the implementation of this new system shall require the transport companies to designate a driver manager and a short training course will be prepared for them.

3) Program Component

(i) Preparatory Works

A further study on content development shall be undertaken during this preparatory stage. A workshop shall be conducted to encourage cooperation among transport companies.

(ii) Coordination with Concerned Organization(s)

Headed by MOT and VRA, coordination mechanism with NTSC, MOET, MOL, and MOH shall be established.

(iii) Development of Manual for Transport Companies

A traffic safety manual detailing the preventive activities that should be undertaken shall be prepared and distributed to transport companies. The following will be the contents of the said manual:

- (1) Office activities which include general discussions on road traffic hazards, feedback from drivers on black spots, check of physical conditions of drivers and vehicles.
- (2) Driver support activities such as preparation of traffic safety management plan, appropriate driver schedules, enforcement of driver aptitude test, and provision of feedback mechanism.

Table 4.5.2 Cost Estimation for Safe Driving Management System for Transport Companies
Unit: (000 USD)

Program	Program Components	Cost Item	2008	2009	2010	2011	2012	Total	Remarks	
Safe Driving Management System for Transport Companies	Preparatory works	Technical expertise		100	100			200		
		Workshop 1		5				5	WS in Hanoi & HCMC	
		Workshop 2			160			160	Regional WS	
		Instructor training				449		449		
	Coordination with concerned organization(s)	Budget for PMU		15	15	15		45		
	Development of manual for transport companies	Distribution of Manual			693			693		
	Conduct of experimental study	Technical expertise		200				200		
	Short course for driver manager	Workshop				160			160	WS in 8 regions
		Training for driver manager					346		346	
	Law enactment	Consultant fee					150		150	
	Total	-	0	320	968	624	496	2,408		

Source: JICA Study Team

4.6 Vehicle Registration Renewal System

1) Introduction

(i) Background

The present vehicle registration system in Vietnam does not require renewal of registration. Thus, it is not unusual for vehicles to be owned by second owners. With the second-hand car ownership anticipated to further increase in the future, renewal of registration will be very important and should therefore be required. This will enable the police traffic enforcers to identify a traffic violator with the use of the camera system. Thus, management of both M/C and car registration should be urgently discussed. In addition, the institutionalization of an appropriate and acceptable road user charge system is deemed important to ensure sustainable implementation of traffic safety measures and development of necessary transport infrastructures.

(ii) Goal

This system aims to (a) secure new fund sources; (ii) introduce a practical insurance that will prove beneficial to both violator and victim of traffic accident; (iii) monitor accurate number of vehicles; and (iv) control traffic violators with the use of CCTV.

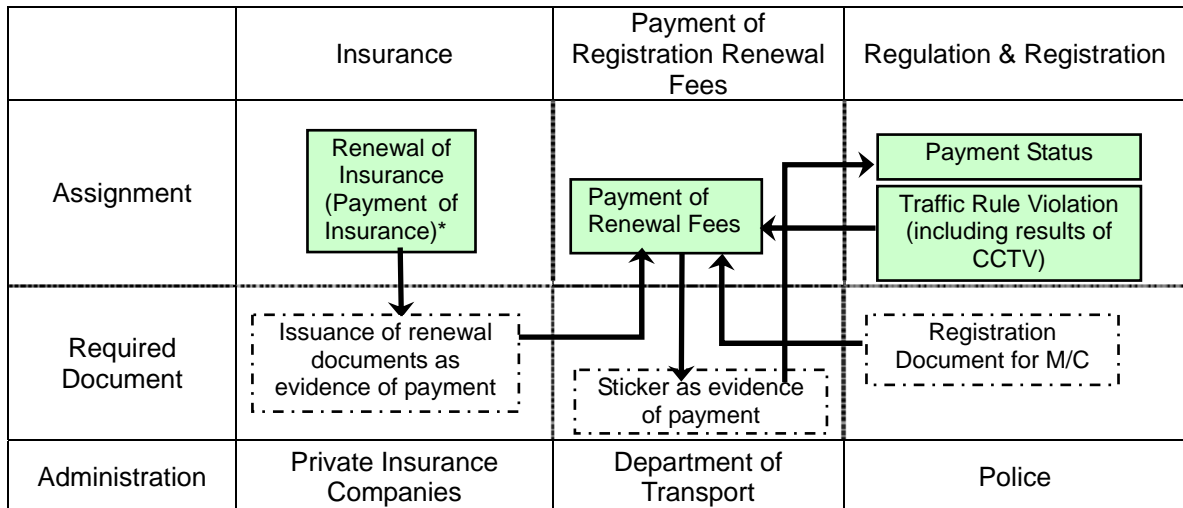
(iii) Target

All vehicle users

2) Implementation Strategy

All vehicle owners and/or users shall be compelled to obtain an Automobile Third Party Liability insurance. During the renewal of vehicle registration, the DOT shall require the presentation of the original receipt as proof of payment for this insurance coverage. Upon renewal of registration, the vehicle owner shall receive a registration sticker which will serve as proof of registration and payment of annual registration fees. This will allow the traffic enforcers and the police to control and monitor traffic violators by checking the registration stickers.

Table 4.6.1 Proposed Vehicle Registration Renewal System



* Automobile Third Party Liability Insurance

Source: JICA Study Team

3) Program Component

(i) Preparatory Works

At the outset, it is important to prepare an outline and scheme of the proposed system. A workshop will then be conducted to enhance understanding among concerned government agencies as well as private insurance companies.

(ii) Coordination with Concerned Organization(s)

Coordination between MOT (VRA) and MOPS will be critical, particularly in data and information sharing related to vehicle registration. Therefore, it will be necessary to clarify areas of responsibility on database management for each organization. In addition, coordination between MOT (VRA) and the private insurance companies will also be required to set a standard and guideline on the proposed mandatory liability insurance among vehicle owners.

(iii) System Development

A detailed system design for database management will be required. This database will be installed in a data center equipped with necessary computer equipments. This will also require development of manual and training on database use and management.

(iv) Setting-up of the Insurance System

In establishing a comprehensive automobile third party liability insurance system in Vietnam, technical expertise shall be required.

(v) Law Enactment

In order to implement this system effectively, it is proposed that the enactment of the following new laws be considered by the GOV:

- (1) Periodic renewal of vehicle registration will be mandatory for all types of vehicles.
- (2) Automobile third party liability insurance will be mandatory from all vehicle owners.
- (3) Registration sticker must be installed on the number plate.

4) Implementation Plan

The preparatory works, system development, setting-up of the insurance system, and law enactment should be completed within the 5-year action program period. Implementation is set in the medium-term (from 2013).

Table 4.6.2 Implementation Schedule and Milestone of Vehicle Registration Renewal System

Program	Program Components	Target (Milestone)		2008-2010	2011-2012
		2010	2012		
Vehicle Registration Renewal System	Preparatory works	Establishment of committee			
	Coordination with concerned organization(s)				
	System Development	Establishment of System			
	Setting-up of the insurance system	Set up of insurance system			
	Law enactment	Issue of Decision			

Source: JICA Study Team

5) Cost Estimation

The cost estimation for this program is approximately USD37.1 million during this 5-year action program period, as shown in Table 4.6.3.

Table 4.6.3 Cost Estimation for Vehicle Registration Renewal System

Unit: (000 USD)

Program	Program Components	Cost Item	2008	2009	2010	2011	2012	Total	Remarks	
Vehicle Registration Renewal System	Preparatory Works	Technical expertise		100	100			200		
		Workshop 1		5				5	WS in Hanoi & HCMC	
		Workshop 2			160			160	WS in 8 regions	
	Coordination with Concerned Organization(s)	Budget for PMU		15	15	15	15	60		
	System Development	Technical expertise				200	200		400	
		Equipment				16,850	16,850		33,700	
		Installation				199	199		397	
		Manual				79			79	
		Training				860	860		1,720	
	Setting-up of the insurance system	Technical expertise		100	100				200	
	Law enactment	Consultant Fee					150	150		
	Total	-	0	220	18,563	18,124	165	37,072		

Source: JICA Study Team

4.7 Technical Inspection for M/C

1) Introduction

(i) Background

An adequate vehicle inspection system for cars was already introduced in Vietnam. Thus, the issue at present is how the quality of motorcycles will be managed. Compared with other Asian countries, M/C user in Vietnam is significantly higher which makes it more imperative that quality of M/C be guaranteed. In addition, the number of vehicles for persons with disability is also an important issue to address in a traffic safety society.

(ii) Goal

This program aims to establish an adequate M/C inspection system and to ensure new fund source.

(iii) Target

Old Motorcycle (from fifth renewal of registration)

2) Implementation Strategy

Owners of old M/C models must have their M/C inspected at an authorized inspection unit and submit the certification of inspection upon renewal of registration. In this case, the designated M/C manufacturer and other M/C distributors may be designated as inspection units.

3) Program Component

(i) Preparatory works

At the outset, it is important to prepare an outline and scheme of the proposed system. A workshop will then be conducted to enhance understanding among

concerned government agencies as well as M/C manufacturers and authorized inspection units.

(ii) Coordination with concerned organization(s)

Coordination between MOT (VRA) and VR will be critical, particularly in sharing of data related to M/C specifications and inspection items. In addition, coordination with M/C manufacturers and distributors will also be required to set a guideline of specifications of insurance and its management.

(iii) System Development

A detailed system design for database management will be required. This database will be installed in a data center equipped with necessary computer equipments. This will also require development of manual and training on database use and management.

(iv) Enactment of the new standard

VR should establish an M/C technical inspection standard. In the same manner, this standard should ensure that M/C manufacturers have complied with the installation of a simple system.

(v) Guidelines for Manufacturers & Dealers

M/C inspection works will be responsibility of manufacturer and dealers. Therefore, prior to implementation of this program, proper guidelines should be formulated for their use.

(vi) Law enactment

In order to implement this system effectively, it is proposed that the enactment of the following new laws be considered by the GOV:

- (1) Submission of inspection certificate will be required from owners upon renewal of registration of M/C.
- (2) Inspection works will be responsibility of the manufacturers and dealers of M/C.

4) Implementation Plan

The preparatory works, system development, law enactment, and guidelines for manufactures and dealers should be completed within the 5-year action program period. Implementation is set in the medium-term (from 2013).

Table 4.7.1 Implementation Schedule and Milestone of Technical Inspection for M/C

Program	Program Components	Target (Milestone)		2008-2010	2011-2012
		2010	2012		
Technical Inspection for M/C	Preparatory works	Establishment of committee			
	Coordination with concerned organization(s)				
	Development of System		System Devt Development of new standards		
	Enactment of the new standard		Issue of Decision		
	Guidelines for manufacturers & dealers		Manual distribution & conduct of WS		
	Law enactment		Issue of Decision		

Source: JICA Study Team

5) Cost Estimation

The cost estimation for this program is approximately USD37.9 million during this 5-year action program period, as shown in Table 4.7.2.

Table 4.7.2 Cost Estimation for Technical Inspection for M/C

Unit: (000 USD)

Program	Program Components	Cost Item	2008	2009	2010	2011	2012	Total	Remarks	
Technical Inspection for M/C	Preparatory works	Technical expertise		100	100			200		
		Workshop 1		5				5	WS in Hanoi & HCMC	
	Coordination with concerned organization(s)	Budget for PMU		15	15	15	15	60		
	System Development	Technical expertise			100	100			200	Establishment of Committee
		Equipment			16,632	16,632			33,264	
		Installation			184	184			368	
		Manual			74				74	
		Training			796	796			1,593	
	Enactment of the new standard	Technical expertise			100	100			200	
	Guidelines for manufacturers & dealers	Distribution of Manual				135			134.6	
		Workshop			5				5	For manufacturer and dealers
		Overview lecture on technical inspection				1,683			1,682.5	In each province
	Law enactment	Consultants' Fee					150		150	
		Total	-	0	120	18,005	19,644	165	37,934	

Source: JICA Study Team

4.8 Strategies to Improve Vehicle Conditions for People with Disability

1) Introduction

(i) Background

It is important to discuss how the condition of vehicles for people with disability can be improved since the safe mobility of people with disability is also an increasingly urgent issue in the future.

(ii) Purpose

This program aims to ensure safe mobility of people with disability.

(iii) Target

Vehicle for people with disability

2) Implementation Strategy

Measures such as tax exemption, preferential treatment and vehicle standards shall be examined.

3) Program Component

(i) Organization of Preparatory Committee

As a first step, the organization of a preparatory committee composed of VR, VRA, MOH, and the disabled person support group will be required.

(ii) Assessment of the Subsidy System

A popular measure is vehicle tax exemption for people with disability. In addition, some preferential treatment may be observed, such as support system for acquiring a driver's license, subsidy for vehicle purchase and modification and parking regulations exemption.

(iii) Assessment of Vehicle Standard

In order to allow vehicle modification, the preparation of a vehicle standard is therefore necessary to include the following: (i) after-sales driver support device, (ii) accelerator by left foot, (iii) winker by foot, (iv) parking brake device, and (v) driver seat special features, among others.

4) Implementation Plan

Assessment of subsidy system and vehicle standards will be completed within the 5-year action program period. This will be followed by the enactment of related laws and finally, implementation of the program after 2013.

Table 4.8.1 Implementation Schedule and Milestone of Strategies to Improve Vehicle Conditions for People with Disability

Program	Program Components	Target (Milestone)		2008-2010	2011-2012
		2010	2012		
Strategies to Improve Vehicle Conditions for People with Disability	Organization of preparatory committee	Establishment of committee			
	Assessment of the subsidy system		Recommendation based on Assessment Reports		
	Assessment of vehicle standard				

Source: JICA Study Team

5) Cost Estimation

The cost estimation for this program is approximately USD1.0 million during this 5-year action program period, as shown in Table 4.8.2.

Table 4.8.2 Cost Estimation for Strategies to Improve Vehicle Conditions for People with Disability

Unit: (000 USD)

Program	Program Components	Cost Item	2008	2009	2010	2011	2012	Total	Remarks
Strategies to Improve Vehicle Conditions for People with Disability	Organization of preparatory committee	Workshop in regions		40	40	40	40	160	Twice a year
		Budget for PMU		15	15	15	15	60	
	Assessment of the subsidy system	Technical expertise				200	200	400	
	Assessment of vehicle standard	Technical expertise				200	200	400	
	Total		-	0	55	55	455	455	1,020

Source: JICA Study Team

4.9 Human Resource Development for Driving Instructors

1) Introduction

(i) Background

At present, it is still feasible for VRA to directly train instructors/teachers since their number is still manageable. However, the number of instructors needs to be increased by at least 100% in accordance with the forecasted increase in motorization rate by 2020. Thus, the establishment of a working group to address continuing driver education is needed.

(ii) Purpose

This program aims to develop human resources responsible for driver training and testing.

(iii) Target

Focus shall be on education and training of driving instructors, examiners and driver managers of transport companies.

2) Implementation Strategy

An instructor education system will be established where the management authority

that centers on VRA will prepare the training system and contents and train instructors (Instructor Trainers) from DOT. The Instructor Trainers will then train a new batch of instructors.

3) Program Component

This will be focused on establishment of a continuing education system and content development which will be based on the other programs such as basic license renewal system, comprehensive program for driver training and testing and safe driving management system for transport companies.

4) Implementation Plan

To benefit from preparation, assessment and development works conducted in other programs, preparatory works for this program shall start from 2011. Periodic personnel training will start in the medium term (after 2013).

Table 4.9.1 Implementation Schedule and Milestone of Human Resource Development Program

Program	Program Component	Target (Milestone)		2008-2010	2011-2012
		2010	2012		
Human Resource Devt	Preparatory works for system and content development		Development of system & content		

Source: JICA Study Team

5) Cost Estimation

The cost estimation for this program is approximately USD0.5 million until 2012, as shown in Table 4.9.2.

Table 4.9.2 Cost Estimation for Human Resource Development Program

Unit: (000 USD)

Program	Program Component	Cost Item	2008	2009	2010	2011	2012	Total	Remarks
Human Resource Devt	Preparatory works for system and content development	Assessment			100	100		200	
		Technical expertise				100	200	300	
	Total	-	0	0	100	200	200	500	

Source: JICA Study Team

4.10 Overall Implementation and Investment Plan

The required budget for the implementation of safe driving and vehicle safety development plan for the 5-year action program period is approximately USD114 million, as shown Table 4.10.1.

Significant amount will be required during the 3rd and 4th years of this action program period for the acquisition of equipment for the new programs such as the vehicle registration renewal system and technical inspection for M/C. Therefore, it is anticipated that the entire budgetary requirement may not be absorbed by the agency budget, and that loan from ODA agencies may be required.

**Table 4.10.1 Overall Investment Plan for Transport Management
Five-Year Action Program**

Unit: (Million USD)

	2008	2009	2010	2011	2012	Total
Total Required Budget	-	12.5	51.6	46.4	3.3	113.9

Source: JICA Study Team

Assuming that system development and acquisition of equipment for new programs will be completed within this 5-year action program period, these programs will be implemented from the medium-term (2013). In addition, it is also assumed that securing of new budget sources from user charges is possible.

Public support, particularly from M/C users, may be hard to secure in the short term. However, this is critical in ensuring sustainable fund sources not only for traffic safety measures but also for the development of required transport infrastructures from the medium- to long-term. While financial assistance may be expected from international donor agencies in the medium-term, sustainable financial resource development should be considered a priority issue by the Government of Vietnam in the near future.

5 EFFICIENT TRAFFIC CONTROL AND ENFORCEMENT DEVELOPMENT PLAN

5.1 Outline of Enforcement Sector Action Program

Table 5.1.1 summarizes the proposed 5-year action program for the traffic enforcement sector which are all urgently required to achieve the traffic safety Master Plan target in 2020.

Table 5.1.1 Proposed Traffic Control and Enforcement Five-Year Action Program

BASIC STRATEGY No.	STRATEGY	IMPLEMENTATION PROGRAM	PROGRAM CODE No.	MILESTONE		Core Agency	Joint Agencies
				2008-2010	2011-2012		
1	Traffic safety guidance for inexperienced and less-skilled road users	On-street traffic safety guidance and warning to motorcycle riders (e.g. proper lane-changing, turning, use of winker, etc.) and pedestrians (e.g. use of pedestrian lanes and overpass, etc.)	1-2-1			MOPS	MOET MOT
		On-site traffic safety guidance and warning on how to drive at black-spots and black-sections	1-2-2			MOPS	MOET MOT
		Traffic safety guidance and warning during rush hour	1-2-3			MOPS	MOET MOT
		Intensified traffic safety guidance and warning for young and beginner drivers	1-2-4			MOPS	MOET MOT
		Traffic safety guidance and warning on how to drive near trucks and buses (e.g. running parallel with, overtaking, etc.)	1-2-5			MOPS	MOET MOT
	Strengthening and intensifying traffic law enforcement to completely eradicate traffic violators	Traffic violations such as over speeding, running on red light, etc.	1-3-1			MOPS	MOET MOT
		Traffic violators at black-spots and sections	1-3-2			MOPS	MOET MOT
		Traffic violators on streets	1-3-3			MOPS	MOET MOT
		Traffic violators among young drivers	1-3-4			MOPS	MOET MOT
		Traffic violators among truck and bus drivers	1-3-5			MOPS	MOET MOT
2	Public relations on traffic safety guidance and enforcements, including current situation of traffic violations, implementation plan and implementation results	Examination and design of public relations on traffic safety guidance and enforcements	2-1-1			MOPS	MOET MOT
		Current situation of traffic violations and implementation plan of traffic guidance/enforcements	2-1-2			MOPS	MOET MOT
3	Coordination with related agencies on traffic safety countermeasures, exchange of views among all participants	Examination and design of public relations strategies on coordination mechanism with related agencies	3-1-1			MOPS	MOT MOET
		Presentation to, and exchange of views among the participants on the current situation of traffic safety guidance and enforcement activities	3-1-2			MOPS	MOT MOET
		Presentation to, and exchange of views among the participants on the current issues on traffic facilities and traffic management related to traffic safety guidance and enforcement	3-1-3			MOPS	MOT MOET
4	Recording and evaluation of traffic safety guidance and enforcement activities and activity planning based on the evaluation	Recording of traffic guidance and enforcement activities	4-1-1			MOPS	MOT
		Evaluation of the activities	4-1-2			MOPS	MOT
		Activity planning based on the evaluation	4-1-3			MOPS	MOT
5	Examination of human resource development policy on traffic safety guidance and enforcement and development of training system for sustainable human resource development	Examination of human resource development policy on traffic safety guidance and enforcement	5-1-1			MOPS	MOT MOET
		Beginners' training	5-1-2			MOPS	MOT MOET
6	Preparation and development of equipment for traffic safety guidance and enforcement	Procurement planning for required equipment on traffic safety guidance and enforcement	6-1-1			MOPS	MOT
		Implementation of procurement plan	6-1-2			MOPS	MOT
		Development of ITS camera system on several main NHs	6-1-4			MOPS	MOT

Source: JICA Study Team.

Fundamental countermeasures for all traffic enforcement programs are those directly related to the cause of the problems. However, in order to systematically analyze the problem and its cause(s), the recorded historical activities concerning the problems and

countermeasures are necessary, which, unfortunately, are unreliable if not totally unavailable. Thus, one major and critical component of this traffic enforcement program is the setting up of the traffic accident database.

In addition, targets for all programs are set based on trends of traffic accidents and traffic violations committed from 2002-2006 as well as in consideration of obtained information on traffic police activities through onsite surveys of 3 cities and 5 provinces.

5.2 Traffic Safety Guidance for Inexperienced and Less-skilled Road Users

1) Implementation Program

The outline of the implementation program is summarized in Table 5.2.1.

Table 5.2.1 Outline of Implementation for Program Nos. 1-2-1 to 1-2-5

Program	Traffic safety guidance for inexperienced and less-skilled road users				
Program No.	1-2-1 ~ 5	Core Agency	MOPS	Joint Agency	MOET, MOT
Purpose	To guide inexperienced and less-skilled road users towards safe participation in a traffic society				
Target	More than 80% reduction in traffic violations by beginner/novice and vulnerable road users (pedestrians, riders and drivers)				
Starting Year	2011, after the implementation of Program Nos. 1-3-1 to 1-3-5				
Implementation Sub-program	1-2-1 On-street traffic safety guidance and warning to motorcycle riders (e.g. proper lane-changing, turning, use of winker, etc.) and pedestrians (e.g. use of pedestrian lanes and overpass, etc.) 1-2-2 On-site traffic safety guidance and warning on how to drive at black-spots and black-sections 1-2-3 Traffic safety guidance during rush hour 1-2-4 Intensified traffic safety guidance and warning for young and beginner drivers 1-2-5 Traffic safety guidance and warning on how to drive near trucks and buses (e.g. running parallel with, overtaking, etc.)				
Focus Points	1-2-1 motorcycle riders, pedestrians 1-2-2 driving at black-spots and black-sections 1-2-3 driving during rush hour 1-2-4 young drivers 1-2-5 driving near trucks and buses				
Program Component	(1) Preparatory works: technical assistance (planning); teaching (combined with on-the-job training); Procurement of equipments (see Table 5.9.3) (2) Implementation: technical assistance (formation, recording); teaching (combined with on-the-job-training) (3) Evaluation: technical assistance (formation); technical assistance (evaluation) (4) Review: technical assistance (review); workshop (5) Training: trainers, trainees				
Required Manpower during Implementation	3-5 policemen /site (Police stationing is to be based on SC-INT1, RSC1;stationing code)				
Required Equipment during Implementation	1 Whistle, 1 nightstick, 1 wireless radio (per policeman), etc. Other equipment such as computers for activity recording, analysis and management.				
Estimated Cost (Mil. USD)	10.6 (except costs for personnel and procurement of equipments)				

Source: JICA Study Team.

The purpose of the program is to guide and/or to educate inexperienced and less-skilled road users to ensure a safe and orderly traffic. Each sub-program has a specific target or focus point: sub-program 1-2-1 is focused on motorcycle riders and pedestrians; sub-program 1-2-2 is focused on driving at black-spots and black-sections; sub-program 1-2-3 is focused on driving during rush hour; sub-program 1-2-4 is focused on young drivers; and sub-program 1-2-5 is focused on driving near trucks and buses.

2) Implementation Plan and Estimated Cost

Table 5.2.2 shows the implementation plan and estimated cost of the program. Total estimated budget required for this program is about USD10.6 million, exclusive of budget required for equipment, which has estimated total of USD4.9 million by 2011 and USD5.718 million by 2012.

Table 5.2.2 Implementation Plan and Estimated Cost for Program Nos. 1-2-1 to 1-2-5

PROGRAM CODE No./ IMPLEMENTATION PROGRAM		CONTENTS	COST ITEMS	2008	2009	2010	2011	2012
1-2-1	On-street traffic safety guidance and warning to motorcycle riders (e.g. proper lane-changing, turning, use of winker, etc.) and pedestrians (e.g. use of pedestrian lanes and overpass, etc.)	Preparatory works	technical assistance (planning)				788	788
			teaching (combined with training)				788	788
			(cost of procurement of equipment excluded)	-	-	-	-	-
1-2-2	On-site traffic safety guidance and warning on how to drive at black-spots and black-sections	Implementation	technical assistance (formation, recording)				788	788
			teaching (combined with training)				788	788
1-2-3	Traffic safety guidance during rush hour	Evaluation	technical assistance (formation)				700	700
1-2-4	Intensified traffic safety guidance and warning for young and beginner drivers		technical assistance (evaluation)				700	700
			workshop				30	30
1-2-5	Traffic safety guidance and warning on how to drive near trucks and buses (e.g. running parallel with, overtaking, etc.)	Review	technical assistance (review)					788
			workshop					30
		Training	trainers				160	160
			trainees				160	160
							4,902	5,718

Source: JICA Study Team.

5.3 Strengthening and Intensifying Traffic Law Enforcement to Completely Eradicate Deliberate Traffic Violators

1) Implementation Program

The outline of the implementation program is summarized in Table 5.3.1.

The purpose of the program is to conduct a strengthening and intensified traffic law enforcement to completely eradicate deliberate traffic violators. Each sub-program has a specific target or focus point: sub-program 1-3-1 is focused on motorcycle riders and pedestrians; sub-program 1-3-2 is focused on driving at black-spots and black-sections, sub-program 1-3-3 is focused on driving during rush hour, sub-program 1-3-4 is

focused on young drivers, and sub-program 1-3-5 is focused on driving near trucks and buses.

Table 5.3.1 Outline of Implementation for Program Nos. 1-3-1 to 1-3-5

Program	Strengthening and Intensifying Traffic Law Enforcement to Completely Eradicate Traffic Violators				
Program No.	1-3-1 ~ 5	Core Agency	MOPS	Joint Agency	MOET, MOT
Purpose	To strengthen and intensify traffic enforcement to completely eradicate deliberate traffic violators				
Target	More than 95% reduction in both violations and accidents caused by traffic violators.				
Starting Year	2008/2009. This program is the first priority for implementation.				
Implementation Sub-program	1-3-1 Traffic violations such as over speeding, running on red light, etc. 1-3-2 Traffic violators at black-spots and sections 1-3-3 Traffic violators on streets 1-3-4 Traffic violators among young drivers 1-3-5 Traffic violators among truck and bus drivers				
Focus Points	1-3-1 motorcycle rider violators 1-3-2 violators at black-spots and black-sections 1-3-3 violators on streets 1-3-4 young driver violators 1-3-5 truck and/or bus driver violators				
Program Component	(1) Preparatory works: technical assistance (planning); teaching (combined with on-the-job training); Procurement of equipments (see Table 5.9.3) (2) Implementation: technical assistance (formation, recording); teaching (combined with on-the-job-training) (3) Evaluation: technical assistance (formation); technical assistance (evaluation) (4) Review: technical assistance (review); workshop (5) Training: trainers, trainees				
Required Manpower during Implementation	4-8 Policemen per site (Police stationing is SC-INT1, RSC1; RSC2, RSC3; stationing code)				
Required Equipment during Implementation	1 Whistle, 1 nightstick, 1 wireless radio (per policeman) 1-2 speed-sensors, 1-2 video cameras, 1-2 digital cameras (per site), etc. Other equipment such as computers for activity recording, analysis and management.				
Estimated Cost (Mil. USD)	15.6 (except costs for personnel and procurement of equipments)				

Source: JICA Study Team.

2) Implementation Plan and Estimated Cost

Table 5.3.2 shows the implementation plan and estimated cost of the program. Total estimated budget required for this program is about USD15.6 million, exclusive of budget required for equipment, which has estimated total of USD3.15 million by 2008, USD1.96 million by 2009, USD3.47 million by 2010, USD3.53 million by 2011, and USD3.53 million by 2012.

Table 5.3.2 Implementation Plan and Estimated Cost for Program Nos. 1-3-1 to 1-3-5

PROGRAM CODE No./ IMPLEMENTATION PROGRAM		CONTENTS	COST ITEMS	2008	2009	2010	2011	2012
1-3-1	Traffic violations such as over speeding, running on red light, etc.	Preparatory works	technical assistance (planning)	788	-	788	788	
			teaching (combined with training)	788	-	788	788	
1-3-2	Traffic violators at black-spots and sections		(cost of procurement of equipment excluded)	-	-	-	-	-
1-3-3	Traffic violators on streets	Implementation	technical assistance (formation, recording)	788	-	788	-	788
1-3-4	Traffic violators among young drivers		teaching (combined with training)	788	-	788	-	788
1-3-5	Traffic violators among truck and bus drivers	Evaluation	technical assistance (evaluation)		700	-	700	700
			workshop		30	-	30	30
		Review	technical assistance (review)		175	-	175	175
			workshop		30	-	30	30
		Training	trainers		160	160	160	160
			trainees		160	160	160	160
				3,150	1,955	3,470	3,530	3,530

Source: JICA Study Team.

5.4 Public Relations on Traffic Safety Guidance and Enforcement

1) Implementation Program

The outline of the implementation program is summarized in Table 5.4.1.

The purpose of the program is to establish good public relations on traffic safety guidance and enforcements including current situation of traffic accidents, traffic violations, and traffic enforcement implementation plan and implementation results.

Each sub-program depends on the steps of implementation. The first step is to examine and design public relations and campaign strategies on traffic safety guidance and enforcements, especially a campaign that targets the novice and inexperienced road users. The second step is to conduct awareness campaigns about current situation of traffic violations, accidents and the implementation plan of traffic guidance and enforcements after carefully examining the appropriate places, timing and frequency of implementation, in addition to contents and methods of implementation.

Table 5.4.1 Outline of Implementation for Program Nos. 2-1-1 to 2-1-2

Program	Public relations on traffic safety guidance and enforcements				
Program No.	2-1-1 ~ 2	Core Agency	MOPS	Joint Agency	MOET, MOT
Purpose	Public relations on current situation of traffic accidents, traffic violations, traffic enforcement implementation plan and implementation results				
Target	More than 90% reduction of traffic violations caused by insufficient knowledge of traffic rules				
Starting Year	2008/2009				
Implementation Sub-program	2-1-1 Examination and design of public relations on traffic safety guidance and enforcements 2-1-2 Current situation of traffic violations and implementation plan of traffic guidance/enforcements				
Focus Points	2-1-1 novice and inexperienced road users 2-1-2 places, timing, frequency, contents, and methods				
Program Component	(1) Preparatory works: technical assistance (2) Implementation: technical assistance (3) Evaluation: technical assistance; workshop (4) Review: technical assistance; workshop (5) Training: technical assistance (trainers); trainees				
Required Manpower during Implementation	3-5 Policemen per site (others) (Police stationing is to be based on SC-INT1, RSC1; stationing code)				
Required Equipment during Implementation	1 Whistle, 1 nightstick, 1 wireless radio (per policeman). Other equipment such as computers for activity recording, analysis and management.				
Estimated Cost (Mil. USD)	12.2 (except costs for personnel and procurement of equipments)				

Source: JICA Study Team.

2) Implementation Plan and Estimated Cost

Table 5.4.2 shows the implementation plan and estimated cost of the program. Total estimated budget required for this program is about USD12.2 million, exclusive of budget required for equipment, which has estimated total of USD0.21 million by 2009, USD3.96 million by 2010, USD4.17 million by 2011, and USD3.96 million by 2012.

Table 5.4.2 Implementation Plan and Estimated Cost for Program Nos. 2-1-1 to 2-1-2

PROGRAM CODE No./ IMPLEMENTATION PROGRAM		CONTENTS	COST ITEMS	2008	2009	2010	2011	2012
2-1-1	Examination and design of public relations on traffic safety guidance and enforcements	Preparatory works	technical assistance	-	210	210	210	-
		Implementation	technical assistance			210	210	210
2-1-2	Current situation of traffic violations and implementation plan of traffic guidance/enforcements	Evaluation	technical assistance			280	280	280
			workshop			96	96	96
		Review	technical assistance			-	280	280
			workshop			-	30	30
Training		technical assistance (trainers)			2,100	2,100	2,100	
		trainees			960	960	960	
				0	210	3,856	4,166	3,956

Source: JICA Study Team.

5.5 Coordination among Related Agencies on Traffic Safety Countermeasures

1) Implementation Program

The outline of the implementation program is summarized in Table 5.5.1.

The purpose of the program is for concerned agencies to have consensus on problems, issues and required countermeasures. Each of the subprogram depends on the steps of implementation. First is the examination and design of an effective coordination mechanism among concerned agencies. This is followed by the presentation to, and exchange of views among the participants on the current situation of traffic safety guidance and enforcement activities; then finally, on the current issues on traffic facilities and traffic management related to traffic safety guidance and enforcement.

Program components and activities include preparatory works, implementation, evaluation, review and training. A very important task during program implementation is how to develop a recording and monitoring system based on data collected during implementation, which will be the basis for finalization of countermeasures. Thus, database development shall be supported by all the tasks undertaken in each program components.

Table 5.5.1 Outline of Implementation for Program Nos. 3-1-1 to 3-1-3

Program	Coordination among related agencies on traffic safety countermeasures				
Program No.	3-1-1 ~ 3	Core Agency	MOPS	Joint Agency	MOT, MOET
Purpose	For concerned agencies to have consensus on problems, issues and required countermeasures				
Target	More than 50% increase in comprehensive countermeasures as a result of successful collaboration among concerned agencies				
Starting Year	2008/2009				
Implementation Sub-program	3-1-1 Examination and design of an effective coordination mechanism with related agencies. 3-1-2 Presentation to, and exchange of views among the participants on the current situation of traffic safety guidance and enforcement activities. 3-1-3 Presentation to, and exchange of views among the participants on the current issues on traffic facilities and traffic management related to traffic safety guidance and enforcement				
Focus Points	3-1-1 coordination methods, contents 3-1-2 difficulties on traffic safety guidance and enforcements 3-1-3 risky road points and sections obtained from ordinary activities				
Program Component	(1) Preparatory works: technical assistance (2) Implementation: technical assistance (3) Evaluation: technical assistance; workshop (4) Review: technical assistance; workshop (5) Training: technical assistance (trainers); trainees				
Required Manpower during Implementation	1-2 Policemen in charge of planning per police station and 2-3 officers-in-charge per police station				
Required Equipment during Implementation	Not specified Regular office equipment				
Estimated Cost (Mil. USD)	13.2 (except costs for personnel and procurement of equipments)				

2) Implementation Plan and Estimated Cost

Table 5.5.2 shows the implementation plan and estimated cost of the program. Total estimated budget required for this program is about USD13.2 million, exclusive of budget required for equipment, which has estimated total of USD0.32 million by 2009, USD4.14 million by 2010, USD4.55 million by 2011, and USD4.24 million by 2012.

Table 5.5.2 Implementation Plan and Estimated Cost for Program Nos. 3-1-1 to 3-1-3

PROGRAM CODE No./ IMPLEMENTATION PROGRAM		CONTENTS	COST ITEMS	2008	2009	2010	2011	2012
3-1-1	Examination and design of public relations on traffic safety guidance and enforcements	Preparatory works	technical assistance	-	315	315	315	-
		Implementation	technical assistance			315	315	315
3-1-2	Presentation to, and exchange of views among the participants on the current situation of traffic safety guidance and enforcement activities	Evaluation	technical assistance			-	315	315
			workshop			-	96	96
		Review	technical assistance			420	420	420
workshop				30	30	30		
3-1-3	Presentation to, and exchange of views among the participants on the current issues on traffic facilities and traffic management related to traffic safety guidance and enforcement	Training	technical assistance (trainers)			2100	2100	2100
			trainees			960	960	960
				0	315	4,140	4,551	4,236

Source: JICA Study Team.

5.6 Recording and Evaluation of Traffic Safety Guidance and Enforcement Activities

1) Implementation Program

The outline of the implementation program is summarized in Table 5.6.1.

The purpose of the program is to enable systematic planning and evaluation of traffic guidance and enforcement activities by using the recorded activities and results of enforcement. Each of the subprogram depends on the steps of implementation. First is the examination of how to efficiently record, file and evaluate traffic guidance and enforcement activities as basis for formulating an effective system. This is followed by recording and filing of activity results on traffic safety guidance and enforcement. And finally, evaluation of results of activities on traffic safety guidance and enforcement.

Program components and activities include preparatory works, implementation, evaluation, and training. The database which will be developed by this program will be very critical not only for police-related activities but also for engineering and educational activities since the database will be very useful for all planning, implementation and evaluation activities related to traffic safety.

2) Implementation Plan and Estimated Cost

Table 5.6.2 shows the implementation plan and estimated cost of the program. Total estimated budget required for this program is about USD17.7 million, exclusive of budget required for equipment, which has estimated total of USD0.95 million by 2009 and USD5.6 million every year of 2010, 2011 and 2012.

Table 5.6.1 Outline of Implementation for Program Nos. 4-1-1 to 4-1-3

Program	Recording and evaluation of traffic safety guidance and enforcements				
Program No.	4-1-1 ~ 3	Core Agency	MOPS	Joint Agency	MOT
Purpose	To ensure feasibility of systematic planning of enforcement activities				
Target	More than 50% increase in cost/benefit of traffic enforcement activities				
Starting Year	2008/2009				
Implementation Sub-program	4-1-1 Examination of how to efficiently record, file and evaluate traffic guidance and enforcement activities as basis for formulating an effective system 4-1-2 Recording and filing of activity results on traffic safety guidance and enforcement 4-1-3 Evaluation of results of activities on traffic safety guidance and enforcement				
Focus Points	4-1-1 Recording formats of traffic guidance and enforcement activities 4-1-2 Evaluation contents 4-1-3 Activity planning based on the evaluation				
Program Component	(1) Preparatory works: technical assistance (formulation); Procurement of equipments (see Table 5.9.3) (2) Implementation: technical assistance (data input); teaching (data output); technical assistance (data analysis) (3) Evaluation: technical assistance; workshop (4) Training: technical assistance (trainers); trainees				
Required Manpower during Implementation	1-2 Policemen in charge of planning per police station and 2-3 officers-in-charge per police station				
Required Equipment during Implementation	1 terminal computer per police station, 1 central computer per city or province, 1 main computer in MOPS				
Estimated Cost (Mil. USD)	17.7 (except costs for personnel and procurement of equipments)				

Source: JICA Study Team.

Table 5.6.2 Implementation Plan and Estimated Cost for Program Nos. 4-1-1 to 4-1-3

PROGRAM CODE No./ IMPLEMENTATION PROGRAM		CONTENTS	COST ITEMS	2008	2009	2010	2011	2012
4-1-1	Examination of how to efficiently record, file and evaluate traffic guidance and enforcement activities as basis for formulating an effective system	Preparatory works	technical assistance (formulation)	-	945	945	945	945
			(cost of procurement of equipment excluded)			-	-	-
4-1-2	Recording and filing of activity results on traffic safety guidance and enforcement	Implementation	technical assistance (data input)			420	420	420
			technical assistance (data output)			420	420	420
			technical assistance (analysis)			420	420	420
4-1-3	Evaluation of results of activities on traffic safety guidance and enforcement	Evaluation	technical assistance			140	140	140
			workshop			192	192	192
		Training	Technical assistance (trainers)			2,100	2,100	2,100
			trainees			960	960	960
				0	945	5,597	5,597	5,597

Source: JICA Study Team.

5.7 Human Resource Development on Traffic Safety Guidance and Enforcement

1) Implementation Program

The outline of the implementation program is summarized in Table 5.7.1. The purpose of the program is to develop policemen's ability on traffic guidance and enforcement. Each of the subprogram depends on the steps of implementation. First is the examination of human resource development policy on traffic safety guidance and enforcement, followed by the development of training system for sustainable human resource development.

Program components and activities include pre-training, training and evaluation. During program implementation, it will be very important to develop a recording and monitoring system based on data collected during pre-training, training and evaluation activities. Thus, database development shall be supported by all the tasks undertaken in each program components.

2) Implementation Plan and Estimated Cost

Table 5.7.2 shows the implementation plan and estimated cost of the program. Total estimated budget required for this program is about USD13.5 million, exclusive of budget required for equipment, which has estimated total of USD1.84 million by 2009, USD8.22 million by 2010, USD4.64 million by 2011, and USD2.8 million by 2012.

Table 5.7.1 Outline of Implementation for Program Nos. 5-1-1 to 5-1-2

Program	Human resource development on traffic safety guidance and enforcement				
Program No.	5-1-1 ~ 2	Core Agency	MOPS	Joint Agency	MOT, MOET
Purpose	Develop policemen's ability on traffic guidance and enforcement				
Target	More than 60% increase in reliability of and dependability on policemen				
Starting Year	2008/2009				
Implementation Sub-program	5-1-1 Examination of human resource development policy on traffic safety guidance and enforcement 5-1-2 Development of training system for sustainable human resource development (intermediate and advanced leaders' training will be started from 2013)				
Focus Points	5-1-1 Human development policy on traffic safety guidance and enforcements 5-1-2 Framework of training system for human development for beginners' training				
Program Component	(1) Preparatory works: technical assistance (planning); technical assistance (formulation); technical assistance (specification); procurement of equipments (2) Pre-training: technical assistance (trainers); technical assistance (evaluation) (3) Training: technical assistance (beginners' training); technical assistance (evaluation) (4) Evaluation: technical assistance (review)				
Required Manpower during Implementation	Trainers: 20 to 30 policemen/provincial (or city) academy Trainers: 30 to 50 policemen/national academy				
Required Equipment during Implementation	(Training materials)				
Estimated Cost (Mil. USD)	13.5 (except costs for personnel and procurement of equipments)				

Source: JICA Study Team.

Table 5.7.2 Implementation Plan and Estimated Cost for Program Nos. 5-1-1 to 5-1-2

PROGRAM CODE No./ IMPLEMENTATION PROGRAM		CONTENTS	COST ITEMS	2008	2009	2010	2011	2012	
5-1-1	Examination of human resource development policy on traffic safety guidance and enforcement	Preparatory works	technical assistance (planning)	-	473	473	473	-	
			technical assistance (formulation)	-	473	473	473	-	
5-1-2	Development of training system for sustainable human resource development		technical assistance (specification)		473	473	473	-	
			(cost of procurement of equipment excluded)		-	-	-	-	
			Pre-training	Technical assistance (trainers)		280	280	280	-
				technical assistance (evaluation)		140	140	140	-
		Training	technical assistance (beginners' training)		-	2,240	2,240	2,240	
			Technical assistance (evaluation)		-	140	140	140	
		Evaluation	technical assistance (review)				420	420	
				0	1,838	4,218	4,638	2,800	

Source: JICA Study Team.

5.8 Preparation and Development of Equipment for Traffic Safety Guidance and Enforcement

1) Implementation Program

The outline of the implementation program is summarized in Table 5.8.1.

The purpose of the program is to develop the equipment procurement plan required for traffic police activities to increase their effectiveness on traffic guidance and enforcement.

Each of the subprogram depends on the steps of implementation. First is procurement planning for the required equipment on traffic safety guidance and enforcement, followed by the actual implementation of the procurement plan.

Program components and activities include preparatory works, implementation, pre-planning, pre-evaluation, and training. During program implementation, it will be very important to develop a recording system of data related to pre-planning, pre-evaluation and training activities.

2) Implementation Plan and Estimated Cost

Table 5.8.2 shows the implementation plan and estimated cost of the program. Total estimated budget required for this program is about USD22.6 million, which has estimated total of USD4.32 million by 2009, USD7.56 million by 2010, USD4.63 million by 2011, and USD6.13 million by 2012.

Table 5.8.1 Outline of Implementation for Program Nos. 6-1-1, 6-1-2, and 6-1-4

Program	Preparation and development of equipment for traffic safety guidance and enforcement				
Program No.	6-1-1 ~ 2, 6-1-4	Core Agency	MOPS	Joint Agency	MOT
Purpose	Increased efficiency on traffic guidance and enforcement activities				
Target	More than 30% increase of cost/benefit of traffic enforcement activities				
Starting Year	2008/2009				
Implementation Sub-program	6-1-1 Procurement planning for required equipment on traffic safety guidance and enforcement 6-1-2 Implementation of procurement plan (Development of new equipment will start from 2013) 6-1-4 Development of ITS camera system on several NHs				
Focus Points	6-1-1 Precise methods and easy treatments 6-1-2 Recordable and maintainable 6-1-4 Effective ITS				
Program Component	(1) Preparatory works: technical assistance (planning); technical assistance (survey); technical assistance (analysis); technical assistance (evaluation) (2) Implementation: technical assistance (pre-planning); technical assistance (pre-evaluation) (3) Training: technical assistance (trainers); trainees				
Required Manpower during Implementation	1-2 Policemen in charge of planning per police station and 2-3 officers-in-charge per police station				
Required Equipment during Implementation	No relevant items				
Estimated Cost (Mil. USD)	7.5 (except costs for personnel and procurement of equipments)				

Source: JICA Study Team.

Table 5.8.2 Implementation Plan and Estimated Cost for Program Nos. 6-1-1, 6-1-2, and 6-1-4

PROGRAM CODE No./ IMPLEMENTATION PROGRAM		CONTENTS	COST ITEMS	2008	2009	2010	2011	2012
6-1-1	Procurement planning for required equipment on traffic safety guidance and enforcement	Preparatory works	technical assistance (planning)	-	315	315	-	-
			technical assistance (survey)			420	420	-
6-1-2	Implementation of procurement plan		technical assistance (analysis)		-	-	105	105
6-1-4	Development of ITS camera system		technical assistance (evaluation)		-	-	105	105
		Implementation	technical assistance (pre-planning)		-	210	-	210
			technical assistance (pre-evaluation)		-	30	-	30
		Training	technical assistance (trainers)		-	2,100	-	2,100
			trainees		-	480	-	480
		ITS camera			4,000	4,000	4,000	3,100
				0	4,315	7,555	4,630	6,130

Source: JICA Study Team.

5.9 Procurement Plan of Required Equipment for Traffic Police Activities

1) Required Equipment

The number of equipment required for traffic police activities depends on the levels of planned activities; that is, the number of traffic police activities that will be simultaneously conducted and the number of traffic policemen who are in charge of traffic guidance and enforcement are related to the required number of equipment.

Table 5.9.1 shows the estimated number of required equipment based on assumptions shown in Table 5.9.2.

Table 5.9.1 Estimated Number of Required Equipment for Traffic Police Activities

Equipment	Quantity	Total
		USD309 Mil. Estimated Cost (USD x 1,000)
patrol car	1,591	47,741.4
patrol motorcycle	3,183	22,279.3
light truck	1,591	55,698.3
vehicle fitout	6,366	50,924.2
vehicle maintenance	6,366	1,909.7
vehicle running costs for patrol cars and light trucks	3,183	19,096.6
vehicle running costs for patrol motorcycles	3,183	5,092.4
speed gun (all day type with picture)	1,591	38,193.1
speed sensor (day time type)	3,183	14,322.4
alcohol sensor (evidence type)	796	8,354.7
alcohol sensor (screening type)	1,591	1,591.4
vehicle scale	1,591	17,505.2
personal safety equipments	7,957	1,989.2
two-way radio (ICOM IC-F2721:25W)	1,591	6,365.5
two-way radio (ICOM VX-571UCAT:25W)	3,183	2,196.1
video recorder (Sony DSR-PD170P)	1,591	3,978.5
digital camera (Sony DSC-H1)	3,183	1,591.4
warning light (780-5S0-16)	7,957	2,227.9
computer (laptop)	1,591	2,625.8
computer (desktop for database)	2,907	4,360.5
computer (desktop for human resource development)	100	150.0
computer (including intranet; traffic police headquarter)	5	1,000.0
TOTAL		309,193.5

Table 5.9.2 Assumptions for the Estimation of Required Number of Equipments

Equipment	Number of Required and Proposed Equipments
Patrol car	Number of traffic patrol policemen(PP) is about 70% of total number of traffic policemen. The required number of patrol cars(PCr) is one-fourth of the number of traffic patrol policemen. The proposed number of patrol cars(PCp) is 80% of the PCr. $PCr=PP/4$, $PCp=0.8 \times PCr$
Patrol motorcycle	Number of traffic patrol policemen(PP) is about 70% of total number of traffic policemen. The required number of patrol motorcycles(PMCr) is one-second of the number of traffic patrol policemen. The proposed number of patrol motorcycles(PMCp) is 80% of the PMCr. $PMCr=PP/2$, $PMCp=0.8 \times PMCr$
Light truck	The prepared number of light trucks (LTp) is the same as that of PCp. $LTp = PCp$
Vehicle fitout	The number of vehicle fitouts(Vfo) is the same as the total of patrol cars and patrol motorcycles and light trucks. $Vfo=PCp+PMBp+LTp$
Vehicle maintenance	Average maintenance cost is USD300 for patrol cars and motorcycles and light trucks. No. of maintenance = $PCp+PMBp+LTp$
Vehicle running cost	One patrol car or light truck runs 60,000 km per year, and it can run about 10km per 1 liter of gas. One patrol motorcycle runs 20,000 km per year, and it can run about 12.5km per 1 liter of gas.
Speed gun (all day type with picture): 1 set per 2 patrol cars	Number of speed guns is one set per one patrol cars. No. = PCp
Speed sensor (day time type): 2 sets per station	Number of speed sensors is one set per one patrol motorcycle.. No.= PCp
Alcohol sensor evidence type: 1 set per station	Number of evidence type of alcohol sensors is one set per two patrol cars. No.= $0.5 \times PCp$
Alcohol sensor screening type: 2 sets per station	Number of screening type of alcohol sensors is one set per one patrol car. No. = PCp
Vehicle scale	Number of vehicle scales is the same as the number of light trucks. No.= LTp
Personal safety equipments	Number of safety equipments is the same as the number of patrol policemen. No.= PP
Two-way radio (ICOM IC-F2721:25W)	Number of high power two-way radios is the same as the number of patrol cars. No.= PCp
Two-way radio (ICOM VX-571UCAT:25W)	Number of low power two-way radios is the same as the number of patrol motorcycles. No.= $PMBp$
Video recorder (Sony DSR-PD170P)	Number of video recorders is the same as the number of patrol cars. No.= PCp
Digital camera (Sony DSC-H1)	Number of digital cameras is the same as the number of patrol motorcycles. No.= $PMBp$
Warning light (Japan 780-5S0-16)	Number of warning lights is the same as the number of patrol policemen. No.= PP
computer (laptop)	Number of laptop computers is the same as the number of patrol cars No.= PCp
computer (desktop)	Number of desktop computers is three sets per one police station: for data input, analysis and database No.= PCp
computer (desktop)	for human resource development No.= 100
computer (server; including internet, traffic police headquarter)	for police activities data management No.= 5

Notes: 1) Number of patrol cars is about 25% of number of traffic patrol policemen.

2) Number of patrol motorcycles is about 50% of number of traffic patrol policemen. (in the case of Japan)

Source: JICA Study Team.

2) Procurement Plan

The equipment procurement plan was prepared based on the following assumptions:

Two-thirds of total required budget for procurement of equipment allocated for the action program period, from 2008 to 2012.

Therefore, one-third of total required budget for the procurement of equipment shall be allocated during the remaining master plan period, from 2013 to 2020.

Budget allocation rate from 2008 to 2012 is 26%, 23%, 20%, 17%, and 14%, from 2008 to 2012, respectively. This is based on the premise that the sooner equipments are procured, the better it is for implementation of traffic enforcement activities.

Table 5.9.3 Proposed Equipments for Procurement

Equipment	Total USD206.1 Mil.	
	Quantity	Estimated Cost (USD x 1,000)
patrol car	1,061	31,827.6
patrol motorcycle	2,122	14,852.9
light truck	1,061	37,132.2
vehicle fit-out	4,244	33,949.4
vehicle maintenance	4,244	1,273.1
vehicle running costs for patrol cars and light trucks	2,122	12,731.0
vehicle running costs for patrol motorcycles	2,122	3,394.9
speed gun (all day type with picture)	1,061	25,462.1
speed sensor (day time type)	2,122	9,548.3
alcohol sensor (evidence type)	530	5,569.8
alcohol sensor (screening type)	1,061	1,060.9
vehicle scale	1,061	11,670.1
personal safety equipments	5,305	1,326.2
two-way radio (ICOM IC-F2721:25W)	1,061	4,243.7
two-way radio (ICOM VX-571UCAT:25W)	2,122	1,464.1
video recorder (Sony DSR-PD170P)	1,061	2,652.3
digital camera (Sony DSC-H1)	2,122	1,060.9
warning light (780-5S0-16)	5,305	1,485.3
computer (laptop)	1,061	1,750.5
computer (desktop for database)	1,938	2,907.0
computer (desktop for human resource development)	67	100.0
computer (including intranet; traffic police headquarter)	3	666.7
TOTAL		206,129.0

Source: JICA Study Team

5.10 Capability Improvement for Transport Inspectors

1) Implementation Program

As proposed in the Master Plan, a capability improvement program to enhance technical capacities of Transport Inspectors is proposed as follows:

- (i) Institutional and Organizational Frameworks
 - Separation of transport-specialized inspectors and administrative inspectors should be considered.
 - Harmonization of institutional issues.

- Coordination and complementation of regulations
- (ii) Human Resource Development
- Setting up of force enhancement and supplementation
 - Training for all transport inspectors with target of 100% certified inspectors
- (iii) Working Conditions Improvement
- Equipments
 - Working spaces

The outline of the implementation program is summarized in Table 5.10.1.

Table 5.10.1 Outline of Implementation Program for Transport Inspectors

Program	Capability Improvement for Transport Inspectors				
Program No.	7	Core Agency	MOT	Joint Agency	VRA, PDOTs
Purpose	Develop working capacities of transport inspectors				
Target	100% of man force are certificated inspectors				
Starting Year	2008/2009				
Implementation Sub-program	(i) Institutional and Organizational Frameworks (ii) Human Resource Development (iii) Working Conditions Improvement				
Focus Points	(1) Separation of transport-specialized inspectors and administrative inspectors should be considered. - Harmonization of institutional issues. - Coordination and complementation of regulations (2) Man forces setup - Training all forces (3) Equipments - Working spaces				
Estimated Cost (Mil. USD)	16.074				

Source: JICA Study Team.

2) Implementation Plan and Estimated Cost

Table 5.10.2 shows the implementation plan and estimated cost of the program. Total estimated budget required for this program is about USD16.1 million, which has estimated total of USD2.845 million by 2009, USD5.19 million by 2010, USD4.705 million by 2011, and USD3.334 million by 2012.

Table 5.10.2 Implementation Plan and Estimated Cost for Transport Inspectors Program

PROGRAM CODE No./ IMPLEMENTATION PROGRAM		CONTENTS	COST ITEMS	2008	2009	2010	2011	2012
7	Capability Improvement for Transport Inspectors	Institutional and Organizational Frameworks	Separation of transport-specialized inspectors and administrative inspectors	-		25	252	102
			Harmonization of institutional issues	-	98	125	16	
			Coordination and complementation of regulations		57	97		
		Human resource	Supplementation of forces		225	225	225	225
			Training		465	750	750	500
	Working conditions	Equipment		998	1,467	1,467	998	
		Working space		1,002	2,501	1,995	1,509	
				2,845	5,190	4,705	3,334	
TOTAL		(in USD1,000)	16,074					

Source: JICA Study Team.

5.11 Implementation and Investment Plan

1) Implementation Strategies

As mentioned in the framework of the master plan, these action programs are formulated based on the basic strategies and the focus points of each issue area, in addition to the nature of traffic enforcement activities and their efficiency and effectiveness.

The implementation strategies corresponding to the basic strategy No.1, that is “measures”, are following:

- (i) Traffic guidance for leading inexperienced road users towards a safe traffic society.
- (ii) Strengthening and intensifying of traffic law enforcement to completely eradicate deliberate traffic violations.

Strategies corresponding to basic strategy No. 2 (traffic safety culture), No.3 (4Cs between stakeholders), No.4 (institutions and database), No.5 (human and financial development) and No.6 (equipments and new technology) are as follows:

- (i) Public relations on traffic safety guidance and enforcements
- (ii) Coordination with the concerned agencies of traffic safety countermeasures
- (iii) Recording and evaluation of traffic safety guidance and enforcement activities
- (iv) Human resource development on traffic safety guidance and enforcements
- (v) Preparation and development of equipments on traffic safety guidance and enforcements

The milestone is determined based on the levels of urgency of the program implementation as well as effectiveness of the program. In addition, the following shall also be taken into consideration:

- (i) Strict enforcement for deliberate traffic violators shall be prioritized during the first

stage of implementation.

- (ii) Guidance for inexperienced road users shall be on the second stage of implementation.
- (iii) Training for the beginner/novice and vulnerable road users shall be on the final stage of implementation.

2) Required Budget

The required budget for implementation of traffic control and enforcement development plan for the 5-year action program period is approximately USD327.7 million, as shown Table 5.11.1.

The budget is divided broadly into two categories, one is the budget for traffic enforcements activities themselves and the other is that for procurement of equipments.

The budget required for traffic enforcement activities consist of the followings:

- (i) Technical assistance (planning): Budget required during the planning process wherein specific enforcement activities will be developed to address the following issues: what types of violations or behaviors should be taken into account, where to focus, how/when to implement, etc. For these planning activities, technical assistance from experts in the field of traffic enforcement shall be vital and necessary.
- (ii) Technical assistance (structure): Budget required for implementing the activities. During organization or structure formation, issues that shall be addressed are as follows: how many policemen should be deployed, most effective way of spatially and timely deploying policemen, what shall be the task of each policeman, what equipment should be used, etc. During this organization formation, technical assistance from organizational experts shall be vital and necessary.
- (iii) Technical assistance (recording): Budget required for gathering and storing data for evaluation and review of activity plans. Issues that shall be addressed are as follows: what kind of data shall be recorded, in what data format shall it be recorded, what kind of system is required to record the data, etc. Technical assistance from database experts shall be vital and necessary.
- (iv) Technical assistance (evaluation): Budget required for evaluating traffic enforcement activities. Issues that shall be addressed are as follows: what kinds of data can be used for evaluation, what evaluation methods shall be used, how often evaluation will be conducted, etc. Technical assistance from evaluation experts shall be vital and necessary.
- (v) Technical assistance (review): Budget required for reviewing enforcement activities based on the results of implementation. The following shall be addressed: What program(s) was/were effective/not effective; what were the performance levels of each program taking into consideration the location, timing, method of traffic enforcement activity implementation, etc. Technical assistance from program review and evaluation experts shall be vital and necessary.

- (vi) Teaching (combined with training): Budget required for direct teaching activities towards the staff, in combination with one-on-one training. Technical assistance from experts in the field of traffic enforcement shall be vital and necessary.
- (vii) Training: Budget required for training the transfer of technical knowledge and skills in a group. There are two types of training: trainers' training and the echo training. This budget includes items for lecturers' fees, room rental fees, etc.
- (viii) Workshop: Budget required for organizing workshops on activity planning, structure/organization formation, implementation, and evaluation. This budget includes items for lecturers' fees, room rental fees, etc.

The budgets required for procurement of equipment consist of the following:

- (i) Vehicles required for the traffic police activities.
- (ii) Enforcement Equipment required for traffic enforcement activities.
- (iii) Management Equipment required for management of traffic enforcement activities which include equipment for database development.

Table 5.11.1 Overall Implementation and Investment Plan for Traffic Control and Enforcement Development Five-Year Action Program

Total: 327.7 Mil. USD

BASIC STRATEGY No.	STRATEGY	IMPLEMENTATION PROGRAM	PROGRAM CODE No.	MILESTONE		Core Agency	Joint Agencies	Budget (Mil USD) (MOPS)
				2008-2010	2011-2012			
1	Traffic safety guidance for inexperienced and less-skilled road users	On-street traffic safety guidance and warning to motorcycle riders (e.g. proper lane-changing, turning, use of winker, etc.) and pedestrians (e.g. use of pedestrian lanes and overpass, etc.)	1-2-1			MOPS	MOET MOT	10.6
		On-site traffic safety guidance and warning on how to drive at black-spots and black-sections	1-2-2			MOPS	MOET MOT	
		Traffic safety guidance and warning during rush hour	1-2-3			MOPS	MOET MOT	
		Intensified traffic safety guidance and warning for young and beginner drivers	1-2-4			MOPS	MOET MOT	
		Traffic safety guidance and warning on how to drive near trucks and buses (e.g. running parallel with, overtaking, etc.)	1-2-5			MOPS	MOET MOT	
	Strengthening and intensifying traffic law enforcement to completely eradicate traffic violators	Traffic violations such as over speeding, running on red light, etc.	1-3-1			MOPS	MOET MOT	15.6
		Traffic violators at black-spots and sections	1-3-2			MOPS	MOET MOT	
		Traffic violators on streets	1-3-3			MOPS	MOET MOT	
		Traffic violators among young drivers	1-3-4			MOPS	MOET MOT	
		Traffic violators among truck and bus drivers	1-3-5			MOPS	MOET MOT	
2	Public relations on traffic safety guidance and enforcements, including current situation of traffic violations, implementation plan and implementation results	Examination and design of public relations on traffic safety guidance and enforcements	2-1-1			MOPS	MOET MOT	12.2
		Current situation of traffic violations and implementation plan of traffic guidance/enforcements	2-1-2			MOPS	MOET MOT	
3	Coordination with related agencies on traffic safety countermeasures, exchange of views among all participants	Examination and design of public relations strategies on coordination mechanism with related agencies	3-1-1			MOPS	MOT MOET	13.2
		Presentation to, and exchange of views among the participants on the current situation of traffic safety guidance and enforcement activities	3-1-2			MOPS	MOT MOET	
		Presentation to, and exchange of views among the participants on the current issues on traffic facilities and traffic management related to traffic safety guidance and enforcement	3-1-3			MOPS	MOT MOET	
4	Recording and evaluation of traffic safety guidance and enforcement activities and activity planning based on the evaluation	Recording of traffic guidance and enforcement activities	4-1-1			MOPS	MOT	17.7
		Evaluation of the activities	4-1-2			MOPS	MOT	
		Activity planning based on the evaluation	4-1-3			MOPS	MOT	
5	Examination of human resource development policy on traffic safety guidance and enforcement and development of training system for sustainable human resource development	Examination of human resource development policy on traffic safety guidance and enforcement	5-1-1			MOPS	MOT MOET	13.5
		Beginners' training	5-1-2			MOPS	MOT MOET	
6	Preparation and development of equipment for traffic safety guidance and enforcement	Procurement planning for required equipment on traffic safety guidance and enforcement	6-1-1			MOPS	MOT	22.6
		Implementation of procurement plan	6-1-2			MOPS	MOT	
		Development of ITS camera system on several main NHs	6-1-4			MOPS	MOT	
7	Transport Inspectors Program	Capability improvement for transport inspectors	7			MOT	PDOT VRA	16.1
SUBTOTAL for PROGRAMS								121.5
PLUS: Equipment								206.1

Source: JICA Study Team.

6 TRAFFIC SAFETY EDUCATION IN SCHOOL AND TRAFFIC SAFETY CULTURE DEVELOPMENT IN COMMUNITY PLAN

6.1 Outline of Traffic Safety Education and Traffic Safety Culture Development

The action program for traffic safety education and traffic safety culture development is proposed for implementation in the following:

1) Traffic School Education in School

- (i) Curriculum development to supplement traffic safety education curriculum of DOET
- (ii) Launching of a campaign on “Traffic Safety Culture in School”
- (iii) Training and retraining programs for traffic safety education teachers in schools
- (iv) Development of management and evaluation guidelines of school traffic safety education
- (v) Institutionalization and development of necessary conditions to ensure sustainable traffic safety education in schools
- (vi) Launching of a nationwide media campaign on “Traffic safety for the young generation”
- (vii) Introduction and inclusion of traffic safety content in the ongoing activities of the mobile traffic safety education and practice team at the district levels.
- (viii) Raising Traffic Safety Education Program Effectiveness through the mass media at central and local levels
- (ix) Establishment of a network organization of traffic safety education professionals
- (x) Retraining officers of government, ministries, and concerned agencies on traffic safety education management and administration.

2) Traffic Safety Culture Development

This refers to the traffic safety education in the community which includes traffic safety campaign and propaganda.

- (i) Establishment of traffic safety foundation responsible for traffic safety culture activities.
- (ii) Enhancement of research and development on Vietnam’s culture of safety.
- (iii) Enhancement of peoples’ knowledge and consciousness/awareness on traffic safety.
- (iv) Human resource development through safety culture workshop activities.
- (v) Enhancement of community involvement/participation for network development.
- (vi) Consensus- and trust-building in community by prioritizing safe community and safe road use issues.

- (vii) Development/improvement of traffic safety standards through information dissemination and communication.
- (viii) Development and increase the level of collaboration and responsibility sharing for action among all stakeholders.
- (ix) Development of system for monitoring and reporting of progress of all planned actions and evaluation results (Key Performance Indicator vis-à-vis Key Success Indicator).

6.2 Traffic Safety Education in School Action Program

1) Curriculum Development to Supplement Traffic Safety Education Curriculum of DOET

(i) Background

Traffic safety education has been introduced into the school curriculum with some guiding documents for teachers and students in recent years. However, in the general education curriculum, traffic safety education activities are extra-curricular activities which are not yet fully developed and are still lacking guidelines on how to be integrated with other subjects. This also holds true in academic colleges where there is a lack of traffic safety education program component in any of the curricula available.

(1) Overall Goals

To develop and enrich traffic safety curriculum, teaching and learning materials which include number of hours required per year/semester to: (i) provide necessary knowledge on traffic safety; (ii) encourage learners to develop the proper attitude towards traffic safety issues, (iii) develop a culture of safety when participating in traffic, (iv) prepare and develop traffic safety advocates in their respective families and communities; and (v) introduce traffic safety education with periodic evaluation of its effectiveness.

(2) Specific Goals

To complete the traffic safety education curriculum and materials development in schools with curricular, integrated and extra-curricular periods; integration of traffic safety education into appropriate courses and development of study unit in the academe to study traffic safety education methodologies.

(ii) Implementation Strategy

For pre-school, primary, lower and upper secondary, increasing the time for extra-curricular activities and integrating traffic safety education into other subjects (geography, civics, Vietnamese language, etc.) will be the main focus of implementation. For training institutions (colleges, universities, vocational schools, etc.), focus will be on increasing traffic safety education content in the appropriate subjects and guiding the organizations' extra-curricular activities among the students. The academe will be encouraged to develop a study unit that will be responsible in formulating traffic safety education methodologies for all levels.

(iii) Program Components

- (1) Supplement the content of and complete the traffic safety education curriculum; guide in the implementation of traffic safety education by level:

Level	No. of curricular periods	No. of extra-curricular periods	Compiling integrated traffic safety knowledge materials into the following Subjects
Primary School	6	4	Vietnamese Language, Natural-Social Studies, Ethics
Lower Secondary	2	4	Geography, Civics, Literature
Upper Secondary	1	4	
University, College, Professional High School and Vocational School	1 session (4 periods, excluding extra-curricular periods)		Geography, Civics, Literature

Source: JICA Study Team.

- (2) Provide guidance in the integration of traffic safety education into the specialized subjects of professional training.
- (3) Develop a curriculum where traffic safety education contents are integrated into the core subjects in universities and colleges, vocational levels.
- (4) Compile teaching guides and develop a program for “Traffic safety education methodology” in academic institutions.

(iv) Implementation Plan

Table 6.2.1 shows the implementation plan.

Table 6.2.1 Implementation Plan and Schedule for Curriculum Development to Supplement Traffic Safety Education Curriculum of DOET

Program Components	2009	2010	2011	2012
(1) Supplement the content of and complete the curriculum to include (a) curricular periods; (b) integrated periods, and (c) activities outside schools.				
(2) Provide guidance in the integration of traffic safety education into 9 subjects (3 levels) and extra-curricular activities.				
(3) Develop a curriculum where traffic safety education contents are integrated into the core subjects in universities, colleges and vocational levels and other extra-curricular activities.				
(4) Compile teaching guides and develop a program for “traffic safety education methodology” in academic institutions.				

Source: JICA Study Team.

(v) Cost Estimation

The estimated cost for completing and supplementing the traffic safety education curriculum is approximately USD 0.027 million for the 5-year action program period as shown in Table 6.2.2.

Table 6.2.2 Cost Estimation for Curriculum Development to Supplement Traffic Safety Education Curriculum of DOET

(Unit: USD1,000)

No.	Program Component	Estimated Cost
1	Supplement the content of and complete the curriculum to include (a) curricular periods; (b) integrated periods, and (c) activities outside schools.	4
2	Provide guidance in the integration of traffic safety education into 9 subjects (3 levels) and extra-curricular activities.	6
3	Develop a curriculum where traffic safety education contents are integrated into the core subjects in universities, colleges and vocational levels and other extra-curricular activities.	5
4	Compile teaching guides and develop a program for "traffic safety education methodology" in academic institutions.	12
	Total	27

Source: JICA Study Team.

2) Launching of "Traffic Safety Culture in School"

(i) Background

This is the next step towards the campaign for preparing and developing the students to be traffic safety advocates in their respective families and communities as stipulated by MOET in its Directive 52/2007/CT-BGDDT dated 31 August 2007 (launched on 12 September 2007). The formulation of a "Traffic Safety Culture in School" is expected to help each educational institution to become an active nucleus in formulating traffic safety culture behaviors and solving public traffic safety problems.

(1) Overall Goals

To develop an active shift in the awareness, behavior and skills towards traffic participation and maintaining traffic safety and order in all stakeholders of the education sector. From the schools, it is anticipated that this positive shift in both awareness and behavior will further be extended into the other stakeholders of the general population.

(2) Specific Goals

To introduce traffic safety slogans and proper traffic behaviors into the school activities so that teachers, staffs and students will hopefully adopt these teachings and behaviors and internalize them accordingly.

(ii) Implementation Strategy

Together with the launching of the campaign for "Traffic Safety Culture in School", it is necessary to design and organize activities in accordance with target groups (i.e. students per age level, teachers, school staffs, etc.). There should also be a mechanism to evaluate effectiveness of implementation.

(iii) Program Components and Implementation Plan

Table 6.2.3 shows the program components and implementation plan.

Table 6.2.3 Implementation Plan and Schedule of Launching of Campaign on Traffic Safety Culture in Schools

Program Components	2009	2010	2011	2012
(1) Develop the contents and requirements for "Traffic safety culture in school".				
(2) Enjoin teachers, journalists and artists to use traffic safety culture concepts as content of their published materials for distribution in schools.				
(3) Educational institutions design and organize activities (e.g. forum, flag salutation activities, commitment signing, etc.) for traffic safety culture program.				
(4) Organize the launching ceremony for the movement of "Traffic safety culture in school" with nationwide coverage by various mass media.				

Source: JICA Study Team.

(iv) Cost Estimation

The estimated cost for launching of the campaign on traffic safety culture in schools is approximately USD 0.40 million for the 5-year action program period, as shown in Table 6.2.4.

Table 6.2.4 Cost Estimation for Launching of Campaign on Traffic Safety Culture in Schools

(Unit: USD1,000)

No	Program Component	Estimated Cost	Remarks
1	Develop the contents and requirements for "Traffic safety culture in school".	2	
2	Enjoin teachers, journalists and artists to use traffic safety culture concepts as content of their published materials for distribution in schools.	215	Conduct of program in 500 pilot schools
3	Educational institutions design and organize activities (e.g. forum, flag salutation activities, commitment signing, etc.) for traffic safety culture program.	150	Conduct of program in 500 pilot schools
4	Organize the launching ceremony for the movement of "Traffic safety culture in school" with nationwide coverage by various mass media.	28	Launching in 14 venues
		5	Nationwide coverage
	Total	400	

Source: JICA Study Team.

3) Training and Retraining Traffic Safety Education Teachers in Schools

(i) Background

Survey conducted on the training and retraining of traffic safety education showed that teachers who are in charge of traffic safety education did not originally receive appropriate training from their colleges, while the number of teachers who received

training is very few and the quality of training received was very limited. In addition, most teachers do not have full understanding and awareness of traffic laws and traffic safety in general.

(1) Overall Goal

To develop teachers who are qualified and capable of organizing traffic safety education activities at schools.

(2) Specific Goals

To provide an adequate understanding of general issues to all teachers responsible for traffic safety education on traffic safety and urgent matters relating to local traffic safety where the school is located. They must have the capability to guide students to participate and advocate for traffic safety in their communities.

(ii) Implementation Strategy

(1) Retraining for 3 target trainees:

- Key teachers to be lecturers,
- Teachers who directly teach traffic safety and
- All other teachers.

(2) Designing the study unit for “Traffic safety education methodology” in the teacher training curriculum.

(3) Developing the contents of “Traffic safety education methodology” at all academic training levels: intermediate, college and university to train pre-school teachers, primary school teachers, lower- and upper-secondary school teachers so that traffic safety education process is uniformly implemented.

(iii) Program Components and Implementation Plan

Table 6.2.5 shows the program components and implementation plan.

Table 6.2.5 Implementation Plan and Schedule of Training and Re-training of Teachers

Program Components	2009	2010	2011	2012
(1) Develop 9 programs of “Traffic safety education methodology” for 3 academic training levels.				
(2) Pilot teaching				
(3) Develop training program for teachers regarding traffic safety and traffic safety education.				
(4) Organize training courses for:				
- Key teacher course for pre-school and universal school level.				
- Key teacher course for vocational, college and university level.				
- Course for teachers who directly teach at localities				
- Course for the remaining teachers				
(5) Evaluation				

Source: JICA Study Team.

(iv) Cost Estimation

The estimated cost for training and re-training of teachers in charge of traffic safety education is approximately USD3.45 million for the 5-year action program period, as shown in Table 6.2.6.

Table 6.2.6 Cost Estimation for Training and Re-training of Teachers

(Unit: USD1,000D)

No.	Program Components	Estimated Cost	Remarks
1	Develop 9 programs of "Traffic safety education methodology"	20	3 academic training levels
2	Pilot teaching of the programs	30	15 programs
3	Compiling the retraining program for teachers regarding traffic safety and traffic safety education at all school levels	5	5 programs
4	Retraining courses for teachers		
4.1	Key teacher course for pre-school, universal	17	2-day course
4.2	Key teacher course for vocational, college, university	30	2-day course
4.3	Local courses:		
	- For direct-teaching teachers; pre-school, primary, secondary	2,950	2-day course
	- For the remaining teachers (in 2012)	4,000	1-day course
Total		3,452	

Source: JICA Study Team.

4) Development of Management and Evaluation Guidelines of Traffic Safety Education in Schools

(i) Background

At present, there is no set of criteria, guidelines or regulation for schools in Vietnam to follow in securing traffic safety and in assessing the impact of present system of traffic safety education based on students' behavior, attitude and skills. This is necessary for proper administration and control of education management.

(1) Overall Goals

To develop and set standards for evaluation and assessment of traffic safety education on different levels and scope and to make evaluation periodic; contributing in the raising of effectiveness of traffic safety education.

(2) Specific Goals

To propose criteria for schools to prevent traffic accidents (e.g. location of school, traffic arrangement for teachers, parents and students when going in and out of schools, etc.); proposing criteria for evaluating traffic safety education on the learners and the criteria for evaluating the traffic safety education results of an educational institution.

(ii) Implementation Strategy

The basic requirement is for schools to provide a safe traffic environment and meet

the minimum standards set by the MOET. Proposed criteria should be feasible based on local conditions.

(iii) Program Components and Implementation Plan

Table 6.2.7 shows the program components and implementation plan.

Table 6.2.7 Implementation Plan and Schedule of Development of Management and Evaluation Guidelines of Traffic Safety Education in Schools

Program Components	2009	2010	2011	2012
(1) Establish standards for schools on how to ensure traffic safety in the school premises.				
(2) Conduct of study on traffic safety education evaluation from other countries; develop methodology and mechanism of traffic safety education evaluation of learners.				
(3) Develop criteria for evaluating traffic safety education of educational institutions.				
(4) Pilot application of the developed criteria, methodology for evaluation, and organization of the evaluation process.				

Source: JICA Study Team.

(iv) Cost Estimation

The estimated cost for the development of management and evaluation guidelines of traffic safety education in schools is estimated at approximately USD 0.20 million for the 5-year action program period, as shown in Table 6.2.8.

Table 6.2.8 Cost Estimation for Development of Management and Evaluation Guidelines of Traffic Safety Education in Schools

(Unit: USD1,000)

No	Program Components	Estimated Cost
1	Establish standards for schools on how to ensure traffic safety in the school premises.	4
2	Conduct of study on traffic safety education evaluation from other countries; develop methodology and mechanism of traffic safety education evaluation of learners.	5
3	Develop criteria for evaluating traffic safety education of educational institutions.	5
4	Pilot application of the developed criteria, methodology for evaluation, and organization of the evaluation process.	10
	Total	24

Source: JICA Study Team.

5) Institutionalization and Development of Necessary Conditions to Ensure Sustainable Traffic Safety Education in Schools

(i) Background

Traffic safety education activities in schools have not been institutionalized and have not developed necessary facility and material prerequisites (academic environment, facilities, books, posters, etc.). Therefore, implementation of traffic safety education is not standardized and systematic and does not encourage full

participation of other sectors outside the education system.

(1) Overall Goals

To institutionalize traffic safety education as an educational activity (and not just as a school organization); defining the necessary and complete conditions to implement traffic safety education in schools.

(2) Specific Goals

To issue necessary documents regulating the requirements, contents, methodology, time, responsible persons to implement traffic safety education in schools, etc.; regulating the requirements for educational environment, list of materials, facilities, etc. for traffic safety education; formulating plans to support necessary facility and material development in educational institutions.

(ii) Implementation Strategy

Documents regulating the contents, methodology to organize traffic safety education in schools; environment standards, list of materials and facilities for traffic safety education so that it can match required national standards, with advanced and feasible perspective of educational methodology.

(iii) Program Components and Implementation Plan

Table 6.2.9 shows the program components and implementation plan.

Table 6.2.9 Implementation Plan and Schedule of Institutionalization and Development of Necessary Conditions for Securing Traffic Safety in Schools

Program Components	2009	2010	2011	2012
(1) Formulate documents necessary to institutionalize school traffic safety education				
(2) Develop the complete list and minimum list of materials and facilities required in the implementation of traffic safety education in schools.				
(3) Supervise the development of traffic safety education infrastructure model (construction of facilities to provide safe environment in schools, development of education materials, pilot use of materials, evaluation of the model)				
(4) Develop, support and implement the plan of providing traffic safety education materials for all school levels (minimum)				

Source: JICA Study Team.

(iv) Cost Estimation

The estimated cost for the institutionalization and development of necessary conditions for traffic safety in schools is estimated at approximately USD2.20 million for the 5-year action program period, as shown in Table 6.2.10.

Table 6.2.10 Cost Estimation for Institutionalization and Development of Necessary Conditions for Securing Traffic Safety in Schools

(Unit: USD1,000)

No	Cost Items	Estimated Cost	Remarks
1	Draft documents, workshops, issuing the documents regarding school traffic safety education	30	
2	Developing the list of full and minimum list of traffic safety education facilities	30	
3	Developing the model of standard materials and facilities at all school levels	40	Pilot application in 4 school levels and 4 models of materials and facilities
4	Supporting and providing traffic safety education materials for all school levels (2012 = 1/5)	2,100	Target completion of 20% by 2012
	Total	2,200	

Source: JICA Study Team.

6) Launching of a Nationwide Media Campaign on “Traffic Safety for the Young Generation”

(i) Background

Recently, the traffic safety programs of Vietnam Television and Voice of Vietnam have largely contributed in increasing the level of awareness and improving the attitude of the people towards traffic safety. However, to significantly create a strong impact in the consciousness of the younger population, particularly that of the road users, it is necessary to launch a nationwide media campaign on traffic safety.

(1) Overall Goal

To create a significant and positive shift in the awareness, attitude and behavior of the people when participating in traffic and handling traffic problems through a massive nationwide media campaign.

(2) Specific Goals

To formulate, consolidate, and deliver concise, effective, and useful traffic safety messages which will hopefully be internalized by the people and guide them towards safe traffic participation.

(ii) Implementation Strategy

Development of audio visual productions of traffic situations with relevant traffic safety messages that can positively influence young peoples' attitude and behavior. These may be further replicated in print and radio and disseminated during peak viewership/listenership/readership periods. It will also be necessary to engage support of famous personalities/celebrities to draw more attention on the campaign.

(iii) Program Components and Implementation Plan

Table 6.2.11 shows the program components and implementation plan.

Table 6.2.11 Implementation Plan and Schedule of Launching the National Media Campaign

Program Components	2009	2010	2011	2012
(1) Develop contents and requirements for the national media campaign.				
(2) Identify and enjoin participation of artists in developing messages for dissemination in various media in support of the theme "Traffic safety for young generations".				
(3) Launch of the campaign in 5 provinces and cities and a full coverage broadcasted nationwide.				
(4) Training after launch of the campaign.				

Source: JICA Study Team.

(iv) Cost Estimation

The estimated cost for launching the national media campaign is approximately USD 0.240 million for the 5-year action program period, as shown in Table 6.2.12.

Table 6.2.12 Cost Estimation for Launching the National Media Campaign

(Unit: USD1,000)

No.	Program Components	Estimated Cost	Remarks
1	Develop contents and requirements for the national media campaign.	3	
2	Identify and enjoin participation of artists in developing messages for dissemination in various media in support of the theme "Traffic safety for young generations".	215	For distribution in 400 communes/ wards from the 5 pilot provinces and cities
3	Launch of the campaign in 5 provinces and cities and a full coverage broadcasted nationwide.	15	
4	Training after launch of the campaign.	7	(400 communes, 2 people/commune, 50 people/course, 16 courses)
	Total	240	

Source: JICA Study Team

7) Introduction and Inclusion of Traffic Safety Content in the Ongoing Activities of the Mobile Traffic Safety Education and Practice Teams at the District Levels

(i) Background

Resolution 32/2007/NQ-CP dated 29 June 2007 considers traffic safety propaganda and dissemination as the most important measure during this period. Directive 07/2008/CT-BGTVT dated 30 May 2008 regarding the dissemination of traffic and transport law in the period of 2008-2012 also defines transport law dissemination as a measure of both short-term and long-term characteristics to build traffic safety education as a safety culture. However, information on traffic safety has not been fully accessible to the people, especially those in the remote areas. Meanwhile, the mobile traffic safety education and practice team can be utilized for this task.

(1) Overall Goal

To consolidate, intensify the capacity of the mobile traffic safety education and practice teams under district-level cultural centers.

(2) Specific goal

To have the mobile traffic safety education and practice teams directly provide the people with basic information regarding traffic safety in understandable methods and forms and those which are also appropriate in their specific conditions and circumstance. For remote areas, mobile traffic safety education learning centers should be used.

(ii) Implementation Strategy

Development of special subjects on traffic safety for integration into the content of mobile traffic safety education and practice teams' activities. The practitioners/campaigners will be trained to apply interactive methodologies to encourage and increase participation of the people (through Q&A / forum, contests, etc.).

(iii) Program Components and Implementation Plan

Table 6.2.13 shows the program components and implementation plan.

Table 6.2.13 Implementation Plan and Schedule of Introduction and Inclusion of Traffic Safety Contents in the Mobile Traffic Safety Education and Practice Teams at District Levels

Program Components	2009	2010	2011	2012
(1) Develop traffic safety contents for the mobile traffic safety education and practice team.				
(2) Provide materials and facilities for the mobile traffic safety education and practice teams covering 500 districts (including visiting cars for remote and mountainous areas).				
(3) Training mobile traffic safety education practitioners.				

Source: JICA Study Team.

(iv) Cost Estimation

The estimated cost for introduction of traffic safety education contents into the activities of the mobile traffic safety education and practice is approximately USD2.6 million for the 5-year action program period, as shown in Table 6.2.14.

Table 6.2.14 Cost Estimation for Introduction and Inclusion of Traffic Safety Contents in the Mobile Traffic Safety Education and Practice Teams at District Levels

(Unit: USD1,000)

No	Program Components	Estimated Cost	Remarks
1	Develop traffic safety contents for the mobile traffic safety education and practice team.	30	
2	Provide materials and facilities for the mobile traffic safety education and practice teams covering 500 districts (including visiting cars for remote and mountainous areas).	2,500	(USD50 worth of materials and facilities for each district; plus visiting cars for remote and mountainous areas, 500 districts).
3	Training mobile traffic safety education practitioners.	70	(2 people/district; 17 courses)
	Total	2,600	

Source: JICA Study Team

8) Raising Traffic Safety Education Program Effectiveness through the Mass Media at Central and Local Levels

(i) Background

Radio and television broadcasts have proven to be the most effective tool of communication that have significant effects on a wide range of audience in terms of its spatial coverage timeliness and effectiveness. However, at present, there is still a lack of regular and quality programs in both mediums in terms of content and appeal to the public, thus there is the need to improve quality of programs.

(1) Overall Goals

To develop an information channel which is updated on a daily basis to provide information on traffic safety programs as well as traffic situation throughout the country. Aside from television broadcast, this channel will also be broadcasted on the central radio and fed to local stations. Amount of time dedicated to traffic safety programs on radio will increase with the addition of new content from existing traffic safety programs.

(2) Specific Goals

To develop the interactive household, school-based and community-based programs on TV with the participation of traffic authorities/representatives, management agencies, and experts and design programs with scientific and educational contents which will be effective in promoting and disseminating traffic laws through television and radio programs.

(ii) Implementation Strategy

In order to realize the above specific goals, traffic safety program content developers must be experts from the various sectors of Traffic Police, Culture, Radio, Television, representatives of general population who have capability to to develop programs which will be interesting, popular and appealing to the general public. A specific broadcasting schedule for these programs must be set, with periodic replays of broadcast especially during prime time slots when viewership/listenership is at its peak.

(iii) Program Components and Implementation Plan

Table 6.2.15 shows the program components and implementation plan.

(iv) Cost Estimation

The estimated cost for use of mass media to raise traffic safety education program effectiveness is approximately USD 0.29 million for the 5-year action program period, as shown in Table 6.2.16.

Table 6.2.15 Implementation Plan and Schedule of Raising Traffic Safety Education Program Effectiveness through the Mass Media

Program Components	2009	2010	2011	2012
(1) Develop a system wherein different sectors will jointly work together in developing the content of traffic safety education programs.				
(2) Human resource development for editors and/or correspondents involved in the development of traffic safety education programs by providing training on interactive communication				
(3) Pilot-broadcast of new traffic safety education program developed under the new system with the use of new media (including radio and television stations).				

Source: JICA Study Team.

Table 6.2.16 Cost Estimation for Raising Traffic Safety Education Program Effectiveness through the Mass Media

(Unit: USD1,000)

No	Program Components	Estimated Cost	Remarks
1	Develop a system wherein different sectors will jointly work together in developing the content of traffic safety education programs.	5	Workshop, Consensus building on new system, etc.
2	Human resource development for editors and/or correspondents involved in the development of traffic safety education programs by providing training on interactive communication	5	Total of 264 trainees, 8 classes.
3	Pilot-broadcast of new traffic safety program developed under the new system with the use of new media (including radio and television stations)	19	
	Total	29	

Source: JICA Study Team

9) Establishment of a Network of Traffic Safety Education Professionals

(i) Background

Since its inception, traffic safety campaign and propaganda is annually being organized in September, which is the national traffic safety month. However, the scale, content and form of this activity remain very much dependent on the functions, operation of specific organizations, departments, ministries, etc. without appropriate and consistent planning. Though communes and wards have been assigned to disseminate information about traffic safety, still, there have been no dedicated personnel responsible for the annual planning and implementation of the propaganda plan. This therefore requires the establishment of a community traffic safety education system.

(1) Overall Goal

To develop the regulation framework necessary for the establishment of responsible organization to implement school-and-community-based traffic safety activities in order to establish a traffic safety education professional network at school and community levels; develop a pool of dedicated media professionals and practitioners in order to make school-and-community-based

traffic safety programs effective.

(2) Specific Goals

To propose the establishment of a network of traffic safety education professionals in the school and community which will have specific functions, duties and assigned tasks; conduct of pilot implementation as a step towards expanding the activities of these professionals.

(ii) Implementation Strategy

Establishment of professional network of traffic safety education practitioners in the schools and communities from existing human resources. The MOPS can be a good source of candidates for this task as members of traffic police force have professional knowledge about traffic laws and traffic safety. They should be provided with more specific functions, duties and assigned tasks to successfully realize the common goals. On the other hand, there should also be a network of concurrent staffs that will be in charge of this task.

(iii) Program Components and Implementation Plan

Table 6.2.17 shows the program components and implementation plan.

Table 6.2.17 Implementation Plan and Schedule of the Establishment of a Network of Traffic Safety Education Professionals

Program Components	2009	2010	2011	2012
(1) Draft and promulgate the regulations on the activities of professional practitioners in school & community; content development for the program, community traffic safety education methodology				
(2) Organize pilot implementation of the activities of professional traffic safety education practitioners in community.				
(3) Expand the community traffic safety education				

Source: JICA Study Team.

(iv) Cost Estimation

The estimated cost for establishment of a professional traffic safety education network is approximately USD2.13 million for the 5-year action program period, as shown in Table 6.2.18.

Table 6.2.18 Cost Estimation for the Establishment of a Network of Traffic Safety Education Professionals

(Unit: USD1,000)

No	Program Components	Estimated Cost	Remarks
1	Draft and promulgate the regulations on the activities of professional practitioners in school & community; content development for the program, community traffic safety education methodology	10	
2	Organize pilot implementation of the activities of professional traffic safety education practitioners in community.	20	6 communes
3	Expand the community traffic safety education	2,100	
	Total	2,130	

Source: JICA Study Team

10) Retraining Officers of Government, Ministries, and Concerned Agencies on Traffic Safety Education Management and Administration

(i) Background

Since there is no community traffic safety education and practical system in Vietnam, there are no dedicated staffs who are appropriately trained and retrained in this field. Thus, leaders of concerned agencies and sectors have no common understanding and practical background to direct community traffic safety education. This requires the organization of retraining courses.

(1) Overall Goal

To intensify the awareness regarding importance and urgency of traffic safety education for leaders of concerned agencies and organizations; enhancing the cooperation and capacity among related agencies to direct and manage community traffic safety education.

(2) Specific Goal

To provide the leaders of concerned agencies, organizations, some ministries, and sectors from central to local levels with basic information on traffic safety and the contents and methods to guide community traffic safety education.

(ii) Implementation Strategy

Training contents for leaders of concerned organizations should be developed based on valuable materials from both domestic and foreign sources. In terms of developing professional skills in directing and managing community traffic safety education, exercises including cooperation among related agencies should be designed to direct this task.

(iii) Program Components and Implementation Plan

Table 6.2.19 shows the program components and implementation plan.

Table 6.2.19 Implementation Plan and Schedule of the Establishment of Retraining Officers on Traffic Safety Educational Management and Administration

Program Components	2009	2010	2011	2012
(1) Content compilation and development on how to manage community traffic safety education				
(2) Organizing training courses:				
- Courses for central-level officers (2 sessions).				
- Courses for provincial officers (2 sessions, 14 participants/province).				
- Courses for district officers (2 sessions, 13 participants/district).				
- Courses for commune officers (2 sessions, 6 participants/commune).				

Source: JICA Study Team.

(iv) Cost Estimation

The estimated cost for retraining the leaders of concerned organizations is

approximately USD1.048 million for the 5-year action program period (Table 6.2.20).

Table 6.2.20 Cost Estimation for the Establishment of Retraining Officers on Traffic Safety Educational Management and Administration

(Unit: USD1,000)

No.	Program Components	Estimated Cost	Remarks
1	Content compilation and development on how to manage community traffic safety education	8	
2	Organizing training courses		
	Courses for central-level officers	1	2 sessions, 30 participants/course
	Courses for provincial officers	15	2 sessions, 14 participants/province
	Courses for district officers	124	2 sessions, 13 participants/district
	Courses for commune officers	900	2 sessions, 6 participants/commune
	Total	1,048	

Source: JICA Study Team

6.3 Traffic Safety Culture Development in Community Plan

As stated in the Master Plan, the overall vision is to achieve “A Kindhearted Traffic Accident-Free Society.” Since major cause of accident is human error, changing road user behavior should urgently be prioritized to make road traffic safety normative. This means a reordered set of culture through values, beliefs, attitudes, and perceptions and altered norms need to be reformed for appropriate behavior when participating in road traffic. Thus, the basic strategy is the introduction of the traffic safety culture through educational campaign and propaganda activities.

The following are the action programs for implementation in the next 5 years:

- (i) Establishment of a foundation responsible for traffic safety culture development.
- (ii) Enhancement of research and development on Vietnam’s culture of safety.
- (iii) Enhancement of peoples’ knowledge and consciousness on traffic safety.
- (iv) Human resource development through safety culture workshop activities.
- (v) Enhancement of community involvement/participation for network development.
- (vi) Consensus- and trust-building in community by prioritizing safe community and safer road use issues.
- (vii) Development/improvement of traffic safety standards through information dissemination and communication.
- (viii) Development and increase in the level of collaboration and responsibility for action among all stakeholders.
- (ix) Development of system for monitoring and reporting of progress of all planned actions and evaluation results (Key Performance Indicator vis-à-vis Key Success Indicator).

The total estimated cost for implementation of the 5-year action program is approximately USD36.85 million. The succeeding subsections demonstrate each proposed action program with estimated cost and implementation plan.

1) Establishment of a Foundation Responsible for Traffic Safety Culture Development

(i) Introduction

(1) Background

Traffic safety culture is a new area and new paradigm for road traffic safety master plan in Vietnam. This requires a comprehensive understanding of its nature, fundamental element of traffic system, traffic safety and its components.

Introduction of traffic safety culture to the Vietnamese society requires a fundamental set of an independent credible institution to act as a focal point foundation responsible for improving road traffic accident situation and changing road user behavior for better quality of life of Vietnamese citizens in a sustainable manner.

(2) Objective

This program is aimed at introducing new policies and practices on safety culture to Vietnamese communities.

(3) Target

The proposed establishment of a traffic safety culture institution or foundation requires cooperation, coordination and communication from not only one single agency but all agencies concerned to work together for development of new policies into practice for safer road use and better quality of life and social welfare. Thus, the concerned agencies should be the NTSC/MOT, MOET, MOPS, in cooperation and coordination with the Central Ideology and Culture Department, MOPH, VN Fatherland Front organization and its union members, universities, private sector such as automobile companies, insurance companies and other safety advocates with fundamental support from the community and general public.

(ii) Implementation Strategies

The implementation strategies and activities are as follows:

- (1) Set up meetings to establish roles and framework of an institution or foundation responsible for research and development (R&D) on safety issues and educational efforts and publicity.
- (2) Collaborate and coordinate with all agencies concerned for information gathering and brainstorming.
- (3) Develop connection with stakeholders for financial sources on information provision & information exchange activities.
- (4) Set up a unit for providing an open access to road traffic accident information like a traffic information center.

(iii) Program Components

The following are the program components:

- (1) Conduct of meetings and preparation of other necessary materials for pre and post-foundation which can entail a development of institutional capabilities and human resources in traffic safety culture coordinating unit through brainstorming meetings/sessions, traffic safety education and training and publicity programs.
- (2) Development of reading materials such as minutes and conclusive summary for each brainstorming session/meeting in order to provide a consecutive plan on road traffic safety education using proactive communication and publicity campaign activities.
- (3) Development of collaboration and coordination mechanism among concerned agencies/stakeholders within central, regional, and local government, communities, nongovernmental organizations, and the private sector (through information gathering and dissemination).
- (4) Encouragement of community participation to work on traffic safety information dissemination that is critical to achieving positive and sustainable outcomes.
- (5) Development of key performance indicator (KPI) of the activity results via presentation, periodical printed materials such as reports, newsletter, bulletin, brochure or e-information on a dedicated website.

(iv) Implementation Plan

Table 6.3.1 shows the implementation plan and timeline.

Table 6.3.1 Implementation Plan and Schedule for the Establishment of a Traffic Safety Culture Foundation or Institution

Program	Objective	Implementation Strategies	Program Component	2008	2009	2010	2011	2012	
Establishment of a foundation or an institution responsible for traffic safety culture	To introduce new policies and practices on safety culture	Set up meetings to establish roles and framework of a foundation responsible for R&D.	Preparation of meetings and other necessitate materials for pre-foundation and etc.	█	█	█	█	➔	
		Collaborate and coordinate with all agencies concerned for information sharing.	Development of reading materials such as minutes and conclusive summary for each brainstorm meeting.	█	█	█	█	➔	
		Develop connection with stakeholders for financial sources on information provision & information exchange activities.	Development of collaboration and coordination as well as the supportive agencies / stakeholders.	█					
		Set up unit for providing an open access on road traffic accident information like traffic information center.	Encouragement of community participation works on traffic safety information dissemination in the traffic information center.	█					
		Development of key performance indicator (KPI) of the activity results		█	█	█	█	➔	

Source: JICA Study Team.

(v) Cost Estimation

The cost for establishing a foundation or an institution responsible for traffic safety culture is estimated at approximately USD3.7 million for the 5-year action program period, as shown in Table 6.3.2.

Table 6.3.2 Cost Estimation for Establishment of a Traffic Safety Culture Foundation or Institution

Unit: (Million USD)

Program	Program Component	Cost Items	2008	2009	2010	2011	2012	Total	Remarks
Establishment of a foundation or an institution responsible for traffic safety culture	Preparation of meetings and other necessitate materials for pre-and-post foundation	Venue Allowance Materials Other	0	0.2	0.2	0.2	0.2	0.8	
	Development of reading materials such as minutes and conclusive summary.	Printed materials & distributions	0	0.2	0.2	0.2	0.2	0.8	Materials used for the meetings
	Development of collaboration and coordination as well as the supportive agencies / stakeholders.	Printed materials Information distribution	0	0.2	0.2	0.2	0.2	0.8	
	Encouragement of community participations for traffic safety information diffusion.	Printed materials Training Information distribution	0	0.2	0.2	0.2	0.2	0.8	Technical assistance may be required for training program
	Development of key performance indicator (KPI) of the activity results	Printed materials Information distribution	0	0.1275	0.1275	0.1275	0.1275	0.5	
Total			0	0.9275	0.9275	0.9275	0.9275	3.7	

Source: JICA Study Team.

2) Enhancement of Research and Development on Vietnam's Culture of Safety

(i) Introduction

(1) Background

Data collection and conduct of research and development on road traffic safety is a key significant element to derive the specific information and factual evidences that occurred in urban and rural communities in Vietnam.

It is extremely important to use results of the research study for development of effective road traffic accident countermeasures to encourage the people to become more concerned about road safety both as a citizen and as a driver.

While majority of the people know that road traffic accidents are now considered a big social problem, not many would own it as his/her personal responsibility. How to change this attitudinal behavior to become a personal responsibility in sustainable way requires an elaborate integration of systematic approach with focus on changing high risk behavior so that this can generate a culture of safety in the Vietnamese community.

Enhancement of research and development will enlighten the determination of policy making for better and safer road usage.

(2) Objective

To identify level of knowledge & understanding on high accident-risk situation;

at which situation they consider risky; opinion, perception and attitude on risk-taking behavior; and opinion on safety culture.

(3) Target group

High risk groups: youths and adults, and other drivers: public transport drivers including bus, taxi, truck and government officials.

(ii) Implementation Strategies

The implementation strategies are as follows:

- (1) Conduct of a “road user high risk behavior study” at local levels.
- (2) Conduct of a study on level of awareness and understanding on traffic safety at organizational level.
- (3) Conduct of a national study on road traffic accident situation problems and finding countermeasures.

(iii) Program Components

The following are the program components:

- (1) Preparation of meetings with agencies concerned to discuss a possibility for conducting research studies on traffic safety at local, regional and national levels.
- (2) Preparation of necessary materials for surveys.
- (3) Development of questionnaire and reading materials for surveys.
- (4) Development of collaboration and coordination within central, regional, and local government, communities, nongovernmental organizations for questionnaire surveys.
- (5) Site survey and analysis of the questionnaire and distribute the results to agencies concerned for further discussions and meetings.
- (6) Development of key performance indicator (KPI) of the activity results via presentation, periodical printed materials such as reports, newsletter, bulletin, brochure or e-information on the website.

(iv) Implementation Plan

Table 6.3.3 shows the implementation plan and timeline.

(v) Cost Estimation

The cost for conducting research and development on traffic safety culture is roughly estimated at approximately USD4.55 million for the 5-year action program period, as shown in Table 6.3.4.

Table 6.3.3 Implementation Plan and Schedule of Research and Development on Traffic Safety Culture

Program	Objective	Implementation Strategies	Program Component	2008	2009	2010	2011	2012	
Enhancement of research and development on Vietnam's culture of safety	To identify level of knowledge & understanding on Hazard situation at which situation they consider risky and asking opinion, perception, attitude on risk taking behavior and opinion on safety culture.	Conduct a "road user high risk behavior study" at local levels.	Preparation of meetings with agencies concerned to discuss a possibility for conducting research studies						
		Conduct a study on level of awareness and understanding on traffic safety at organizational level.	Preparation of necessitate materials for surveys.						
		Conduct a national study on road traffic accident situation problems and finding countermeasure	Development of questionnaire and reading materials for surveys						
			Development of collaboration and coordination within central, regional, and local government, and communities, for questionnaire surveys.						
			Site survey and analysis of the questionnaire						
		Development of key performance indicator (KPI) of the activity results							

Source: JICA Study Team.

Table 6.3.4 Cost Estimation for Research and Development on Traffic Safety Culture

Unit: (Million USD)

Program	Program Component	Cost Items	2008	2009	2010	2011	2012	Total	Remarks	
Enhancement of research and development on Vietnam's culture of safety	Preparation of meetings with agencies concerned to discuss a possibility for conducting research studies	Venue							Materials use for meetings	
		Materials Other	0	0.2025	0.2025	0.2025	0.2025	0.81		
	Preparation of necessitate materials for surveys.	Printed materials & Stationary Distributions		0	0.2025	0.2025	0.2025	0.2025	0.81	Materials use for surveys
				0	0.2025	0.2025	0.2025	0.2025	0.81	
	Development of questionnaire and reading materials for surveys	Printed materials Information distribution		0	0.2025	0.2025	0.2025	0.2025	0.81	Materials use for surveys
				0	0.2025	0.2025	0.2025	0.2025	0.81	
	Development of collaboration and coordination within central, regional, and local government, and communities, for questionnaire surveys.	Printed materials Meeting Information distribution & Communication		0	0.2025	0.2025	0.2025	0.2025	0.81	
			0	0.27	0.27	0.27	0	0.81	Operating cost for survey and analysis	
Development of key performance indicator (KPI) of the activity results	Printed materials Information distribution		0	0.125	0.125	0.125	0.125	0.5		
Total			0	1.205	1.205	1.205	0.935	4.55		

Source: JICA Study Team.

3) Enhancement of Peoples' Knowledge and Consciousness on Traffic Safety

(i) Introduction

(1) Background

It is apparent that the level of traffic safety education among all Vietnamese is varied dependent upon geographic factor (urban or rural area) and level of income. Those who live in rural areas or on mountainous areas may have low literacy level and have less access to education and training program on traffic safety. The attitudinal belief and behavioral belief of indigenous communities can be an obstacle to make them understand the rules of the road and obey the traffic laws.

Hence, a provision of education and training program on traffic safety is very important in generating a community understanding and acceptance toward road traffic accidents, risk-taking behavior, safety driving and safe road usage.

(2) Objective

To heighten community awareness and consciousness on road traffic safety.

To create community understanding on traffic accidents, risk-taking behavior and traffic rules and regulations.

(3) Target group

Local community and university students, high risk groups: youths and adults, and other drivers: public transport drivers including bus, taxi, truck and government officials.

(ii) Implementation Strategies

The implementation strategies are as follows:

(1) Enhancement of "smart learning society" at each local Community Learning Center and Cultural House which can lead to developing a culture of safe society.

(2) Encouragement of "public participatory activity" at grass-root level to raise traffic safety awareness and other safety issues among residents living in the communities.

(3) Create community understanding and acceptance on safety issues.

(iii) Program Components

The following are the program components:

(1) Development of traffic safety education pocket book (for both verbal and non-verbal communications so as to reach Vietnamese people at grass-root level) which focuses on need-to-know the rules of road basis.

(2) Organizing of workshops and seminars nationwide for better understanding of traffic safety emphasizing on black spots and risk-taking behaviors and how to

use road safely to avoid potential accidents with basic traffic rules and regulations.

- (3) Provision of effective information and materials on rules of road and safe driving manner through manuals, posters, leaflets, brochure and video-clip to be distributed nationwide.
- (4) Development of key performance indicator (KPI) of the activity results via presentation, periodical printed materials such as reports, newsletter, bulletin, brochure or e-information on the website.

(iv) Implementation Plan

Table 6.3.5 shows the implementation plan and timeline.

Table 6.3.5 Implementation Plan and Schedule of the Enhancement of Peoples' Knowledge and Consciousness on Traffic Safety Culture

Program	Objective	Implementation Strategies	Program Component	2008	2009	2010	2011	2012
Enhancement of peoples' knowledge and consciousness on traffic safety	To heighten community awareness and consciousness on road traffic safety.	Enhancement of "smart learning society" at each local Community Learning Center and Cultural House	Development of traffic safety education pocket book		→			
	To create community understanding on traffic accidents, risk-taking behavior and traffic rules and regulations	Encouragement of "public participatory activity" at grass-root level to raise traffic safety awareness and other safety issues among residents living in the communities.	Organizing workshops and seminars nationwide for better understanding of traffic safety		→			
		Create community understanding and acceptance on safety issues.	Provision of effective information & materials on rules of road & safe driving manner		→			
		Development of key performance indicator (KPI) of the activity results			→			

Source: JICA Study Team.

(v) Cost Estimation

The cost for preparation and implementation to enhance peoples' knowledge and consciousness on traffic safety culture is estimated at approximately USD8 million for the 5-year action program period, as shown in Table 6.3.6.

Table 6.3.6 Cost Estimation for Enhancement of Peoples' Knowledge and Consciousness on Traffic Safety Culture

Unit: (Million USD)

Program	Program Component	Cost Items	2008	2009	2010	2011	2012	Total	Remarks
Enhancement of peoples' knowledge and consciousness on traffic safety	Development of traffic safety education pocket books	Preparation of Pocket books Others	0	0.85	0.85	0	0	1.7	Materials to be used for the program/ activity
	Organizing workshop and seminar nationwide for better understanding of traffic safety	Workshop Training Technical assistance Printed materials & Stationary	0	0.875	0.875	0.875	0.875	3.5	Materials to be used for workshop and training
	Provision of effective information & materials on rules of road & safe driving manner	Media, Manuals, posters, leaflets, brochure and video-clip	0	0.575	0.575	0.575	0.575	2.3	Materials disseminated nationwide
	Development of key performance indicator (KPI) of the activity results	Printed materials Information distribution	0	0.125	0.125	0.125	0.125	0.5	Operating cost for survey and analysis
	Total		0	2.425	2.425	1.575	1.575	8.0	

Source: JICA Study Team.

4) Human Resource Development through Safety Culture Workshop Activities

(i) Introduction

(1) Background

Human error is a major contributing factor to road traffic accidents. Thus, building capacity of human resources would bring about the potential for sustainable development.

In connection with safety education, development of a learning society through need-to-know on road traffic safety basis and driving skill training program and building the model of community learning center is direct to the development of community learning center network nationwide. Those who live in not only urban area but also rural areas or in mountainous areas can benefit in this development and hence generating an access to education and training program on traffic safety which can help reduce traffic accidents, injuries and fatalities.

(2) Objective

To generate capacity building for human resource development and to improve driving skills & quality of life and social welfare.

(3) Target group

Local community and university students, high risk groups: youths and adults, and other drivers: public transport drivers including bus, taxi, truck and government officials.

(ii) Implementation Strategies

The implementation strategies are as follows:

- (1) Organize practical training workshops from local to national level to generate capacity building for human resource development to improve learning and driving skills and quality of life.
- (2) Organize meeting, seminar and workshop at policy making level, management level and practitioner level.
- (3) Provision of technical transferability on traffic safety related issues by inviting local experts and foreign experts to train people from CEOs to grass-root levels.

(iii) Program Components

The following are the program components:

- (1) Development of traffic safety education manual and pocket book (for both verbal and non-verbal communications so as to reach Vietnamese people at grass-root level) focuses on need-to-know the rules of road basis in cooperation with Police agency.
- (2) Organizing of seminar and workshop with training program for CEOs to grass-root levels nationwide for better understanding of traffic safety emphasizing on black spots and risk-taking behaviors and how to use road safely to avoid potential accidents with basic traffic rules and regulations and interaction with unexpected risk via a training program on riding simulator.
- (3) Provision of experts and instructors during the events.
- (4) Provision of effective information materials on traffic rules on the road and safe driving manner through manuals, posters, leaflets, brochure and video-clip to be distributed nationwide.
- (5) Development of key performance indicator (KPI) of the activity results via presentation, periodical printed materials such as reports, newsletter, bulletin, brochure or e-information on the website.

(iv) Implementation Plan

Table 6.3.7 shows the implementation plan and timeline.

Table 6.3.7 Implementation Plan and Schedule of Human Resource Development Activities

Program	Objective	Implementation Strategies	Program Component	2008	2009	2010	2011	2012
Human resource development through safety culture workshop activities	To generate capacity building for human resource development and to improve driving skills & quality of life	Organize practical training workshops from local to national level to generate capacity building for human resource development to improve learning and driving skills & quality of life.	Development of traffic safety education manual and pocket book					
		Organize meeting, seminar and workshop at policy making level, management level and practitioner level.	Organizing workshop and seminar nationwide for better understanding of traffic safety					
		Provision of technical transferability on traffic safety related issues by inviting local experts and foreign experts to people at CEOs to grass-root levels.	Provision of experts and instructors, effective information & materials on rules of road & safe driving manner					
		Development of key performance indicator (KPI) of the activity results						

Source: JICA Study Team.

(v) Cost Estimation

The cost for the preparation and implementation on human resource development through safety culture workshop activities is estimated at approximately USD4.5 million for the 5-year action program period, as shown in Table 6.3.8.

Table 6.3.8 Cost Estimation for Human Resource Development through Safety Culture Workshop Activities

Unit: (Million USD)									
Program	Program Component	Cost Items	2008	2009	2010	2011	2012	Total	Remarks
Human resource development through safety culture workshop activities	Development of traffic safety education manual and pocket book	Preparation Manuals, Pocket books Others	0	0.25	0.25	0	0	0.5	Materials use for The program activity
	Organizing of workshop and seminar nationwide for better understanding of traffic safety	Workshop Training Technical assistance Printed materials & Stationary	0	0.5	0.5	0.5	0.5	2	Materials use for workshop and training
	Provision of experts and instructors, effective information & materials on rules of road & safe driving manner	Training, Operating cost, Media, posters, leaflets, brochure and video-clip	0	0.375	0.375	0.375	0.375	1.5	Materials use nationwide
	Development of key performance indicator (KPI) of the activity results	Printed materials Information distribution	0	0.125	0.125	0.125	0.125	0.5	Operating cost for survey and analysis
	Total			0	1.25	1.25	1	1	4.5

Source: JICA Study Team.

5) Enhancement of Community Involvement / Participation for Network Development

(i) Introduction

(1) Background:

The enhancement of local community involvement or participation in traffic safety in Vietnam is still relatively low. Most of policy making and decision making are from top-down and local community will exercise the policy only when there is a command from the top.

A fundamental element necessary in achieving road traffic safety improvement for safer road usage is to have public participation in traffic safety activities. The people in the community should therefore feel obliged that compliance with the traffic laws is their ascribed responsibility. However, to reach this self-perception level may take a longer period among the Vietnamese to comprehend if not given proper encouragement and proactive and persuasive communication.

Networking development among local communities and local governments is the key to success in establishing traffic safety culture. When community peoples experience participating in road traffic safety education and publicity activities, they will learn to exchange new ideas and opinions with one another which is a preliminary stage for interactive communication development that leads to networking development.

(2) Objective

To enhance community participation / involvement for networking development in the Vietnamese communities.

(3) Target group

Local communities, high risk groups: students, youths and adults, particularly those who live along the national highways, union groups under the Fatherland Front Union and central & local government officials.

Private sector

(ii) Implementation Strategies

The implementation strategies are as follows:

- (1) Organize quarterly safety activity on “safe community zone” program to gather community residents and brainstorm among each other.
- (2) Develop “traffic safety culture fan club program” for building community network.
- (3) Recruit fan club as volunteer basis for promoting community participation and networking the system.

(iii) Program component

The program component may include:

- (1) Preparation of seminar for gathering local communities with provision of educating community participants on traffic safety related problems with basic alternate solutions.
- (2) Preparation of workshop with training programs on how to make community safer in their living neighborhood areas.
- (3) Note that the training programs should be provided to grass-root levels from specific locations to regional and remote areas for better understanding of road use, ability to perceive potential risk of accident occurrence emphasizing on black spots and risk-taking behaviors and how to use road safely to avoid potential accidents with basic traffic rules and regulations and interaction with unexpected risk via a training program on riding simulator.
- (4) Distribution of traffic safety education manual and pocket book and other materials such as posters, leaflets, brochure and video-clip which focuses on need-to-know the rules of road basis.
- (5) Provision of experts and instructors during the events in cooperation with Police agency.
- (6) Development of key performance indicator (KPI) of the activity results via presentation, periodical printed materials such as reports, newsletter, bulletin, brochure or e-information on the website.



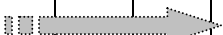

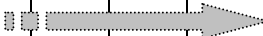
(iv) Implementation Plan

Table 6.3.9 shows the implementation plan and timeline.

(v) Cost Estimation

The cost for preparation and implementation on enhancement of community involvement/participation for network development is estimated at approximately USD3.6 million for the 5-year action program period, as shown in Table 6.3.10.

Table 6.3.9 Implementation Plan and Schedule of Enhancement of Community Involvement/ Participation for Network Development

Program	Objective	Implementation Strategies	Program Component	2008	2009	2010	2011	2012
Enhancement of community involvement/participation for network development	To enhance community participation / involvement for networking development in the Vietnamese communities	Organize quarterly safety activity on "safe community zone" program to gather community residents and brainstorm.	Preparation of seminar for gathering local participants to educate community participants on traffic safety related problems with basic alternate solutions.					
		Develop "traffic safety culture fan club program" for building community network.	Organizing of workshop with training programs on how to make community safer in their living neighborhood areas.					
		Recruit fan club as volunteer basis for promoting community participation and networking the system.	Provision of experts and instructors during the events in cooperation with Police agency.					
			Distribution of traffic safety education manual and pocket book and other materials					
			Development of key performance indicator (KPI) of the activity results					

Source: JICA Study Team.

Table 6.3.10 Cost Estimation for Enhancement of Community Involvement/ Participation for Network Development

Unit: (Million USD)									
Program	Program Component	Cost Items	2008	2009	2010	2011	2012	Total	Remarks
Enhancement of community involvement/participation for network development	Preparation of seminar for gathering local participants to educate community participants on traffic safety related problems with basic alternate solutions.	Preparation and implementation cost Others	0	0.24	0.35	0.28	0	0.87	Costs that may occur for the event
	Organizing workshop with training programs on how to make community safer in their living neighborhood areas.	Workshop Training Technical assistance Printed materials & Stationary	0	0.125	0.31	0.31	0.125	0.87	Costs that may occur for the event. Materials used for workshop and training
	Provision of experts and instructors during the events in cooperation with Police agency.	Operating cost, Experts allowance	0	0.25	0.36	0.25	0	0.86	Operating cost for experts and some assistances
	Distribution of traffic safety education manual and pocket book and other materials	Manuals, Pocket books, posters, leaflets, brochure and video-clip	0	0.125	0.125	0.125	0.125	0.50	Materials used nationwide
	Development of key performance indicator (KPI) of the activity results	Printed materials Information distribution	0	0.125	0.125	0.125	0.125	0.50	Materials used nationwide
	Total		0	0.865	1.27	1.09	0.375	3.6	

Source: JICA Study Team.

6) Consensus- and Trust-building in Community by Prioritizing Safe Community and Safer Road Use Issues

(i) Introduction

(1) Background

Road traffic accident situation in Vietnam is getting critical. More road traffic accidents have been significantly increased with different types of collision and casualty. However, very few of them were precisely identified.

The discrepancy between the numbers of accident statistics, injury and fatality recorded depends on different source of data (e.g., data from Police, Hospital and NTSC). This generates confusions among policy makers or decision makers towards the development of proper countermeasures to fix certain road traffic accident problem. Subsequently, it brings about lacking confidence of Vietnamese citizens upon their government.

Thus, it is important that the government should pay attention on building trust among Vietnamese communities upon safe road use in the communities by limiting number of accidents in the certain period of times.

Note that there should be not only one single agency responsible for these severe problems but the central and local governments working together with every Vietnamese citizen to make community safer.

Prioritization of safe community and safe road use issues should be the core heart of implementing road traffic safety action program so that the government can regain the trust and good cooperation from its communities.

(2) Objective

To build trust among community residents on safe community and safe road use to entail public awareness on traffic safety and public understanding on the government efforts towards building the quality of life and welfare of Vietnamese community.

(3) Target group

Every target group including local communities, students, government officials, workers, union groups under the Fatherland Front Union and central & local government officials.

Public transport companies, such as bus transport companies, taxi companies, and trucking companies.

(ii) Implementation Strategies

The implementation strategies for this program will be intensively involved the road use activities that occur daily in the community which consists of:

- (1) Generate a series of episodes involving lives in the communities interactive with kindhearted assistance and instruction from local government and police

to raise awareness and stimulate public participation activities with the use of effective messages and mass media.

- (2) Pedestrian safety month under the slogan of "Safer road for pedestrian" (3 months experiment). This activity should involve local pedestrians including students and residents collaborating and coordinating together with unions and police as well as local government and media.
- (3) Motorcycle safety month under the slogan of "Driving smartly and safely with your bike" (3 months-experiment). This activity should involve gathering young people who own and ride motorcycles and encourage them to form a collective fan club aimed at developing smart and safe driving behaviors in their community.
- (4) Riding safe bus month under the slogan of "This/Your bus takes me safely home" (3 months experiment). This activity may involve and require cooperation and coordination with public transport companies like bus transport companies and local police along with other experts to train them before the campaign and use massive media for publicity and propaganda.

(iii) Program Components

The program components include:








- (1) Conduct of study for development of traffic safety episodes.
- (2) Preparation of manuscript and messages for the episodes and selection of media.
- (3) Preparation of workshop with training programs for local volunteers on how to guide pedestrians across streets correctly and safely.
- (4) Preparation of workshop with training programs for young motorcycle riders on how to ride safely with fun and enjoyably educated system to fit with their local community.
- (5) Note that the training programs of both activities should be provided to grass-root levels from across types or use of roads at specific locations to regional and remote areas for better understanding of road use, develop ability to perceive potential risk of accident occurrence while using roads and avoid risk-taking behaviors and how to use road safely to avoid potential accidents with basic traffic rules and regulations and interaction with unexpected risk via a training program on riding simulator.
- (6) Preparation of workshop with training programs for bus drivers on driving discipline and driving safely with fun and enjoyable educated system to fit with their driving environment and to serve their community effectively.
- (7) Distribution of traffic safety education manual and pocket book and other materials such as posters, leaflets, brochure and video-clip which focuses on need-to-know the rules of road basis.
- (8) Provision of experts and instructors during the events in cooperation with Police agency.

- (9) Development of key performance indicator (KPI) of the activity results via presentation, periodical printed materials such as reports, newsletter, bulletin, brochure or e-information on the website.

(iv) Implementation Plan

Table 6.3.11 shows the implementation plan and timeline.

Table 6.3.11 Implementation Plan and Schedule of Program on Trust-building in Community by Prioritizing Safe Community and Safer Road Use Issues

Program	Objective	Implementation Strategies	Program Component	2008	2009	2010	2011	2012
Trust-building in community by prioritizing safe community and safer road use issues	To build trust among community residents on safe community and safe road use	Generate a series of episodes involving lives in the communities interactive with kindhearted assistance and instruction from local government and police using effective messages and mass media.	Conduct of study for development of traffic safety episodes. Preparation of manuscript and messages for the episodes and selection of media.					
		Pedestrian safety month under the slogan of "Safer road for pedestrian" (3 months experiment).	Preparation for workshop with training programs for local volunteers on how to guide pedestrians across streets correctly and safely.					
		Motorcycle safety month under the slogan of "Driving smartly & safely with your bike" (3 months-experiment).	Preparation for workshop with training programs for young motorcycle riders on how to ride safely with fun and enjoyably educated system to fit with their local community.					
		Riding safe bus month under the slogan of "This/Your bus takes me safely home" (3 months experiment).	Preparation for workshop with training programs for bus drivers on driving discipline and driving safely with fun and enjoyably educated system to fit with their driving environment and to serve their community effectively.					
			Provision of experts and instructors during the events in cooperation with Police agency.					
		Distribution of traffic safety education manual and pocket book and other materials						
		Development of key performance indicator (KPI) of the activity results						

Source: JICA Study Team.

(v) Cost Estimation

The cost for preparation and implementation of program for trust-building in community by prioritizing safe community and safer road use issues is estimated at approximately USD4.5 million for the 5-year action program period, as shown in Table 6.3.12.

Table 6.3.12 Cost Estimation for Program on Trust-building in Community by Prioritizing Safe Community and Safer Road Use Issues

Unit: (Million USD)

Program	Program Component	Cost Items	2008	2009	2010	2011	2012	Total	Remarks
Trust-building in community by prioritizing safe community and safer road use issues	Conduct of study for development of traffic safety episodes. Preparation of manuscript and messages for the episodes and selection of media.	Preparation and implementation cost Printed materials Media cost	0	0.3	0.8	0	0	1.1	Costs that may occur for the event
	Workshop with training programs for local volunteers on how to guide pedestrians across streets correctly and safely.	Workshop Training Technical assistance Printed materials & Stationary	0	0	0.9	0	0	0.9	Costs that may occur for the event Materials use for workshop and training
	Workshop with training programs for young motorcycle riders on how to ride safely with fun and enjoyably educated system to fit with their local community.	Workshop Operating cost, Technical assistance Printed materials & Stationary	0	0	0.4	0.6	0	1	Operating cost for experts and some assistances
	Workshop with training programs for bus drivers on driving discipline and driving safely with fun and enjoyably educated system to fit with their driving environment and to serve their community effectively.	Workshop Operating cost, Technical assistance Consultation fees, Manuals, Pocket books, posters, leaflets, brochure and video-clip	0	0	0.1	0.45	0.45	1	Costs that may occur for the event Materials use for workshop and training Operating cost for experts and some assistances
	Provide experts and instructors during the events in cooperation with Police agency								
	Distribute traffic safety education manual and pocket book and other materials								
	Development of key performance indicator (KPI) of the activity results	Printed materials Information distribution	0	0.125	0.125	0.125	0.125	0.5	Materials use nationwide
Total			0	0.425	2.325	1.175	0.575	4.5	

Source: JICA Study Team.

7) Development/Improvement of Traffic Safety Standards through Information Dissemination and Communication

(i) Introduction

(1) Background

In order to make Vietnamese people understand which level considers a safety standard requires massive information distribution and communication to reach

to every target group. However, the communication between the government and local community are still through Top-Down procedure. The communication channels that have been mostly used are one-way communication via TV, radio, particularly, megaphone, billboard and printed materials.

The materials provided for traffic safety education in schools and communities are quite obsolete and inadequate and lack of consistency which is in contrast with the rapid growth of motorization and traffic congestion and its adverse effect of traffic accidents.

A provision of traffic safety education and training with traffic rule and regulation manual books is still insufficient and inefficient entailing lack of proper driving practice and hence, disobeying the traffic laws and not being considerate of other road users.

A shorter and easier-to-understand rule on road information should be provided which is accessible to all the people of Vietnam, living in both urban and rural or remote areas.

The common corrective and practical traffic safety information should be developed and diffused consistently and continually to the community residents so that the people can have an ample time to develop their level of understanding towards the traffic safety standard.

Two-way communication between the central/local governments and local communities should be taken into account for mutual interaction and to ensure the messages are reached to the right target groups.

Proactive communication plan and communication channels should be developed and selected to get messages across all Vietnamese communities and be ready for feedback and interaction.

(2) Objective

To improve safety standard in community for the quality of life and welfare of Vietnamese citizens.

(3) Target group

Every target group including local communities, students, government officials, workers, union groups under the Fatherland Front Union and central & local government officials.

(ii) Implementation Strategies

The implementation strategies are as follows:

- (1) Develop toll-free hotline for providing traffic information and road traffic accident situation on voluntarily basis.

- (2) Develop traffic radio station for providing a real time traffic information and traffic accidents situation including receiving incoming calls and reporting information of road traffic accident and road traffic situation as voluntarily basis.
- (3) Communicate about the changes of non-motorization to motorization which affects daily traveling and community lifestyle and how to deal with these changes. , e.g., launch of public relations campaign and propaganda utilizing community learning center and university campus in each region as a location tool for communication.
- (4) Communicate about road traffic accidents and safe community problems and alternative countermeasures. These activities can be done by launching essay competition, slogan competition and drawing competition projects with school students, university students and local public in cooperation with local media such as newspapers, radio, television or providing complaint call, comment box.

(iii) Program Components

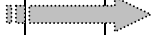
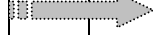





The program components are the following:

- (1) A small booth or small office for providing toll-free hotline on traffic information and road traffic accident situation on voluntarily basis.
- (2) A radio station that can spare 5 to 10 minutes interval voluntarily for reporting and receiving incoming calls for real time traffic information and traffic accidents situation on voluntarily basis.
- (3) Public relations campaign and propaganda focus on “community and campus tours to communicate about the changes” of non-motorization to motorization which affects daily traveling and community lifestyle and how to deal with these changes utilizing community learning center and university campus in each region as a location tool for communication.
- (4) Launch essay competition, slogan competition and drawing competition projects to communicate about road traffic accidents and safe community problems with alternative countermeasures. These activities can be done with school students, university students and local public in cooperation with local media such as television, newspapers, radio, megaphone, internet and leaflet.
- (5) Provision of complaint call center and comment box at local government office or at public facilities like community learning center, central railway station, bus terminal, post office, school, university.
- (6) Development of key performance indicator (KPI) of the activity results via presentation, periodical printed materials such as reports, newsletter, bulletin, brochure or e-information on the website.

(iv) Implementation Plan

Table 6.3.13 shows the implementation plan and timeline.

Table 6.3.13 Implementation Plan and Schedule of Development/Improvement of Traffic Safety Standards through Information Dissemination and Communication

Program	Objective	Implementation Strategies	Program Component	2008	2009	2010	2011	2012
Development/ improvement of traffic safety standards through information dissemination and communication	To improve safety standard in community for the quality of life and welfare of Vietnamese citizens.	Develop toll-free hotline for providing traffic information and road traffic accident situation on voluntarily basis.	A small booth or small office for providing toll-free hotline on traffic information and road traffic accident situation on voluntarily basis.					
		Develop traffic radio station for providing a real time traffic information and traffic accidents situation including receiving incoming calls & reporting traffic information and road traffic accidents as voluntarily basis.	A radio station that can spare 5 to 10 minutes interval voluntarily for reporting and receiving incoming calls for real time traffic information and traffic accidents situation on voluntarily basis.					
		Communicate about the changes of non-motorization to motorization which affects daily traveling and community lifestyle and how to deal with these changes.	Public relations campaign and propaganda focus on "community and campus tours to communicate about the changes" utilizing community learning center and university campus in each region as a location tool for communication.					
		Communicate about road traffic accidents and safe community problems and alternative countermeasures.	Launch essay competition, slogan competition and drawing competition projects to communicate about road traffic accidents and safe community problems with alternative countermeasures.					
			Provide experts and instructors during the events in cooperation with Police agency. Distribute printed materials, video clip					
			Provision of complaint call center and comment box at local government office or at public facilities like community learning center, central railway station, bus terminal, post office, school, university.					
		Development of key performance indicator (KPI) of the activity results						

Source: JICA Study Team.

(v) Cost Estimation

The cost for preparation and implementation of development/improvement of traffic safety standards through information dissemination and communication is estimated at approximately USD4.5 million for the 5-year action program period, as shown in Table 6.3.14.

Table 6.3.14 Cost Estimation for Development/Improvement of Traffic Safety Standards through Information Dissemination and Communication

Unit: (Million USD)

Program	Program Component	Cost Items	2008	2009	2010	2011	2012	Total	Remarks
Development/ improvement of traffic safety standards through information dissemination and communication	A small booth or small office for providing toll-free hotline on traffic information and road traffic accident situation on voluntarily basis.	Operating cost Staff Telephone line	0	0	0.3	0.5	0.2	1	Costs that may occur for the set up
	A radio station that can spare 5 to 10 minutes interval voluntarily for reporting and receiving incoming calls for real time traffic information and traffic accidents on voluntarily basis.	Operating cost Staff for preparing script Telephone line Stationary Printed materials	0	0	0	0.55	0.45	1	Costs that may occur for the set up Materials use for operation
	Public relations campaign and propaganda focus on "community and campus tours to communicate about the changes" utilizing community learning center and university campus	Operating cost Technical assistance Stationary Printed materials Traffic safety booklet, leaflet, sticker	0	0	0	0.4	0.4	0.8	Operating cost for experts and some assistances
	Launch essay competition, slogan competition and drawing competition projects to communicate about road traffic accidents and safe community problems with alternative countermeasures.	Implementation plan Media such as television, newspapers, radio, megaphone, internet and leaflet.	0	0	0.2	0.6	0.4	1.2	Costs that may occur for the event Materials use for operation
	Provide experts and instructors during the events in cooperation with Police agency. Distribute printed materials, video clip	Experts and instructors during the events in cooperation with Police agency. Distribute printed materials, video clip	0	0	0.2	0.6	0.4	1.2	Operating cost for experts and some assistances
	Provision of complaint call center and comment box at local government office or at public facilities	comment clip Comment box Telephone line	0	0	0	0	0	0	
	Development of key performance indicator (KPI) of the activity results	Printed materials Information distribution	0	0.125	0.125	0.125	0.125	0.5	Materials use nationwide
	Total			0	0.125	0.625	2.175	1.575	4.5

Source: JICA Study Team.

8) Development and Increasing Level of Collaboration and Responsibility for Action among all Stakeholders

(i) Introduction

(1) Background

Given that responsibilities for road safety are shared between varied organizations, it is not possible to rely solely on activities carried out by just a single organization to achieve this target. Therefore, the related and responsible organizations shall gather together and work together towards reducing the number of accident victims to derive maximum benefit from potential improvements in road safety from increased knowledge and communication, accumulated experience and technical progress.

Collaborations and coordination among all agencies concerned is a key element to success in coping with traffic safety problems in urban and rural communities and organizations in Vietnam. However, the level of cooperation among key actors in organizations in charge is still poor and slow. Some sections have overlapping works and responsibilities over the other.

Particularly, the level of collaboration and shared responsibility for action among public and private sectors are barely seen.

Road traffic accidents are a tragic artificial epidemic that generates a social cost which can be avoidable if proper countermeasures are developed by the government sector and implemented by all stakeholders and exercised by local community at grass-root level.

Thus, it is important to develop traffic safety culture activities to increase the opportunities to tune up cooperation and coordination, particularly to generate proactive communication among central and local governments who are policy makers with all stakeholders concerned from private agencies who are practitioners including automobile companies, insurance companies, IT firms for social corporate responsibility and public practitioners such as mass media, schools, universities and local communities together with NPOs, NGOs and the union members of the fatherland front for turning policy into practice in their organizations and daily lifestyle.

(2) Objective

To promote collaboration and share responsibility among stakeholders in developing safety culture in organizations and communities for improving traffic safety and the quality of life and social welfare of Vietnamese citizens.

(3) Target group

Government personnel and potential stakeholders, public transport companies, automobile companies, IT firms, insurance companies

People in community, schools, universities, union members of the Fatherland Front union, media.

(ii) Implementation Strategies

The implementation strategies are as follows:

- (1) Introduce “family rally for driving safely activity” that encourages safety culture among family members in the communities and those working in the organizations of both public and private sectors so that they can share a common understanding on traffic rules and safe driving which can create responsibility among stakeholders involve.
- (2) Organize “you are the best driver workshop” in various public transport organizations and invite private sector such as automobile firms to join the session as external expert for giving the driving instructions on smart and safe driving with maintaining morality.
- (3) Organize “Safety Culture Fair/Exposition” inviting all stakeholders in private sectors to join the event to encourage a sense of social responsibility and cooperation, coordination particularly mutual communication among stakeholders and community peoples as spectators/audiences to share the idea of safety is everyone concerned environment.
- (4) Organize “Traffic Safety Forum” in Southeast Asian region and invite the government agency, academic, domestic and foreign experts to intensively talk on development of safety culture in road traffic issue with providing a “student chapter for poster session and traffic safety problem and solution debate.”

(iii) Program Component

The program components include:

- (1) Provision of “family rally for driving safely activity” starts from parading on major highway with demonstrating risk-taking behavior and safety driving and selects the national highway route where frequent accidents occur so as to raise traffic safety awareness among general public and community peoples who live along the selected national highway in cooperation with MOPS, MOT and private sector.
- (2) Preparation of materials and experts (either local or foreign expert from Japan) for lecturing and assisting the organizers of “you are the best driver workshop” in various public transport organizations and invite private sector such as automobile firms to join the session as external expert for giving the driving instructions on smart and safe driving with maintaining morality.
- (3) Provision and preparation of “Safety Culture Fair/Exposition” together with selecting the event venue, inviting all stakeholders in public and private sectors, public relations and publicity campaigns using proactive communication channel through effective media such as TV, radio, billboard, banner, pamphlet, sticker, internet so that community peoples as spectators/audiences can participate and share the idea of safety is everyone concerned and responsive.
- (4) Provision and preparation of “Traffic Safety Forum” together with inviting the government agency, academic, domestic and foreign experts to intensively talk

on development of safety culture in road traffic issue with providing a “student chapter for poster session and traffic safety problem and solution debate” in cooperation and coordination with universities and media.

- (5) Provision and distribution of printed materials related to the above events.
- (6) Publicity on the above events prior to it ignition at least 3 to 6 months earlier so that every agency concerned can have ample time for preparation.
- (7) Provision of all available information and a smooth and convenience work with media and union member of the Fatherland front union to ensure that all intended traffic safety messages get across all target groups in local, regional and national level.
- (8) Development of key performance indicator (KPI) of the activity results via presentation, periodical printed materials such as reports, newsletter, bulletin, brochure or e-information on the website.

(iv) Implementation Plan

Table 6.3.15 shows the implementation plan and timeline.

(v) Cost Estimation

The cost for preparation and implementation on development and increasing the level of collaboration and responsibility for action among all stakeholders is estimated at approximately USD3.5 million for the 5-year action program period, as shown in Table 6.3.16.

9) Development of System for Monitoring and Reporting Progress of all Planned Actions and Evaluation Results





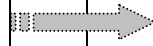

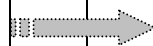
In this 5-year action program, the development of monitoring and reporting of progress of all planned actions and evaluation results (Key Performance Indicator vis-à-vis Key Success Indicator) is proposed and is a component of each proposed program for a systematic documentation process.

The cost for developing a monitoring, evaluating and reporting system is estimated at approximately USD 4 million which is already included in the implementation programs and activities from the previously discussed programs throughout the 5-year action program.

Establishing performance indicators or the use of performance indicators makes it possible to target actions in key areas systematically and to monitor implementation whether it succeeds or fails.

These concern evaluation of the activities as indicated in each proposed action area that target particular groups of road users such as local communities, school children or university students, novice drivers and professional drivers and general public whether they obey or drive in compliance with important safety rules (such as the wearing of a crash helmet, speeding, drunk-driving, the use of restraint systems and safety devices, and number of roadside checks).

Table 6.3.15 Implementation Plan and Schedule of Development and Increasing the Level of Collaboration and Responsibility for Action Among all Stakeholders

Program	Objective	Implementation Strategies	Program Component	2008	2009	2010	2011	2012	
Development and increasing the level of collaboration and responsibility for action among all stakeholders	To promote collaboration and share responsibility among stakeholders in developing safety culture in organizations and communities for improving traffic safety and the quality of life and social welfare of Vietnamese citizens.	Introduce "family rally for driving safely activity" encouraging safety culture among family members in the communities and those working in the organizations of both public and private sectors.	Provision of "family rally for driving safely activity" through parading on major highway with demonstrating risk-taking behavior and safety driving and selects the national highway route where frequent accidents occur						
		Organize "you are the best driver workshop" in various public transport organizations	Preparation of materials and experts (either local or foreign expert from Japan) for lecturing and assisting the organizers of "you are the best driver workshop"						
		Organize "Safety Culture Fair/Exposition" to encourage a sense of social responsibility and cooperation, coordination particularly mutual communication among stakeholders and community peoples	Preparation of "Safety Culture Fair/Exposition" with selecting the event venue, inviting all stakeholders in public and private sectors, public relations and publicity campaigns using proactive communication channel through effective media						
		Organize "Traffic Safety Forum" in Southeast Asian region and invite the government agency, academic, domestic and foreign experts to intensively talk on development of safety culture in road traffic issue with providing a "student chapter for poster session and traffic safety problem and solution debate."	Provision of "Traffic Safety Forum" to intensively talk on development of safety culture in road traffic issue with providing a "student chapter for poster session and traffic safety problem and solution debate"						
			Provide experts and instructors during the events in cooperation with Police agency, MOT Distribute printed materials, video clip						
			Provision of all available information and a smooth and convenience work with media and union member of the Fatherland front union						
		Development of key performance indicator (KPI) of the activity results							

Source: JICA Study Team.

Table 6.3.16 Cost Estimation for Development and Increasing the Level of Collaboration and Responsibility for Action Among all Stakeholders

Unit: (Million USD)

Program	Program Component	Cost Items	2008	2009	2010	2011	2012	Total	Remarks
Development and increasing the level of collaboration and responsibility for action among all stakeholders	"family rally for driving safely activity" through parading on major highway, demonstrating risk-taking behavior and safety driving and selects the national highway route where frequent accidents occur	Implementation cost Operating cost Assisting Staff PR campaign	0	0	0.225	0.425	0	0.65	Costs that may occur for the event The event may gain sponsorship from private sector
	Preparation of materials and experts (either local or foreign expert from Japan) for lecturing and assisting the organizers of "you are the best driver workshop"	Operating cost of workshop Staff for preparing materials Stationary Printed materials	0	0	0	0.65	0	0.65	Operating cost for experts Costs that may occur for the workshop Materials use for operation
	"Safety Culture Fair/Exposition" with selecting the event venue, inviting all stakeholders in public and private sectors, PR and publicity campaigns using proactive communication & media	Operating cost Technical assistance Stationary PR, Printed materials Traffic safety booklet, leaflet, sticker	0	0	0	0.225	0.725	0.95	Operating cost for the event and some assistances Printed material The event may also gain sponsorship from private sector
	"Traffic Safety Forum" on development of safety culture in road traffic issue with providing a "student chapter for poster session and traffic safety problem and solution debate"	Implementation plan Technical assistance, Experts and instructors during the events in cooperation with Police agency. Distribute printed materials, video clip	0	0	0	0.225	0.525	0.75	Costs that may occur for the event Materials use for operation Operating cost for experts and some assistances The event may also gain sponsorship from private sector
	Provide experts and instructors during the events in cooperation with Police agency. Distribute printed materials, video clip	Media such as television, newspapers, radio, megaphone, internet and leaflet.							
	Provide all available information and a smooth and convenience work with media and union member of the Fatherland front union								
	Development of key performance indicator (KPI) of the activity results	Printed materials Information distribution	0	0	0.166	0.166	0.168	0.5	Materials use nationwide
Total			0	0	0.391	1.691	1.418	3.5	

Source: JICA Study Team.

A quarterly review provides significant figure of the increase or reduction of number of violation and traffic accidents before and after the implementations. A statistical report should be produced at regular intervals for the nation and public based upon the statistics and performance indicators, which will make it possible to monitor the progress made in implementing this action program and to analyze the trends with regard to safety levels.

6.4 Summary and Recommendations on the Overall Implementation Strategy of Traffic Safety Education and Traffic Safety Culture Development Programs

The simultaneous implementation of traffic safety education program with traffic safety culture development program will entail a symbolic significance in the Government's attempt to revolutionize and hopefully sustain the positive changes in the Vietnamese peoples' road user behaviors.

In doing so, a significant amount of funds, time and succession of events are essentially required. The estimated costs for traffic safety education and traffic safety culture development programs, in some cases, may not be able to cover the overall proposed activities as some of them may require consultation and technical assistances from overseas development agencies. Thus, obtaining funding support from the private sector or ODA would extremely help in alleviating burden on Government in financing the proposed traffic safety programs.

Furthermore, a commitment at all levels (local, regional, and national levels) to improve road safety will call for coordinated action that is focused on a common goal. Joint action is warranted to deal with common road safety issues, to raise greater awareness and to implement the most effective measures at the different levels.

The involvement of all stakeholders in the transportation system will help meet the challenge of increasing road safety which will necessitate a shift in thinking among those responsible for the traffic system and road users about how people use the roads and how they can be used safely.

In particular, programs to enhance traffic safety through school- and community-based activities (e.g. safe community, pedestrian safety, smart and decent driving, wearing of crash helmet, driving with proper license, no to drug- and drunk-driving, etc.) will provide a good illustration of the interdependence of different road safety measures and stakeholders and the need for interaction at all levels of government, whether local, regional or national, as well as between public and private sectors, to ensure effective protection of students and community peoples' life.

To address road traffic accidents, particularly motorcycle-related accidents, an integrated approach must be implemented which involves the simultaneous conduct of study on road users and motorcycle riders' attitude and riding behavior in parallel with other technical improvements. In doing so, the need to set up a traffic safety institution or foundation will be more than justified.

Information dissemination on traffic safety-related concepts and data is as equally important as the proposed traffic safety programs and activities. Therefore adequate emphasis should be provided on disseminating information on traffic rules and regulations; proper traffic behavior; cause and effect of speeding, running a red light, reckless driving, not wearing helmet, drunk-driving, etc. These information may be disseminated in the form of pamphlets, pocket books, reflective stickers, and audio visual presentations which may be made widely available in automobile dealerships, city district, book stores, local libraries, schools and universities free of charge. Also, effective use of the media such as television, newspapers, radio, public address

system, and the internet as communication tools/mechanisms for traffic safety culture, education and publicity could significantly heighten traffic safety knowledge and awareness, which can hopefully translate to desired safe traffic behavior.

Finally, conduct of monitoring and evaluation with development of key performance indicators (KPI) and key success indicators (KSI) before and after implementation of the activities would make it possible to systematically target key areas and monitor the level of effectiveness of implementation. As a feedback mechanism, publication of a quarterly review or periodical report could provide the significant figure of the incremental reduction in the number of violation and traffic accidents before and after program implementation. A statistical report should be produced at regular intervals which would show the statistics and performance indicators. This will make possible an efficient monitoring of the progress made in implementing this action program and serve as input in the analysis of trends with regard to safety levels and hence, contributing to better improvement of the next step.

6.5 Overall Implementation and Investment Plan

The required budget for the implementation of the traffic safety education and traffic safety culture development for the 5-year action program period is estimated at USD49 million, as shown Table 6.5.1.

It is anticipated that the entire budgetary requirement may not be absorbed by the agency budget and that an ODA loan may be required.

Table 6.5.1 Overall Investment Plan for the Traffic Safety Education and Traffic Safety Culture Development Five-Year Action Program

Unit: (Million USD)

Programs	2008	2009	2010	2011	2012	Total
Traffic Safety Education in School Plan		0.3	1.8	4.6	5.4	12.2
Traffic Safety Culture Development Plan		7.2	10.4	10.8	8.4	36.8
Total Required Budget	-	7.5	12.2	15.4	13.8	49.0

Source: JICA Study Team

7 MEDICAL EMERGENCY DEVELOPMENT PLAN

7.1 Basic Legislations and Present Conditions

1) Basic Legislation

- (i) Decision 259/QD-TTg dated 4 March 2008 of the Prime Minister approving the project “Strengthening National Traffic Safety until the year 2010” indicates that the Ministry of Health (MoH) shall be responsible for developing and submitting the following projects for approval by the national government:
 - (1) Information dissemination/campaign on the impacts of traffic accidents to the community.
 - (2) Guideline on the establishment of medical emergency units strategically located within appropriate distance of the national roads network.
 - (3) Strengthening capacity of medical emergency units located near the national road system.
 - (4) Training on pre-hospital care and emergency for health workers at emergency facilities.
- (ii) Decision 17/2008/BYT-QD of the Minister of MoH approving the plan of action on “traffic and injury prevention to the community until the year 2010” has the following components:
 - (1) Implementation of education and information campaigns on traffic and injury prevention.
 - (2) Setting-up of traffic accident/injury system.
 - (3) Establishment of pre-hospital emergency network.
 - (4) Strengthening of emergency capacity of the health workers and community.
 - (5) Pilot implementation of traffic/injury safety model at the community.

2) Present Conditions

The following constraints were mentioned in the traffic safety master plan:

(i) Number of Fatalities and Injuries

The number of fatalities and injuries resulting from traffic accidents in Vietnam is higher compared with that from other countries in the region as well as in the world, with 1.36/100,000 population fatality rate resulting from traffic accidents¹. In the same manner, the number of injured people in hospitals due to traffic accidents is also very high. Data from Cho Ray Hospital in Ho Chi Minh City (5 year period: 1 January 2003 to 31 December 2007) recorded 139,011 victims, of which 7,959 resulted to death. This translates to an annual average of 27,802 victims or 76 victims per day or one traffic accident victim being admitted to the hospital emergency unit every 19 minutes.

¹ Source: Statistic data 2006, page 218.

(ii) Present emergency information system

The present emergency information system is the 115 system, which, however, has still very limited coverage to the big provinces/cities. On the other hand, all emergency cases in the rural areas are being covered by the hospital system. Thus, there is a very low recorded rate (10%) of traffic accident victims being transported by ambulances to the nearest hospital facility due to late information, difficulty in calling emergency service from mobile phones, etc. And in areas which are far from the cities, delay in transfer of emergency information results in failure to provide first aid to the traffic accident victims. In addition, communities which do not have the proper training and information on the 115 emergency systems opt to transfer traffic accident victims to hospitals and other emergency facilities, often resulting to further complications, and sometimes death, before reaching the hospitals.

Vietnam is yet to develop an emergency information system along the national road system. Thus, when traffic accidents occur in remote areas, it is very difficult to find means to relay information, especially in some areas which are still not covered by mobile networks. This usually results in the delay in the transfer of traffic accident victims to the nearest hospital or medical facility.

Thus, installation of an emergency telephone system (such as a telephone box along the highway which can only be used to call 113 or 115 during emergency) is very important particularly in rural areas where there are no available telephone land lines in the communes or mobile phones among the residents. A pilot implementation may be undertaken to selected areas, then replicated nationwide as the country's telephone infrastructure system improves through the years.

(iii) Rest stops/stations along the national road

The Traffic Safety Master Plan recommended the establishment of rest stops/stations along the national roads and highways across the country. It is proposed that each station will have restaurants and shops, vehicle maintenance shops, rest rooms, emergency centers, and pharmacy, among others.

These rest stops/stations will be developed through the government's "social mobilization policy" wherein priority will be given to both local private companies and foreign investors, especially private companies transport and insurance companies. The health sector shall be responsible in providing manpower training as well as ambulance and emergency services for traffic accident victims.

Recently, some transport and insurance companies have invested in the development of several rest stops/stations in the localities. Figure 7.1.1 shows some more of these planned developments.

It is deemed necessary that a study on the structure, scale, capability, and quality of services of these rest stops/stations be conducted in order to determine appropriate requirements on manpower, equipment, and training and to establish close collaboration with the health sector in the respective localities when a serious traffic accident occurred.

Figure 7.1.1 Planned Rest Stops/Stations



The *Mai Linh Transport Company* made an announcement of its plan to establish a total of 106 rest stops/stations throughout the country with a total estimated budget of USD192 million. Property size of each rest stop/station will vary from 1ha to 4has, construction cost amounting from USD1 million to USD4 million. The *Mai Linh Transport Company* estimates that 10% of the total 4.4 million traffic participants shall use their services at present, and is expecting an increase of up to 14% in the future.

The motor service enterprise company *AAA Logistics* announced that it will invest 20,000 billion VND to construct 38 “Car parking point” across national road No 1 from Northern to Southern of Vietnam. This project has been started in 2008. In the first period from 2008 to 2010 will have 11 stations constructed with budget estimated 10.440 billion VND. The distance of each station is around 180km. The second period, 27 stations will be constructed. The area of this station will be 30ha.

The *Trung Thanh Transport Company* has ongoing projects along the national roads of Ba Ria – Vung Tau, Can Tho and An Giang provinces which has the following locators: supermarket, banks, hospitals, and insurance services.

Source: JICA Study Team

(iv) Participation of community during a traffic accident emergency

Based on report, over 70% of traffic accident victims received first aid from and were transferred to the hospitals by community members.

However, lack of adequate training on first aid techniques led to very high (over 50%) rate of complications to victims due to improper bandaging/tourniquet techniques, handling of broken bones to avoid shock and injuries in blood vessels and nervous system, transferring of victims particularly for victims who sustained injuries in vertebral column.

Therefore, it is necessary to provide proper guidelines, equipment and training to the community members especially those living near high-risk accident areas. Alternatively, the following groups may be targeted for such training: staff from gasoline stations and shops along these black spots and taxi/xe-om drivers frequenting these pilot national roads.

(v) Emergency capacity of district health facilities

Due to lack of medical equipment and limited skills on emergency techniques of staff in district hospitals, there is not much choice at present but to transfer the traffic accident victims to the nearest provincial/central hospitals. This however delays the timely provision of first aid, resulting in increased risks of death or complications.

Therefore, it is necessary to upgrade the district hospitals' medical equipment as well as manpower capabilities to enable them to provide appropriate and timely first aid treatments to traffic accident victims. The provincial hospitals can provide support by sending mobile teams when necessary to eventually reduce the fatality rate of traffic accidents victims.

(vi) Emergency capacity during mass casualty accident

Traffic accidents, particularly collisions involving buses, cars and trains which can result to mass casualty (over 50 victims) have high occurrence rate in Vietnam. Based on collected data, some form of traffic accident that results in a number of victims occur every month.

Unfortunately, the hospitals which are located along national roads where these accidents usually occur are not equipped and capable to receive mass casualty accident victims. Therefore, upgrading of district hospitals located near black spots along the national roads is deemed critical to decrease number of fatalities and complications.

(vii) Training staff in health sector for emergency services

Most of the existing manpower/staff in the health sector are not adequately trained on emergency techniques. The medical colleges at present likewise do not offer special training courses or curriculum on emergency which can comply with the requirements of the hospitals during emergency cases. This therefore necessitates the development of an appropriate training program on emergency.

(viii) Target reduction in fatality rate

The proposed Traffic Safety Master Plan is targeting the 50% reduction of traffic accident fatality rate (based on 2007 data) in the hospitals by the year 2020 (or 0.6 deaths/100,000 population). Meanwhile, for this 5-year action program period (2008 to 2012), the target is to reduce this initially to 0.81 deaths/100,000 population.

Many countries apply the fatality rate indicator to refer to "fatalities within 30 days of traffic accident", which is a clearer indication of capacity of hospitals to handle emergency cases. In Vietnam, the fatality rate estimated by the health sector is based on the number of victims who died right after having been brought to the hospitals. This figure in 2007 was 1.36 deaths/100,000 population. However, a large number of victims who were seriously injured and brought home by families, since recovery is not anymore possible, died soon after and may not have been recorded in the health sector statistics. So the actual number of fatalities by traffic

accidents may be higher than that recorded in hospitals.

Therefore, to have a clear understanding of actual situation and come up with appropriate five-year action program as well as long-term plan for implementation, it is necessary to review the fatality rate of traffic accident victims based on number of deaths within the 30-day period in the hospitals located along pilot national roads.

7.2 Enhancement of Quality of Pre-hospital Care to Traffic Accident Victims

1) Development of emergency Information System for Traffic Accident Victims

- (i) Pilot GPS system to improve capacity search and rescue for traffic accident victims.
 - (1) Identify demand and determine required technical assistance to develop GPS equipment for vehicles
 - (2) Support 3 GPS centers at 3 regions
 - (3) Training and awareness campaign/promotion to improve the system
 - (4) Estimated budget is USD50,000 per region for a total of USD150,000 for 3 regions.

2) Improving First Aid Capabilities at the Commune Health Stations

Organize training courses for the health worker at grassroots level on basic emergency techniques such as tourniquet (to stop bleeding), bandaging, resuscitation or CPR, and transferring of victims to the hospitals.

- (i) Participants: Health workers at grassroots level (commune level), priority given to those in black spot areas. Total number of trainees will be 30 participants.
- (ii) Duration for each course: Three (3) days (including travel time).
- (iii) Budget items: Transportation costs, accommodation and per-diem of participants; training-related costs such as venue rental, lecturers' fees, training materials, and other incidental expenses.
 - Estimated costs for one course is USD 4,700. Total number of courses is 1,500 (500 districts, 3 communes per district).
 - Total cost for 100 courses supported by JICA project is USD 470,000.
 - Total cost for 1,400 courses supported by MoH is USD 6.58 million

3) Training on First Aid for Community Members

Organize training courses for community members on basic emergency techniques with available facilities in the community.

- (i) Participants: A total of 50 participants will be trained. Priority shall be given to students at secondary level, staff working at gasoline stations and other service shops, and representatives of interest groups such as women, youth, red cross, etc. based in the pilot areas where traffic accidents usually occur.
- (ii) Duration: One (1) day at the commune level

(iii) Budget items: Rental of venue/meeting hall, lecturers' fees, training materials, lunch for participants, and other incidental expenses.

- Estimated cost for one course is USD1,000.
- JICA project shall support 500 courses for the 500 communal health stations, for a total cost of USD500,000.
- MoH shall support 11,000 courses for 11,000 communal health stations, for a total cost of USD11 million.

4) Training of Trainers to Improve Capacity of the 115 Emergency System in 9 Regions.

(i) Participants: Health workers of the provincial hospitals, lecturers of the provincial health secondary schools. These persons will be lecturers to the training courses in the localities.

(ii) Training curriculum will be prepared at the central level in coordination with and with recommendations from the medical universities and central hospitals.

(iii) Lecturers will be selected from central hospitals and central medical universities.

(iv) Duration: Each training course will be conducted for 1 day at the regional center.

(v) Required budget will pay for accommodation and travel expenses of participants coming from outside the regional center/provinces.

- Estimated budget for each course is USD2,700.
- JICA project shall support 3 courses for a total cost of USD8,100.
- MoH shall support 9 courses for a total cost of USD24,300.

5) Training on Capacity Development for 115 Ambulance System

Most of the traffic accident victims do not receive appropriate first aid and instead brought directly to hospitals due to lack of first aid capabilities of health staff of 115 emergency ambulance systems. Many victims unfortunately suffer serious complications due to bleeding and shock. It is therefore necessary to provide training to these health workers of the 115 emergency systems.

(i) Participants: A total of 50 health workers from 115 emergency stations, priority will be given to those in the pilot areas where traffic accidents usually occur.

(ii) Duration: One (1) day

(iii) Budget items: Transportation costs and allowance of participants; training-related costs such as venue rental, lecturers' fees, training materials, and other incidental expenses.

- Estimated cost for one course is USD1,200.
- JICA project shall support a total of 10 training courses for the 3 regions, for a total cost of USD12,000.
- MoH shall support 53 training courses in 3 regions, for a total cost of USD63,600.

6) Workshop on Development of Emergency Transportation with Participation from the Private Sector

The policy on “Social mobilization” shall be applied by encouraging private sector to participate in the provision of emergency transportation. It is necessary to conduct a workshop to discuss the policies that need to be developed to set-up a pilot model of non-government emergency transportation in the country.

- (i) Participants: A total of 50 participants coming from existing 115 emergency ambulances (including private emergency service providers), representatives from the Ministry of Health and related ministries.
- (ii) Duration: One (1) day
- (iii) Budget items: Transportation costs for participants coming from other cities/provinces, allowances of participants, venue/meeting hall rental, lecturers’ fees, training materials, and other incidental costs.
 - Estimated cost for one course is USD3,000.
 - MoH shall sponsor a total of 7 courses in 7, for a total cost of USD21,000.

7) Workshop on Prevention of Traffic Accident and Safety in Community

Proper motivation of community members to participate in the government’s efforts towards achieving a safe traffic society is very important. This may be successfully implemented through the conduct of various information dissemination and awareness campaigns, workshops and discussions at the commune level.

- (i) Participants: For each workshop session, a total of 50 participants from the commune located at high-risk traffic accidents area.
- (ii) Duration: One (1) day per commune.
- (iii) Budget items: Allowances for participants, venue/meeting hall rental, lecturers’ fees, workshop materials, and other incidental expenses.
 - Estimated cost per workshop is USD1,000. Workshop will be held in 3 communes per district, in 500 districts, for a total of 1,500 training courses. Total estimated cost is USD1.5 million.

8) Rehabilitation Capacity Development of Hospitals

- (i) District Hospitals: To distribute rehabilitation equipment to the district hospitals for use in rehabilitation of traffic accident victims after they have received emergency services and treatment in the hospital and before they are discharged.
 - Estimated cost to purchase equipment is USD10,000 and training cost for staff of the hospital on equipment use and maintenance is USD2,000.
 - Estimated budget is USD12,000 per hospital, for a total cost of USD6.0 million for 500 district hospitals.
 - JICA pilot project shall support 12 district hospitals, for a total cost of USD144,000.
- (ii) Provincial Hospitals: Many of the provincial hospitals do not have any rehabilitation equipment, and for provincial hospitals which do have the equipment, state of

rehabilitation equipment is very poor.

- Estimated cost to purchase equipment is USD20,000 and training cost for staff of the hospital on equipment use and maintenance is USD2,000.
- Estimated budget is USD22,000 per hospital, for a total cost of USD1.386 million for 63 provincial hospitals.
- JICA pilot project shall support 12 provincial hospitals, for a total cost of USD264,000.

9) Commune-based Rehabilitation for Traffic Accident Victims

Many of the traffic accident victims, particularly those who suffered from head and nerve system injuries, still require continuous rehabilitation even after being discharged from hospitals. Thus, a commune-based rehabilitation facility may be organized with minimum cost by using simple equipment available in the commune and manpower support from their family members.

Although there is no budgetary requirement to purchase equipment, it is necessary to allocate budget for a one-day lecture on proper guidelines in setting-up the commune-based rehabilitation facility; how to find and use materials available in the commune; methods and techniques to assist traffic accident victims during their rehabilitation exercises. It is still proposed that traffic accident victims should have a periodic consultation in the hospitals for a period of 6 to 12 months.

- (i) Participants: Communes with many traffic accident victims, with each lecture attended by an estimated number of 50 commune members.
- (ii) Duration: One day lecture at the commune.
- (iii) Budget items: Allowances for participants, venue/meeting hall rental, lecturers' fees, lecture materials and other incidental expenses.
 - Estimated cost per lecture: USD1,000
 - One lecture per commune, total of 10,000 communes for a total cost of USD10 million.

7.3 Capacity Development to Improve Preparedness for Mass Casualty Accidents

1) Training for Support Groups

When serious traffic accident occurs, it is necessary to encourage and motivate participation of local authorities, other concerned branches of government and mass organizations in terms of providing first aid on site and transfer of victims to the hospitals.

- (i) Participants: Health workers at the grass-root level, head of branches (police, military, etc.), mass organizations. Target number of participants for each training course is 30.
- (ii) Duration: 2 days per course
- (iii) Budget items: Allowances for participants, travel cost for participants coming from outside the city, venue/meeting hall rental, lecturers' fees, training materials and

other incidental expenses.

- Estimated costs for one course is USD3,500.
- MoH shall support 53 training courses for a total cost of USD185,500.
- JICA pilot project shall support 10 training courses for total cost of USD35,000.

2) Training for Hospital System

- (i) Participants: Health workers of the provincial, regional, military hospitals which are expected to provide service during mass casualty accidents. Target number of participants for each training course is 40.
- (ii) Duration: 2 days per course
- (iii) Budget items: Allowances for participants, travel cost for participants coming from outside the city, venue/meeting hall rental, lecturers' fees, training materials and other incidental expenses.
 - Estimated cost for one course is USD4,500.
 - MoH shall support 53 training courses in the 7 regions for a total cost of USD238,500.
 - JICA pilot project shall support 10 training courses for a total cost of USD45,000.

3) Drill and Exercises on Mass Casualty Emergency

Drill and exercises are needed to have a comprehensive plan of action during mass casualty accident. The entire process of drills and exercises will be recorded on CD for distribution in training facilities as supplement to training courses for health workers and the community.

- (i) Participants: Health workers at grass-root level, leader of local authorities, police, military and community; big group of people to play the role of traffic accident victims; vehicle(s) involved in accident. Total target participants shall be 150.
- (ii) Duration: Haft day
- (iii) Budget Items: Travel cost for participants, accommodation for high level officials and resource persons, fees for vehicle rental and fictitious victims, meeting hall rental, CD production, and other incidental costs.
 - Estimated cost for each drill is USD6,000
 - MoH shall support one drill per province for 53 provinces for a total cost of USD318,000.
 - JICA pilot project shall support 10 drills for a total cost of USD60,000.

7.4 Medical Emergency Resources Development Plan

Development of resources for medical emergency services such as human resources, drugs, medical equipment, and ambulances, as well as a management plan for the plan of action on medical emergency for the period 2009-2012.

1) Training Curriculum on Medical Emergency for Traffic Accident Victims in Medical Institutions

(i) Development of training curriculum on medical emergency

Practitioners and specialists on medical emergency will be selected and tasked to prepare an appropriate training curriculum based on recommendation from medical institutions and universities. The proposed training curriculum will then be submitted for joint review and approval of the Ministry of Health and Ministry of Education and Training. Estimated cost of development of training curriculum is USD30,000.

(ii) Workshop to review and recommend approval of proposed training curriculum

Workshop conducted by the Ministry of Health and Ministry of Education and Training to review and recommend approval of proposed training curriculum. Estimated cost of workshop is USD6,000.

Total estimated budget for all curriculum development and workshop is USD36,000.

2) Training Centers for Human Resource Development in the Health System

Three (3) training centers are proposed to be established in Hanoi, Hue and Ho Chi Minh City which shall be linked with existing medical universities in respective cities. Estimated budget for each center is USD40,000 to cover costs for printing of training materials, purchase of equipment and other incidental expenses. Total budget for 3 centers is USD120,000.

3) Staffing of Emergency Units and Commune Health Stations

There should be training for new health workers and re-training of existing ones which will then be deployed to emergency units and health stations at the commune level. Target number is 50 trainees per university, 3 universities per year for a period of 3 years. Estimated budget for training is USD225,000.

4) Purchase of Equipment and Drugs for District Hospitals

A budget of USD50,000 will be allocated to purchase emergency equipment for each of 500 district hospitals. Total budget is estimated at USD25 million.

5) Purchase of Ambulance for Hospitals

Estimated cost for one ambulance is USD50,000. Total estimated budget to provide one ambulance for each of 500 hospitals is USD25 million.

6) Purchase of Ambulance for 115 Emergency Centers

Proposal is to purchase 3 ambulance units for each 115 emergency centers in 63 provinces. Total estimated budget is USD9.45 million that already includes maintenance and operational costs for the first two years.

7) Purchase Emergency Equipment for Provincial Hospitals for Use during Mass Casualty Accident

Estimated costs for the purchase of equipment for each of the 40 provincial hospitals is USD100,000 for a total cost of USD4million.

8) Supervision Training for Medical Emergency Team Leaders

Designated project team leaders at central and local levels should have appropriate training on supervision to ensure provision of efficient medical emergency services. A total of six (6) training courses (three each at the central and local levels) will be organized. Estimated budget for each training course is USD5,600 or total of USD16,800 at each level.

9) Periodic Supervision Activities in the 3 Pilot Areas

A quarterly supervision of project activities at the local level in whole country will be conducted by a 2-member team. Budget shall be allocated for travel costs (by air and land), accommodation and allowances for the members of the team. Estimated cost per supervision mission is USD3,580, or total of USD57,280 for a period of four years.

Supervision costs for JICA pilot project is also estimated at USD57,280.

10) Mid-term Evaluation in the 3 Pilot Areas

One mid-term evaluation mission will be conducted in 2010. A five-member team will conduct the mid-term evaluation and will be composed of project representatives at the central level and 3 supervision units, and one JICA consultant. Budget shall be allocated for travel costs and allowances of the team members. Total estimated cost is USD14,100, shared equally between MoH and JICA pilot project.

11) Identification of Input and Output Indicators of the Project

In order to determine effectiveness of the plan of action, it is necessary to identify input and output indicators, especially indicators of fatality of the traffic accident victims to hospital within 30 days. The identification of such indicators is very important in providing correct data on the results of medical treatment of TA's victims. Existing data indicate only the victims who died in the hospitals within a few days, but do not indicate total death victim in hospitals within 30 days, including victims who were very seriously injured and impossible to survive and then died after brought home by their families.

Budgetary requirements shall cover costs for survey including development, pre-test, finalization, and printing of questionnaire; field survey; data collection and analysis; and preparation of the report. Estimated costs for one survey is USD20,000. A total of four surveys are planned during this action program period, with total estimated cost of USD80,000 shared equally between MoH and JICA project.

12) Final Project Evaluation

A final evaluation mission will be conducted by the end of the action program period in 2012. A five-member team will conduct the final evaluation and will be composed of project representatives at the central level and 3 supervision units, and one JICA consultant. Budget shall be allocated for travel costs and allowances of the team members. Total estimated cost is USD14,100, shared equally between MoH and JICA pilot project.

13) Technical Support & Evaluation

Three (3) JICA international consultants will be contracted to provide technical support

during the survey, mid-term evaluation and final evaluation. Estimated cost for a 2-week engagement of each consultant is USD20,000, for a total cost of USD60,000.

14) Overseas Study Tour

An overseas study tour is deemed necessary to provide opportunity for local counterparts to study, observe and exchange experiences with other countries in the region on medical emergency. Study tours in Japan are proposed for a 10-member delegation (per study tour) which will be composed of project representatives at the central level and pilot provinces. Total estimated cost per study tour will be USD40,000.

MoH shall sponsor four (4) study tours for a total cost of USD160,000. In the same manner, JICA pilot project shall also sponsor four (4) study tours for a total of USD160,000.

15) Project Management

In order to monitor project effectiveness during implementation, a Project Management Unit will be established at the central level. The PMU shall be responsible in the preparation of a plan of action, supervision, management, and evaluation of project activities at the local levels. JICA support is recommended to cover operating costs of the PMU during this 4-year period and is estimated at USD150,400. This is also the same amount recommended to be shared by MoH.

7.5 Implementation and Investment Plan

Table 7.5.1 shows the proposed implementation and investment plan for the medical emergency sector based on the planned timing for implementation and investment:

- | | |
|----------------------------|-----------------------|
| 1) Preparation phase: | January to June 2009 |
| 2) Implementation phase: | July 2009 to Oct 2012 |
| 3) Final evaluation phase: | November 2012 |

Table 7.5.1 Overall Implementation and Investment Plan for Medical Emergency Development Five-Year Action Program

Strategies	Program Components	Cost (x 1000 USD)				
		2009	2010	2011	2012	Total
Enhancement of Quality of Pre-hospital Care to Traffic Accident Victims	1) Pilot GPS system to improve capacity search and rescue for traffic accident victims		100.0	100.0	100.0	300.0
	2) Improving first aid capacity at the commune health stations	2,021.0	2,021.0	2,021.0	987.0	7,050.0
	3) Guideline to the community on first aid to the TA victims (one course per commune; estimated 11,500 courses)	3,100.0	3,150.0	3,150.0	2,100.0	11,500.0
	4) Training of trainers to improve capacity of the 115 emergency system in 9 regions.	10.8	8.1	8.1	5.4	32.4
	5) Training on capacity development for 115 ambulance system	21.6	21.6	21.6	10.8	75.6
	6) Workshop on development of emergency transportation with participation from the private sector	6.0	6.0	6.0	3.0	21.0
	7) Workshop on prevention of traffic accident and safety in community (3 courses/district x 500 districts)	300.0	400.0	400.0	400.0	1,500.0
	8) Rehabilitation capacity development in district hospitals	1,236.0	2,436.0	1,236.0	1,236.0	6,144.0
	9) Rehabilitation capacity development in provincial hospitals	396.0	396.0	396.0	462.0	1,650.0
	10) Commune-based rehabilitation for traffic accident victims (target number of communes is 10,000)	3,000.0	2,000.0	3,000.0	2,000.0	10,000.0
Subtotal 1		10,091.4	10,538.7	10,338.7	7,304.2	38,273.0
Capacity Development to Improve Preparedness for Mass Casualty Accidents	1) Training for support groups on mass casualty emergency process	63.0	63.0	63.0	31.5	220.5
	2) Training for hospital system on mass casualty emergency process	81.0	81.0	81.0	40.5	283.5
	3) Drill and exercises on mass casualty emergency (one drill per province, total of 63 provinces)	108.0	108.0	108.0	54.0	378.0
Subtotal 2		252.0	252.0	252.0	126.0	882.0
Medical Emergency Resources Development Plan	1) Training curriculum on medical emergency for traffic accident victims in medical institutions	20.0	10.0	6.0	0.0	36.0
	2) Training centers for human resource development in the health system	40.0	40.0	40.0	0.0	120.0
	3) Staffing of emergency units and commune health stations	0.0	75.0	75.0	75.0	225.0
	4) Purchase of equipment and drugs for district hospitals	5,000.0	10,000.0	5,000.0	5,000.0	25,000.0
	5) Purchase of ambulance for hospitals	5,000.0	10,000.0	5,000.0	5,000.0	25,000.0
	6) Purchase of ambulance for 115 emergency centers	2,500.0	2,500.0	2,500.0	1,950.0	9,450.0
	7) Purchase of emergency equipment for provincial hospitals for use during mass casualty accident	1,000.0	1,000.0	1,000.0	1,000.0	4,000.0
	8) Supervision training for medical emergency team leaders	0.0	5.6	5.6	5.6	16.8
	9) Periodic supervision activities in the 3 pilot areas	28.6	28.6	28.6	28.6	114.6
	10) Mid-term evaluation in the 3 pilot areas	0.0	14.1	0.0	0.0	14.1
	11) Identification of input and output indicators of the project	0.0	40.0	0.0	40.0	80.0
	12) Final project evaluation	0.0	0.0	0.0	14.1	14.1
	13) Technical support and evaluation	0.0	20.0	20.0	20.0	60.0
	14) Overseas study tour	160.0	0.0	160.0	0.0	320.0
	15) Project management	75.0	75.0	75.0	75.8	300.8
Subtotal 3		13,823.6	23,808.3	13,910.2	13,209.1	64,751.4
TOTAL BUDGET FOR 2009-2012		24,167.0	34,599.0	24,500.9	20,639.3	103,906.4

Source: JICA Study Team

8 TRAFFIC SAFETY INSTITUTIONS

8.1 Outline of Institutional Improvement Plan

In order to ensure the sustainability of the comprehensive traffic safety development in Vietnam, the NTSC shall be urgently strengthened as a central organization. However, organizational innovation shall require significant leadership to build consensus among various relevant and concerned authorities and shall also need additional human and financial resources adequate enough for it to play its role as a central coordination body as well as a leading body for traffic safety policy development. The basic framework and implementation strategies were already discussed in the Master Plan. In this section, priority action programs in the coming five years will be examined.

Proposed institutional improvement programs and their priority issues for the Action Program are shown in Table 8.1.1. The institutional improvement will be a long term issue that will require tolerant and continuous efforts. However, while VRSP has already started and JBIC traffic safety project is about to commence which include institutional improvements as one of their project components, there is no time to wait for the establishment of the new organization so that it is urgently required to examine and confirm the directions of the institutional innovations for the sustainable traffic safety development and also to make necessary revisions for the VRSP and JBIC safety projects.

It will however be difficult to immediately confirm the new organizational set-up, thus the Action Program proposes to formulate a provisional organization based on the proposed direction of the innovation. Through the VRSP and JBIC project implementation, at the very least, it is expected that human resources will be developed and data related to project implementation will be recorded for reference in future permanent activities of the new system. The provisional activities will also serve as input for the initial evaluation of the proposed institutional improvements. In addition, the organizational improvement and development during this 5-year action program period shall be legalized as a new law, Road Traffic Safety Policy Act, or shall be a part of the Road Traffic Law.

Table 8.1.1 Summary of 5-Year Action Program for Institutional Improvement

Development Program		Target of the 5-Year Plan	Priority Action Items
Organizational Improvement	National Traffic Safety Authority	<input type="checkbox"/> Approval of the innovation plan <input type="checkbox"/> Establishment of a provisional organization and implementation of necessary activities ¹	<ul style="list-style-type: none"> Preparation of a draft innovation plan Coordination with relevant authorities Capacity building with the provisional organization
	National Traffic Safety Center	<input type="checkbox"/> Approval of the established plan <input type="checkbox"/> Establishment of provisional organization and implementation of the necessary activities ¹	<ul style="list-style-type: none"> Conduct of Feasibility Study Coordination and consensus building Ongoing project Monitoring and evaluation Capacity building²
	National Traffic Safety Advisory Council	<input type="checkbox"/> Establishment of the Council <input type="checkbox"/> Start of official activities	<ul style="list-style-type: none"> Operational regulation /guidelines Establishment of the Executive Office Election of Chairperson and members Organization of periodical meetings
	National Traffic Safety Foundation	<input type="checkbox"/> Establishment of the Foundation <input type="checkbox"/> Start of official operation	<ul style="list-style-type: none"> Conduct of Feasibility Study Consultation from private sectors, NGOs Submission to Advisory Council for approval Preparatory works for the set-up of the office and invitation to members
Law and Regulation	Traffic Safety Policy Act	<input type="checkbox"/> Approval of a new law by the government, including new organizational establishment and Traffic Safety Plan development	<ul style="list-style-type: none"> Preparation of the draft law Coordination and consensus building Submission to National Assembly
Notes: ¹ Major activities by the provisional organizations shall be coordinated with or should be part of the ongoing VRSP and JBIC traffic safety projects. For example, for VRSP: Component A-Institutional and Capacity Building Program, Component B- Road Safety Demonstration and Awareness Program and Component C-Road Safety Monitoring and Evaluation Program. ² Refer to JICA Hanoi Traffic Safety Human Resource Development Project (TRAHUD).			

Source: JICA Study Team.

8.2 National Traffic Safety Authority

The NTSC is the highest advisory council of the Prime Minister on traffic safety policy development. Traffic safety measures however are individually prepared by each concerned sector without any form of effective coordination among the sectors. The Master Plan has underscored the importance of comprehensive traffic safety measures and their sustainable implementation and subsequently proposes the establishment of an administrative organization under the supervision of NTSC which will be responsible in developing action programs and promoting their implementation. And the organization that will be responsible for the overall development and implementation of the comprehensive traffic safety measures is the proposed National Traffic Safety Authority (NTSA).

Main functions of the NTSA will be as follows: (1) development of Traffic Safety Master Plan and Action Program, (2) promotion of private sector and community traffic safety

activities and (3) provision of support to local traffic safety committees and their activities, in addition to the existing responsibilities of NTSC-Executive Office and TSPMU.

The first function of the new organization, the development of a traffic safety master plan and action program, is similar with this JICA study. The NTSA is therefore expected to prepare the succeeding National Traffic Safety Plans in five to ten years time. Functions (2) and (3), however, should be undertaken immediately once this Master Plan and Action Program are approved. In particular, it is urgent that local governments' capacity to develop their traffic safety plans in accordance to their respective local conditions will be enhanced.

To promote private sector and community traffic safety activities which are at present being implemented on ad-hoc capacity, the Government of Vietnam should take a stronger leadership and send a clear message to the community as well as to the private sector of its intention to achieve its mission for Vietnam to develop a "Traffic Safety Culture" and a "Kindhearted Traffic Society without Traffic Accident," among others. It is also proposed that the traffic safety month should be more interesting and motivating and should promote more community activities. For the proposed new intervention to promote community traffic safety activities, the Traffic Safety Foundation, Traffic Safety Advisory Council, as well as local government organizations should play more significant roles. However, due to lack of resources in the organizations, the proposed NTSA should play wider functions in coordinating with provincial governments to promote traffic safety activities across the county.

In the Master Plan, the NTSA shall be established and be fully operational by 2015, with appropriate manpower and financial resources. By then, major functions of the new organization such as coordination mechanism, share of data and information and development of the comprehensive traffic safety measures, among others, shall be confirmed with concerned agencies. At the same time, preparatory works shall be carried out for the new support organizations during the traffic safety interventions such as Advisory Council, Traffic Safety Foundation and Traffic Safety Center. On the other hand, the ongoing VRSP and JBIC traffic safety projects would be significant opportunities to develop a new organization to upgrade human resources. Thus, accordingly, the following targets are proposed for the Action Program:

- (1) Establishment of a Provisional Organization;
- (2) Review of VRSP and JBIC traffic safety projects so as to enhance the capability through the actual project implementation and
- (3) Preparation of legal procedure for the new permanent organization.

Major activities for the coming 5-year period are shown in Table 8.2.1. Consensus building for the NTSC innovation, development of a provisional organization and establishment of the preparatory committees for the council and foundation shall be undertaken immediately.

Table 8.2.1 Implementation Plan for the Development of National Traffic Safety Authority

Major Activities	Year					Major Considerations
	08	09	10	11	12	
Preparation of legal documents for the strengthening of NTSC	■	■				- Overall structure of NTSC - Rolling plan development
Consensus building and approval			■	■		- Review of draft laws
Consolidation of the full scale system					■	
Establishment of provisional organization	■					
Start of operation		■	■	■	■	
Human resource development		■	■	■	■	- With VRSP and JBIC projects
Establishment of preparatory committees for Advisory Council and Traffic Safety Foundation	■					

Source: JICA Study Team.

8.3 National Traffic Safety Center

While the NTSA will be an administrative office, the NTSC will be expected to provide necessary data and information through conduct of scientific study, research and analysis for the new traffic safety policy development. The three main activities are therefore proposed:

- (1) Research and development, monitoring and evaluation for the traffic safety measures,
- (2) Development and operation of the proposed Comprehensive Traffic Safety Database and
- (3) Human Resource Development for the traffic safety planning and implementation.

The main activities discussed in the Master Plan are aimed towards developing sustainability of traffic safety development. As also discussed, a lot can be learned from experiences of several developed countries such as Japan which also tackled serious traffic problems in the past and has developed advanced systems as countermeasures. While sophisticated and advanced systems are now available as mentioned in the Master Plan's basic strategies, it is necessary to carefully assess first the introduction of such technologies in Vietnam. Needless to say, most of these advanced technologies would require high investments for operation/maintenance; moreover, they shall require reliable database such as traffic accident data, road traffic data, traffic accident victim data, road safety facility data, etc. which are obtained and managed by different organizations at present. The proposed Comprehensive Traffic Safety Database will consolidate all existing databases and shall also include license and vehicle registration/inspection data, which will be the main responsibility of the proposed NTSC.

However development of this integrated database will require some time to be established. On the other hand, responsible organizations are required to develop and

implement effective traffic countermeasures to curb the increasing traffic accidents at present and in the near future. Thus, in order to respond to these urgent requests, the functions of the NTSC must be carried out immediately for monitoring, evaluation and revision of the safety countermeasures based on scientific analysis. NTSC therefore has the following targets for this 5-year action program period:

- (1) To conduct a Feasibility Study on the establishment of the Center, and to build consensus among the concerned agencies particularly on data and information sharing.
- (2) To formulate a provisional organization for the ongoing traffic safety projects.
- (3) To collect necessary data and information for the next five-year plan.

Table 8.3.1 shows the major activities planned during this 5-year action program period. The conduct of the Feasibility Study for the development of the Center shall include organizational structure, database development as well as formulation of a human resource development plan and shall also cover the examination of financial resources for the operation of the Center. For the research and development activities, the Center will be required to associate with other traffic safety institutions, not only in Vietnam but also in other countries such as Japan and other developed countries. For the time being, ODA assistance from developed countries is one of the practical strategies until effective operation is assured.

The provisional organization may be established based on the existing Executive Office and TSPMU, which are already involved in the VRSP and JBIC traffic safety projects. It is not necessary for any drastic changes to be made on the current staffing of both organization, just changes on the structure to clearly identify functions and responsibilities in conjunction with the sustainable policy development.

The Traffic Safety Human Resource Development project will refer to the ongoing JICA Hanoi Traffic Safety Human Resource development Project (TRAHUD). Two main focus areas for the resource development are (1) traffic safety planning capability and (2) practical implementation skills for engineering, enforcement and education safety measures. The Center will organize training courses for the trainers in the respective sector in cooperation with educational institutions such as universities, academy and international organizations.

Table 8.3.1 Implementation Plan for the National Traffic Safety Center Development

Major Activities	Year					Major Considerations
	08	09	10	11	12	
Conduct Feasibility Study for Center development	■					- Operational regulation and financial viability - Coordination with other institutes
Design and development of the Traffic Safety Database software		■				- Traffic data, Accident data, Road Inventory data, etc. - Driver and Vehicle information
Collection of data and information for the Database			■	■	■	- Driver and Vehicle information, socio-economic information., etc. and other available data
Establishment of provisional organization	■					- Based on the existing organizations and staffing
Collection of data and information for the evaluation of ongoing projects		■	■	■	■	- With VRSP and JBIC safety projects
Monitoring and evaluation for ongoing projects		■	■	■	■	- With VRSP and JBIC safety projects
Human resource development in the provisional organization		■	■	■	■	- With VRSP and JBIC safety projects
Preparation of Human Resource Development Plan		■				- Trainers' training
Implementation of the Human Resource Development Project			■	■	■	- Collaboration with educational institutions

Source: Study Team

8.4 National Traffic Safety Advisory Council

The objective of the National Traffic Safety Advisory Council is to provide linkages between government sectors and private sectors. Thus, participation of the private sector and NGOs into the traffic safety activities shall be enhanced particularly for the dissemination of the traffic education and propaganda. The Advisory Council will be formulated with members coming from both government and private sectors. The Council will be responsible in conveying any request and advice from the private sector to the NTSC and vice-versa, so that traffic safety measures would be more effective and appealing.

Due to low level of peoples' safety awareness and lack of consciousness on traffic rules and regulations, significant social and economic losses were caused by increasing number of traffic accidents which is also compounded by the rapid increase in motorization brought about by the country's continuing economic development. However, due to the very limited human and financial resources from the government sector, implementation of traffic safety measures is also very limited. Therefore, it is important to develop a mechanism of inviting or encouraging participation of the private companies and NGOs. At present, major automobile companies as well as leading companies in Vietnam provide sponsorship and support traffic safety programs.

However, such sponsored activities have very limited target reach, in both geographical areas and groups of people. A very good example demonstrating the importance of effective coordination between government and private sector is the Helmet Campaign in 2007. The campaign was implemented extensively across the country, with strong governmental commitment and active private sector participation.

The Master Plan also proposed the Traffic Safety Culture Development program which is aimed at achieving the traffic safety development policy's mission of a "Kindhearted Traffic Society." The key players for this culture development should be various kinds of communities supported by NGOs and other private sectors. The proposed Traffic Safety Foundation is envisioned to provide the main financial support and the Advisory Council will ensure an effective support not only from the government sector but also from the private sector.

Further, the Advisory Council is expected to play a significant role in developing the traffic safety culture in Vietnam as a coordinative body between the government and private sectors. Membership of the Council shall therefore be consisted of representatives from both government and private sectors as well as representatives from educational institutions. This kind of tri-sectoral organization has also been established for the VRSP project, so the proposed Advisory Council will be formulated based on the further expansion of the VRSP advisory committee, which is more realistic and logical, rather than developing a totally new Council.

Since this Advisory Council will play an important role in the development of the Traffic Safety Foundation and Traffic Safety Culture Development Program, then the establishment of the Council's is urgently required. Needless to say, strong governmental leadership and support shall be indispensable to set-up and manage the Council effectively. From this perspective, strengthening of the NTSC will be the most critical issue. Table 8.4.1 shows the major activities planned during this 5-year action program period in relation with the establishment of the Advisory Council.

Table 8.4.1 Implementation Plan for the National Traffic Safety Advisory Council

Major Activities	Year					Major Considerations
	08	09	10	11	12	
Preparation of the charter for the Council and consensus building	■					- Responsibility for the foundation - Status and authority of the Council
Preparation of Operational Regulations and Guidelines	■					- Membership, voting rights, etc - Annual Report
Establishment of Executive Office		■				- In the proposed NTSA (authority)
Selection of the members and chairperson		■				- From Government, NGO, Private sector, International community
Preparation of annual Action Program		■	■	■	■	
Permanent operation			■	■	■	- Periodical meetings

Source: JICA Study Team

8.5 National Traffic Safety Foundation

The National Traffic Safety Foundation is aimed at providing sustainable fund resources for continuous dissemination activities to increase traffic safety awareness and also to promote traffic safety interventions with NGOs and private companies as well as communities. Not only local organizations but also foreign organizations are envisioned to be involved in the Foundation. Foreign organizations such as international automobile companies have extensive experiences and know-how on the conduct of traffic safety campaigns and activities. Moreover, they have played significant roles in various forms in foundations from other countries. On the other hand, the automobile industry, which is a leading industry for the development of automobile society, is envisioned to take social responsibility in achieving more desirable traffic society in the concept of Corporate Social Responsibility (CSR).

As already mentioned, the private sector has been conducting simultaneous activities through their own initiatives and expertise. Those activities are found to be contributing effective impacts and influences to the peoples' safety awareness and they should be continued. However, in order to accelerate the improvement of the peoples' safety consciousness, more community involvement activities based on the concept of "Participation, Experience and Practice" are proposed aimed at developing a desirable Traffic Safety Culture for the country or, initially, to encourage local governments to develop their respective town's or community's "safety culture."

The Vietnam Innovation Day 2007 by the World Bank was conducted with the theme of "Traffic Safety". The program was aimed at providing funds for traffic safety activities implemented by any group and any person in Vietnam. More than 250 proposals were submitted from communities, school groups, organizations, peers, etc. nationwide, from urban, rural and even remote areas. A total of 30 projects were selected and received funding with maximum of USD10,000. This kind of nationwide activity has proven to be very effective in promoting "Participation, Experience and Practice." Unfortunately, however, this program was organized only during the past 2007 and there is no indication of a repeat, or sustainability, for that matter. Thus, in order to develop a "Kindhearted Traffic Society in Vietnam," these kinds of efforts should be continued until the peoples' behaviors have finally internalized the necessary changes towards a desirable traffic society. The Proposed Traffic Safety Foundation is therefore expected to ensure sustainable funding for such activities.

A foundation is one of the popular systems present in the traffic safety sector in other countries. Many types of traffic safety foundations are operating from national level to local level, from research activity to propaganda activities. In Vietnam, there are some NGOs providing support for traffic safety campaigns and other activities. Since the proposed Foundation shall promote nationwide activities, accordingly, it shall require sufficient funding available for its operation. It will then be necessary to invite many organizations, particularly those from automobile and its related sectors. To make the Foundation more attractive to the target sectors, aside from encouraging these corporations to adhere to the concept of CSR, some incentives may also be provided for their contributions such as tax exemption for social contributions. The proposed National Traffic Safety Advisory Council should take responsibility in preparing a more

desirable environment and to make participation to traffic safety activities of the Foundation more attractive.

During this 5-year action program period, the National Traffic Safety Foundation development program is aimed at establishing the Foundation and making it fully operational as soon as possible so that funds for Traffic Safety Culture development program will be secured. Major activities for the action program are shown in Table 8.5.1. The legal procedure should be completed by 2010, and from then on, it shall gradually build up the organization according to the expansion of the activities.

Table 8.5.1 Implementation Plan for the National Traffic Safety Foundation

Major Activities	Year					Major Considerations	
	08	09	10	11	12		
Feasibility Study on establishment of the foundation		■				- Corporate status, tax incentives - Fund operation	
Preparation of Articles of the Foundation		■				- Relationship with NTSA and Advisory Council	
Preparation of Operational Regulations of the Fund		■				- Compliance - Audit system	
Establishment of the Executive Office		■				-	
Preparation of yearly activity plan and Schedule			■	■	■	■	- Traffic Safety Culture development - National Traffic Safety Campaign
Start of Operation			■	■	■		

Source: JICA Study Team

8.6 Development of Legal System for Sustainable Traffic Safety Policy

To eliminate complex traffic accident causes including defects on road facilities and lack of social consciousness on traffic safety as discussed in the Master Plan, the comprehensive approaches and sustainable efforts shall be the most important strategies. In order to ensure sustainability, needless to say, it is important to establish a comprehensive institutional infrastructure such as a Traffic Safety Policy Law, which covers new organizations and systems proposed in the Master Plan. The Policy Law shall cover the function of the National Traffic Safety Committee and Provincial Traffic Safety Committee, policy guideline for the Traffic Safety Plans (Master Plan and Action Program). Under this Law, implementation regulation of the National Traffic Safety Authority, National Traffic Safety Advisory Council and Traffic Safety Foundation implementation regulations should also be clarified and identified clearly.

For Traffic Safety Plans development, the laws should define the status of the Traffic Safety Mater Plan and Traffic Safety Fundamental Plan (Five-year Plan) which will be prepared by the National Traffic Safety Committee, and status of the Local Traffic Safety Plan prepared by the provincial governments and city governments. In addition, this JICA Traffic Safety Master Plan Development Study is aimed at formulating a nationwide Traffic Safety Fundamental Plan, and based on this fundamental plan, each provincial government shall develop their own Traffic Safety Plan.

Target of the Action Program is to legalize proposed institutional innovations discussed in this chapter. The Traffic Safety Policy Law may not be absolutely necessary; it may include other laws or ordinances such as the Road Traffic Law, as long as proposed institutional innovations are legalized. Table 8.6.1 shows the Traffic Safety Policies Law in Japan.

Table 8.6.1 Traffic Safety Policies Law in Japan

Chapter 1. General Rule
- Objective
- Definition
- Responsibility of National Government and Local Government
- Responsibility on Traffic Safety Facilities
Chapter 2. Traffic Safety Committee
- Central Traffic Safety Committee and Central Traffic Safety Task Force
- Prefecture Traffic Safety Committee
Chapter 3. Traffic Safety Plan
- National Traffic Safety Master Plan (Basic Plan)
- Traffic Safety Plan (Five-year Plan) – Prefecture Plan
- Local Traffic Safety Plan (Five-year)
Chapter 4. Policy for the Traffic Safety Plan
- Development of the Traffic Environment
- Dissemination of Traffic Safety Education and Propaganda
- Safety Driving
- Safety Vehicles
- Traffic Order
- Medical Emergency
- Insurance
- Research and Development, etc
Chapter 5. Others

Source: JICA Study Team

8.7 Cost Estimation and Investment Plan for Institutional Improvement

Table 8.7.1 shows the estimated investment cost and schedule for the institutional innovations discussed in this chapter. Total investment required is USD17.37 million during the 5-year action program period. Major investment is allocated for the office facilities followed by human resource development. Traffic Safety Center project and Traffic Safety Foundation project will require some budget allocation for the Feasibility Study to examine further the organizational establishment, economic and financial viability, as well as sustainable fund sourcing, etc.

Table 8.7.1 Overall Investment Plan for Institutional Improvement Five-Year Action Program

Program	Cost Item	Cost (mill USD)	Investment Plan					Remarks
			08	09	10	11	12	
National Traffic Safety Authority	Legalization	0.06	0.03	0.03	-	-	-	Consultant fees
	Office Facilities	4.50	-	-	-	-	4.50	
	Equipments	0.15	-	-	-	-	0.15	
	Capacity Building	0.20	-	0.05	0.05	0.05	0.05	Training
	Total	4.91	0.03	0.08	0.05	0.05	4.70	
National Traffic Safety Center	F/S	0.06	0.03	0.03	-	-	-	Consultant fees
	Office Facilities	9.00	-	-	-	4.50	4.50	
	Equipments	1.00	-	-	-	0.50	0.50	
	Software	0.12	-	0.06	0.06	-	-	Consultant fees
	Capacity Building	0.32	-	0.08	0.08	0.08	0.08	Training
	Total	10.50	0.03	0.17	0.14	5.08	5.08	
National Traffic Safety Advisory Council	Legalization	0.03	0.03	-	-	-	-	Consultant fees
	Total	0.03	0.03	-	-	-	-	
National Traffic Safety Foundation	F/S	0.10	0.05	0.05	-	-	-	Consultant fees
	Office Facilities	1.80	-	1.80	-	-	-	
	Capacity Building	0.05	-	0.05	-	-	-	Training
	Total	1.94	0.05	1.90	-	-	-	
	Grand Total	17.37	0.14	2.15	0.19	5.13	9.78	

Source: JICA Study Team

9 ECONOMIC EVALUATION AND IMPLEMENTATION PLAN

This Chapter will present the economic justification for each proposal in each sector, and the Investment Fund Resources and Implementation Schedule for the whole Action Program.

9.1 Overall Economic Evaluation of the Action Program

The Action Program is evaluated from the economic perspective, following the prevailing method of cost-benefit analysis wherein the project cost and benefit are measured in economic price and compared through the plan life. This economic evaluation can justify economically the proposed Action Program by finding out Benefit/Cost ratio and Economical Internal Rate of Return (EIRR).

1) Cost Estimation for the Action Program

Total cost of the Five-Year Action Program is estimated at USD1,351 million (about VND22,289 billion). Table 9.1.1 summarizes total cost presented by implementation year while Table 9.1.2 presents the program costs per sector. Based on the total cost of the proposed Action Program, the following should be taken into consideration:

- The GOV's approved Scheme to ensure National Traffic Order and Safety as indicated in Decision No 259/QDD-TTg dated 4 March 2008 estimated an amount of VND 6,953 billion. The very large discrepancy of the estimated costs between the Scheme and the Action Program may be due to the following:
 - The Scheme deals with all transport modal (road, railway, in-land waterway etc.) while the Action Program deals with road transport only.
 - The Scheme time interval is 2008 until 2010, while the Action Program targets a five-year implementation period (2008-2012).
 - More importantly is that the cost estimated in the Action Program includes all proposed measures while the Scheme only considered cost for some measures and does not include cost for traffic safety improvement of infrastructure which is majority of the cost of the Plan (about 55-80%). In addition, the Scheme does not include expenditure for medical emergency which is also included in the Plan.
- Total cost of this Action Program is approximately 1.66% of the nationwide GDP in 2007, which is lower than the economic loss due to traffic accidents nationwide (about 2.8% of GDP as already mentioned). In addition, it is lower than cost of some single projects such as the First Metro Line in HCMC which required USD1.9 billion¹
- As shown in Figure 9.1.1, the first two years are mainly dedicated to preparatory works that is why the cost percentage in these years is lower than the succeeding three years where majority of implementation works are scheduled to be undertaken.

¹ <http://khanh-blog.over-blog.com/article-18045475.html>

Table 9.1.1 Cost Estimation for the Five-Year Action Program by Sector

In Mil USD

No	Sector	2008		2009		2010	
1	Road Infrastructure	58.8	50.8%	132.8	55.6%	184.7	51.5%
2	Transport Management			12.5	5.2%	51.6	14.4%
3	Traffic Enforcement	56.7	49.0%	59.8	25.0%	75.2	21.0%
4	Education & TS Culture			7.5	3.1%	12.2	3.4%
5	Medical Emergency			24.2	10.1%	34.6	9.7%
6	Institution	0.1	0.1%	2.2	0.9%	0.2	0.1%
	Total (per year)	115.7	100.0%	238.9	100.0%	358.5	100.0%
No	Sector	2011		2012		GRAND TOTAL	
1	Road Infrastructure	182.1	52.7%	180.6	61.8%	739.0	54.7%
2	Driving	46.4	13.4%	3.3	1.1%	113.8	8.4%
3	Enforcement	71.8	20.8%	64.2	21.9%	327.7	24.3%
4	Education & propaganda	15.5	4.5%	13.9	4.7%	49.0	3.6%
5	Medical Emergency	24.5	7.1%	20.6	7.1%	103.9	7.7%
6	Institution	5.1	1.5%	9.8	3.3%	17.4	1.3%
	TOTAL	345.4	100.0%	292.3	100.0%	1,350.8	100.0%

Source: JICA Study Team

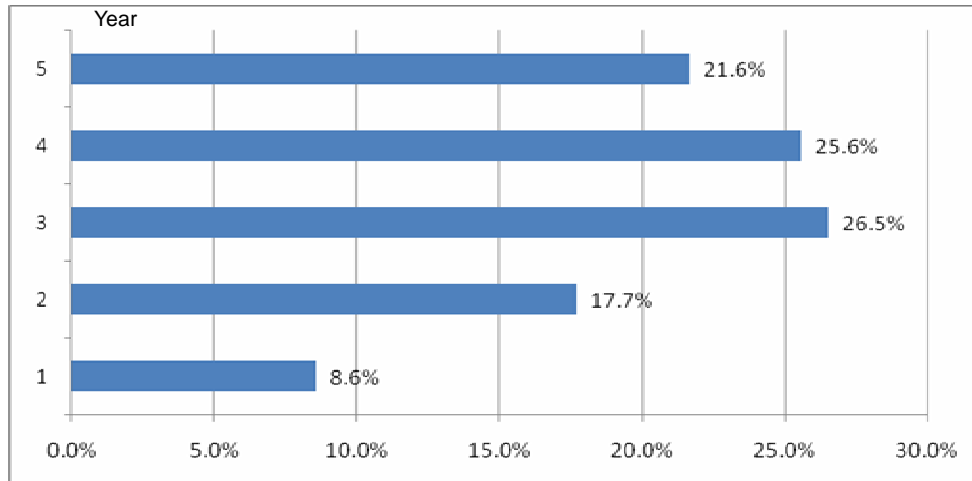
Table 9.1.2 Cost Estimation for the Five-Year Action Program by Sectoral Program

Unit: (Million USD)

	Traffic Safety Program	Annual Investment Plan					Total
		1	2	3	4	5	
Road Infrastructure	1) Black Spot Improvement Plan	8.3	7.9	10.9	13.1	12	52.0
	2) Traffic Safety Audit System Development Plan	0.3	0.7	0.6	0.5	0.4	2.5
	3) Traffic Safety Corridor development Plan	0.7	30.4	50.1	50	50	181.2
	4) Highway TS Facility Enhancement Plan	39.6	77	92.2	91.9	91.9	392.6
	5) Vulnerable Road User Accident Prevention	1.5	12.8	25	25	25	89.3
	6) Expressway Safety Development Plan	1.2	1	0.3	0.3	0.3	3.1
	7) Road Work Traffic Safety Development Plan	6.7	2.7	5.1	0.2	0.2	14.9
	8) TS Monitoring and Maintenance Plan	0.5	0.3	0.4	0.4	0.4	2.0
	9) Human Resource Development Plan	-	-	0.1	0.7	0.4	1.2
	Sub-total	58.8	132.8	184.7	182.1	180.6	739.0 [54.7%]
Transport Management	1) Safe Driving and Vehicle Safety Development	-	12.5	51.6	46.4	3.3	113.9
	Sub-total	-	12.5	51.6	46.4	3.3	113.9 [8.4%]
Traffic Enforcement	1) Enforcement for Inexperienced Road Users				4.9	5.7	10.6
	2) Enforcement for Deliberate Law Violations	3.2	2.0	3.5	3.5	3.5	15.6
	3) Traffic Safety Culture Supporting Program		0.2	3.9	4.2	4.0	12.2
	4) Comprehensive TS Enhancement Program		0.3	4.1	4.6	4.2	13.2
	5) Database Development Program		0.9	5.6	5.6	5.6	17.7
	6) Human Resource Development Program		1.8	4.2	4.6	2.8	13.5
	7) Enforcement Equipment Modernization Preparation	53.6	47.7	44.8	35.7	31.9	228.7
	8) Transport Inspectors Program		2.8	5.2	4.7	3.3	16.1
	Subtotal	56.7	53.0	66.1	63.0	57.7	327.7 [24.3%]
Traffic Safety Education and Traffic Safety Culture	1) Safety Practice for Pre-school Children			0.2	0.2		0.4
	2) Traffic Safety Education for Students		0.0	0.1	2.0	3.6	5.7
	3) Community Involvement Program		0.0	1.0	2.0	1.7	4.7
	4) Institution and Human Resource Development for Schools		0.0	0.4	0.4	0.2	1.1
	5) Traffic Safety Culture Development Program		7.2	10.4	10.8	8.4	36.9
	6) Traffic Safety Campaign and Propaganda		0.2	0.0	0.0		0.3
	Subtotal		7.5	12.2	15.5	13.9	49.0 [3.6%]
Medical Emergency	1) Pre-hospital Care Enhancement		10.1	10.5	10.3	7.3	38.3
	2) Capacity Development for Mass Casualty		0.3	0.3	0.3	0.1	0.9
	3) Medical Emergency Resources Development		13.8	23.8	13.9	13.2	64.8
	Subtotal		24.2	34.6	24.5	20.6	103.9 [7.7%]
Institution	1) National Traffic Safety Authority	0.1	0.1	0.1	0.1	4.7	5.1
	2) National Traffic Safety Center	0.1	0.2	0.1	5.1	5.1	10.6
	3) National Traffic Safety Advisory Council	0.1	0.1	-	-	-	0.2
	4) National Traffic Safety Foundation	0.1	1.9	-	-	-	2
	Subtotal	0.4	2.3	0.2	5.2	9.8	17.9 [1.3%]
Grand Total Investment (USD million)		115.7	238.9	358.5	345.4	292.3	1,350.8 [100%]

Source: JICA Study Team

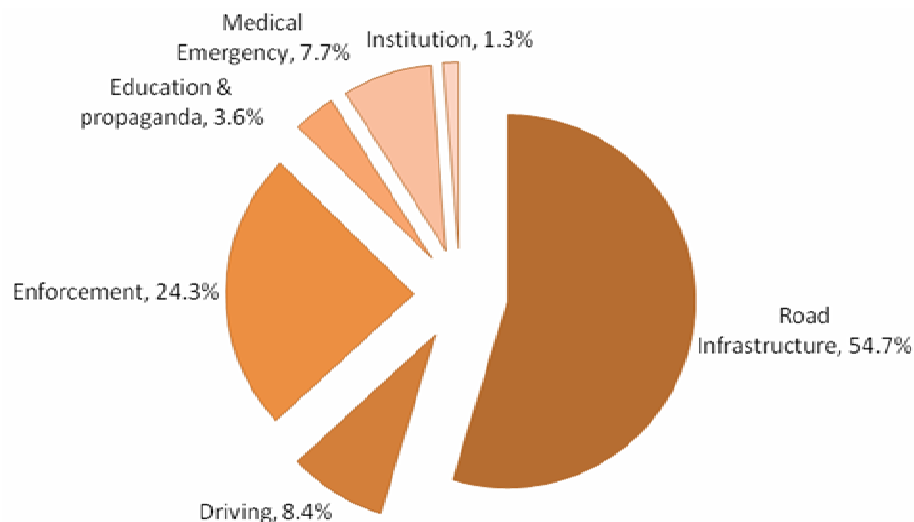
Figure 9.1.1 Cost Distribution per Year (%)



Source: JICA Study Team

- Figure 9.1.2 shows the distribution of cost by sector (and intersector) where about 55% of the total investment is for engineering improvement and 24% for enforcement. License and vehicle system improvement and medical emergency improvement share approximately 8-9% of the total respectively. Those investments are mainly for the hardware improvement such as safety facilities, nationwide communication system, among others. Investment share for Enforcement and Education sectors on the other hand are smaller because focus for these sectors are soft components such as human resource development which requires much lesser investment as compared with infrastructure and equipments investments in the other sectors.

Figure 9.1.2 Distribution of Cost by Sector (%)



Source: JICA Study Team

2) Economic Benefit of the Action Program

The Action Program's main quantifiable economic benefit is derived from the significant reduction in the number of traffic accidents. The costs of avoidable traffic accidents will form this economic benefit. These accident costs have been calculated based on a series of assumptions formulated from global experiences and researches on traffic

accidents.

The number of traffic accidents which will be reduced by the implementation of the improvements in safety facilities, education, police enforcement, medical response, etc. was then forecasted. In order to estimate the number of reduction, the target set by this Action Program was used, which is “a reduction of 5.2 - 6% in traffic accidents per year against previous year, in terms of the absolute number of fatalities” (Chapter 2). Other assumptions are made based on known information such as Heinrich Law of Accidents, Pyramid of Injuries of MOT, etc.

With 2008 as the basic, the traffic accident data of 2007 is considered as the baseline data.

Table 9.1.3 2007 Traffic Accident Data as Baseline Data

No	Item	Number
1	Traffic Accident	13,985
2	Fatalities due to Traffic Accidents	12,800
3	Injuries due to Traffic Accidents	10,266

Source: NTSC Report dated 24 Jan 2008 at Annual National Conference on Traffic Safety

Durable life of the traffic safety program for economic evaluation is another issue. Transportation project is usually very long, that is, 50 to 60 years, if it is properly maintained. On the other hand, economic project life is considered much shorter than the physical life, that is, 25 to 35 years, because the facilities soon become outdated and uneconomical due to rapid innovation. Therefore, most of the transportation projects will apply economic project life of 30 years after commencement of operation. However, even though the traffic safety program will include construction of the safety facility infrastructure, durable life of the traffic safety program will be much shorter than the infrastructure development in terms of sustainability of keeping peoples' awareness on traffic safety as derived from the programs. Moreover, traffic situation and causes of traffic accident is expected to change in accordance with the expansion of the motorization and changes on the socioeconomic situations. Thus, economic evaluation for this project applies 10 years of economic project life from the second year, when actual traffic safety programs are completed, that means 15 years since the first year of the Five-Year Action Program.

3) Cost-Benefit Analysis and Sensitivity

Table 9.1.4 shows the summary of the economic evaluation with economic cash flow over the period for calculation of economic internal rate of return (EIRR). The economic internal rate of return (EIRR) for said investment is showing a high EIRR of 21%, which economically justifies the Action Program.

Table 9.1.4 Summary of Economic Evaluation

No.	Year	Action Program		Net Cash Flow	Discount Cash flow	Discounted Cost	Discounted Benefit
		Cost	Benefit				
1	2008	115,676	0	(115,676)	(115,676)	115,676	-
2	2009	238,950	104,394	(134,556)	(120,139)	213,348	93,209
3	2010	358,512	206,073	(152,439)	(121,523)	285,803	164,280
4	2011	345,355	301,072	(44,283)	(31,520)	245,817	214,297
5	2012	292,332	385,774	93,442	59,384	185,782	245,166
6	2013		386,813	386,813	219,488	-	219,488
7	2014		398,769	398,769	202,029	-	202,029
8	2015		374,843	374,843	169,560	-	169,560
9	2016		358,225	358,225	144,681	-	144,681
10	2017		341,887	341,887	123,288	-	123,288
11	2018		320,690	320,690	103,254	-	103,254
12	2019		300,807	300,807	86,475	-	86,475
13	2020		282,157	282,157	72,423	-	72,423
14	2021		264,664	264,664	60,654	-	60,654
15	2022		248,254	248,254	50,798	-	50,798
		1,350,824	4,274,422			1,046,426	1,949,601

Economic Internal Rate of Return (EIRR)	21%
Net Present Value (NPV)	50,798
Benefit / Cost Ratio (B/C)	1.86

Source: JICA Study Team

As shown in Table 9.1.5, sensitivity of EIRR is tested in terms of cost increase and benefit decrease. The Action Program is still economically viable with 13% EIRR even if the cost increases 10% and benefit decreases 10%.

Table 9.1.5 Sensitivity Analysis (EIRR: %)

EIRR		Cost Increase			
		0% up	10% up	20% up	30% up
Benefit Decrease	0% down	21%	17%	13%	10%
	10% down	16%	13%	10%	7%
	20% down	12%	9%	6%	4%
	30% down	7%	5%	2%	0%

Source: JICA Study Team

9.2 Investment Fund Sources

As ESCAP considered, the most basic and prevailing constraint for many countries in achieving traffic safety goals is the insufficient amount of resources available.² Similarly, the Federal Ministry for Economic Cooperation and Development of Germany believe that “the funding problem seems to be the most difficult one to overcome and needs to be tackled first in combination with road safety awareness” improvement³. In Volume 3, Part 1, Sub-section 9.4, various financial resources with advantages and disadvantages are presented, as follows:

- Value-added generated by transport to State budget

² ESCAP document No. E/ESCAP/CMG(4/I)/7 dated July 30, 2007

³ The Road Safety Cent – Management and Financing of Road Safety in Low-Income Countries. Deutsch Gesellschaft fuer Technische Zusammenarbeit GmbH, Eschborn, Germany, 2006

- Surcharge for ensuring traffic safety in addition to funds collected from fines
- Surcharges on motor fuel
- Surcharges on weight-distance charges
- Surcharges on vehicle insurance compulsory
- Surcharges on vehicle license fees
- Surcharges on road tolls
- Contribution by private sector
- Development loans and grants

Among them, the first one, the value-added generated by transport, is advantageous for majority of cases and it justifies the investment of state budget in transport and/or traffic safety projects by contributing to the increasing magnitude of state budget through tax and through other contributions for socio-economic development. But this value-added cannot be an extra receivable resource for traffic safety.

The last two, contribution from private sector and development loans and grants, largely depend on the sponsors/donors and need special mobilization mechanism. The private sector is proposed to contribute to the Traffic Safety Foundation as presented in Chapter 8 while securing loans and grants is the responsibility of the Government. Therefore, the issue is how to mobilize the rest of potential funding resources for the Five-Year Action Program.

There are related issues, as follows:

(1) Mandate on Receivable Accounts

This authority consists of four items: (i) Regulations on the rate of tax/fee/charge, (ii) Collection mechanism, (iii) Management, and (iv) Usage of each kind of receivables.

The proposed fund resources can be basically in two forms, (i) Additions to tax and (ii) Fee and charge. They however need very sound legal bases to be applied:

- As stipulated in the “State Budget Law” No. 01/2002/QH11 dated 16 December 2002, tax and all tax-related receivables are decided by the National Assembly.
- Regarding Fee and Charge, the Decree No.24/2006/ND-CP dated 6 March 2006 stipulated that:
 - The Government prescribes the important fee with significant amount and related to various socio-economic policies.
 - The Provincial People Council prescribes some fee and charges that are related to local land, natural resources management and to state management functions of local governments.
 - The MOF stipulates the other types of fees and charges to be standardly applied nationwide.

(2) Preparatory and Approval Process for Legal Bases

The preparation and approval of these legal bases should go through the general process through the following steps with proposed schedule shown in Table 9.2.1.

Table 9.2.1 Schedule of Preparatory and Approval Process for Legal Bases of the Newly Proposed Government Receivables

Step	Activity	Dec -08	Feb -09	Apr -09	Jun -09	Aug -09	Oct -09	Dec -09	Jan -10
1	NTSC proposes to the Government and/or MOF to get concurrence to consider the possibility of mobilization of these potential resources for traffic safety.								
2	Working group(s) with members from MOF, NTSC and related agencies to draft fundamentals								
3	Comments and opinions from related agencies and local government								
4	Revision of draft and submission of proposal to the Government or MOF for approval								
5	Approval and issuance by the Government or MOF								
6	The local government in Hanoi and HCMC to decide on Surcharge for ensuring traffic safety in addition to funds collected from fines								
7	Collection of proposed new funding sources begins								

Source: JICA Study Team

Table 9.2.2 Road Safety Activities and Potential Funding Sources

Activities	Potential Funding Sources (categories may overlap)			
	State/Local Budget	User charge	Development loans/grants	Private sector contribution
Safety coordination	√	√	√	
Road infrastructure	√		√	
Traffic management	√		√	
Information	√	√	√	√
Education	√	√	√	√
Enforcement and inspection	√		√	
Accident data, research and studies	√	√	√	√
Emergency response and medical data	√	√	√	

Source: JICA Study Team

9.3 Implementation Policies

To ensure the successful implementation of the Action Program, it is necessary to confirm the following:

- Implementation strategies
- Roles and responsibilities of any road safety stakeholder
- Monitoring and evaluation.

1) Implementation Strategies

The improvements to be implemented cover all major sectors related to road safety and the individual countermeasures were phased to ensure maximum effect. The strategies adopted are as follows:

- The Action Program proposes various measures based on the 4E approach and the “All-People” and “Comprehensiveness” policies. Therefore, implementation should also be based on the same approaches/policies.
- For the great social impact of the proposed Action Program, a very strong leadership from the Government is essential to ensure the smooth and sustainable implementation.
- In addition and equally as important, a close relationship among responsible agencies and between central and local governments is necessary; thus, the adoption of the 4Cs (cooperation, collaboration, coordination, and communication) approach is advisable.
- The initial years of this Action Program shall have preparatory works as the main tasks, which will prove convenient and provide opportunities for further activities. Among the preparatory works, those concerning institutional and planning issues are being emphasized, which impacts greatly on the smooth and sustainable implementation of the entire Master Plan and the first Five-Year Action Program.
- For some key strategic improvements to be carried out, absolute funding will be necessary (such as for the development of an improved accident data system). For some other proposed measures, however, some amount (or “seed money”) should be enough to realize and encourage desirable results and developments. There are also some proposed measures which may require funding or support for a limited period only, after which, anticipated developments and resulting activities (or sustainable operation) would eventually take over the funding requirement:
- For staffing development and technical assistance, funds for technical specialization training of key personnel is necessary so that in the future, the more comprehensive safety improvements that will be required could be implemented by adequately-trained and skilled local professionals. For the interim period, technical assistance from international specialists and consultants would be required to assist in planning and implementation of the key strategic improvements as well as in the training of local staff through demonstration projects.

2) Roles and Responsibilities of Different Road Safety Stakeholders

Following the “All-People” policies, any stakeholder could and should take part in the traffic safety activities. It is enviable for each stakeholder to actively participate and own to their roles/responsibilities as professionally as possible. To do that, suitable legal framework and policies to encourage these stakeholders are very essential.

The most important stakeholder groups who can be mobilized and who have a role to play in reducing road traffic accidents are summarized as follows:⁴

⁴ http://www.worldbank.org/transport/roads/saf_docs/orgs.pdf

(i) Government and the Public Sector can:

- Provide leadership and a framework for the development and implementation of effective road safety policies.
- Provide high standards of accountability in meeting road safety objectives and to ensure the effective use of resources.
- Provide funds for road safety programs that maximize benefits.

(ii) Local and Regional Governments can:

- Take a leading role in coordinating the road safety effort of all relevant agencies and community groups within their particular administrative area. These activities should be consistent with the National Road Safety Plan, and coordinate activity across all relevant agencies in that geographic area.
- Ensure that planning of local facilities and residential areas effectively takes account of the road safety needs of the community.
- Where possible, fund and implement road safety programs and initiatives.
- Ensure effective policies for the control and enforcement of liquor laws.

(iii) Communities and Cultural or Ethnic Organizations can:

- Provide support and leadership for road safety campaigns and initiatives.
- Demonstrate a concern for the number of road deaths occurring and a commitment to foster improvements.
- Persuade various communities to accept a greater participatory role in road safety improvements.
- Work with other organizations in providing road safety education/publicity and other road safety programs.

(iv) Education Sector can:

- Make a formal commitment to promote effective road safety education in schools and pre-schools so that appropriate behavior is fostered from early age.
- Develop links between schools and other agencies, such as the MOT, NTSC and police, in relation to road safety.
- Assist in the life-long education of road users.

(v) Media can:

- Enhance community awareness and understanding of the causal factors and real costs of road crashes.
- Support road safety initiatives through responsible and objective reporting.
- Influence societal changes which lead to a reduction in unacceptable driver behavior and poor attitudes.

(vi) Police and Enforcement Agencies can:

- Improve road user behavior and vehicle standards through a balance of

education, encouragement and effective enforcement strategies.

- Maximize enforcement effectiveness using proven enforcement systems and technology.
- Maintain a high level of expertise in crash/casualty reporting.
- Focus on high-risk behaviors and use casualty and crash data to identify locations and where police enforcement could minimize such unsafe behaviors.

(vii) Health Agencies and Professionals can:

- Ensure development of effective emergency medical/services.
- Advise patients on their fitness to use the road, including the effects of prescribed drugs and medication on road user performance.
- Provide feedback from injury assessment to improve vehicle occupant protection and road safety policy.
- Provide health promotion road safety programs.
- Liaise with other practitioners in the road safety field to avoid duplication of effort.

(viii) Transport and Land-Use Planners can:

- Adopt effective and safe traffic management measures in planning transport and land-use developments.
- Pay particular attention to the safety requirements of people with disabilities, older people, children, pedestrians, bicycle riders and other non -motorized road users in the planning task.

(ix) Road Engineers and Highway Authorities can:

- Improve the safety performance of the road network by ensuring that planning, design, construction and maintenance places a high priority on safety outcomes.
- Apply crash reduction and crash prevention techniques to create safer road networks for the future.
- Review and safety audit existing, rehabilitated and new roads to eliminate unnecessary hazardous locations and misleading/absent markings.

(x) Insurance Industry can:

- Assist in the development, sponsorship and funding of crash prevention programs.
- Provide premium incentives as a means of encouraging and rewarding safer behavior.
- Provide feedback to government and regenerative crash trends and outcomes to assist in the further development of road safety policy.

(xi) Alcohol and Hospitality Entertainment Industry

- Adopt responsible standards of alcohol serving and host responsibility programs,

especially for young adults.

- Assist patrons in monitoring alcohol consumption, for example, through the use of coin-operated breath testers and better labeling of alcoholic content of beverages.
- Promote the consumption of low-alcohol beverages in preference to higher proof drinks.
- Advertise and promote alcohol responsibility.

(xii) Vehicle Manufacturers and Importers can:

- Improve crashworthiness features of vehicles including enhanced occupant protection
- Progressively introduce in-vehicle crash avoidance technology.
- Adopt an advertising code which promotes the safety features and safety performance of vehicles and their responsible use.
- Discontinue importation of crashed vehicles. Such crashed vehicles must be repaired/restored in the originating country before being imported into Viet Nam
- Only vehicles under five years old to be imported and all vehicles to undergo a mandatory vehicle roadworthiness inspection before being permitted to use on Viet Nam roads.

(xiii) Heavy Vehicle Transport Industry can:

- Adopt responsible freight forwarding and driving schedules which permit adequate rest breaks and promote driver safety.
- Prevent the abuse of alcohol and drug stimulants and promote healthy lifestyle habits amongst drivers.
- Ensure high standards of vehicle, mechanical safety, and load stability and security.
- Enhance industry professionalism and safety through improved fleet management.

(xiv) Driver Training Providers can:

- Require all learner vehicles to display signs.
- Equip learner and novice drivers with the necessary skills, attitudes and behavior needed to drive safely on our roads.
- Maintain and foster a high standard of driver training, instruction and professionalism.
- Promote and foster the upgrading of driving skills amongst drivers, particularly drivers of heavy and public service vehicles.
- Establish an Association and enhance industry professionalism by developing a Code of Providers teaching materials, Driving Instructors training programs, etc., for their members.

(xv) Motoring Associations can:

- Promote road safety amongst their memberships by providing up-to-date and relevant information on traffic laws, safe driver behavior and techniques, road conditions, maintenance procedures and vehicle safety.
- Support, promote and sponsor effective road safety initiatives and campaigns.
- Provide membership feedback to government and industry on road safety policy and new initiatives.

(xvi) Advertisers can:

- Discourage advertising which glamorizes and/or promotes unsafe practices and products.
- Actively encourage safer practices and products.

(xvii) Researchers/Universities can:

- Ensure that there is a balance between research on basic and applied topics.
- Ensure that road safety research is of high quality, timely and that its implications are identified and promoted.
- Ensure the development of high quality databases.
- Evaluate effectiveness of measures implemented to ensure cost effective expenditure.
- Provide reliable research results and knowledge against which policy decisions can be made.

(xviii) All Organization can:

- Develop internal safety policies for their staff including host responsibility.
- Promote safe practices in fleet operation.
- Larger fleet operators can encourage staff to participate in defensive driving courses, and where feasible, sponsor or buy in defensive driving courses for own staff at own premises.

(xix) Individual Road Users can:

- Attain a greater understanding, awareness, and practice of safe behavior and skills.
- Make a personal commitment to improve road safety by adopting more courteous and considerate road behavior and demonstrating care for the safety of others.

3) Monitoring and Evaluation

All road safety activities should be monitored to ensure that money is being spent effectively and lessons are learned about the most and least successful schemes. Given that funds are always limited for such purposes, it is imperative that the money available is spent in the most efficient, prudent and effective way to tackle the problem. As each initiative is implemented, the effectiveness of that measure should be

monitored (ideally by comparing accident data from the before and after program implementation for equivalent periods of time).

Monitoring of an overall action program aimed at institution building and strengthening the key agencies with road safety responsibilities must focus on whether the objectives of the action program are being achieved. It is necessary to ensure that the activities of the consultants and specialist advisors have been effective and that the impact of such activity is having the desired effect in terms of strengthening the capability of the country to tackle the problem.

The use of monitoring frameworks is to be recommended and generally results in greater success in terms of implementation of action programs.

This identifies (in a framework format) exactly what activities are to be carried out as part of the action program implementation and seeks to identify performance indicators that can be used to see whether or not the desired impact has been achieved. They can be used during implementation to identify whether the project is progressing as desired in terms of development and institutional impact.

10 CONCLUSION AND RECOMMENDATION

10.1 Conclusion

The National Traffic Safety Master Plan Study has been completed by the JICA Study Team in cooperation with the NTSC and other line ministries, MOT, MOPS, MOET, and MOH. Major findings of the Study are summarized as follows:

- (1) Smooth economic development has brought rapid increase in rate of motorization. As of 2007, a total of 23 million vehicles are registered across the country, 90% of which are motorcycles, a phenomenon creating a unique motorization characteristic in the world.
- (2) Number of traffic accidents has decreased since 2002; however, the number of fatalities has remained high with over 10,000 fatalities since year 2001. In 2006, total number of fatalities and injuries reported were 12,757 and 11,288 respectively, which increased economic losses to approximately 3% of the GDP.
- (3) Causes of the traffic accident are intricately-intertwined between physical situation and human errors, mixed traffic and reckless driving behaviors. Many traffic accidents have occurred on the main national highways, particularly in the major urban areas and its conurbations, of which 70% of total fatalities are motorcycle users. The major causes of accidents are over speeding and reckless overtaking. Moreover, it should be underscored that more than half of the total victims are below 30 years old.
- (4) The Government of Vietnam has undertaken numerous countermeasures as well as enlisted the support, assistance and cooperation of international donors to alleviate one of the most pressing social problems in the country at present, which is traffic safety. While some of the countermeasures are showing positive results such as the nationwide campaign for helmet wearing, however, there is still a long way to go to develop safe driving behaviors among traffic participants in the country.
- (5) Urgent traffic safety issues have been addressed by the different sectors, such as black spot improvements and traffic safety corridor improvements for the Engineering sector, and enhancement of the traffic enforcement capacity and dissemination of the school traffic safety education for Enforcement and Education Sectors respectively, as well as development of the 115 system for Emergency sector. However, these efforts are still on the pilot stages and only in very limited areas.
- (6) Based on the current road traffic safety situations in Vietnam, the Traffic Safety Master Plan and its Action Program have been developed. The Master Plan is aimed at developing traffic safety development policies and strategies toward 2020, while the Action Program will be the implementation program of the proposed Master Plan policies and strategies for the next five years (2008-2012). However, based on the endorsement schedule of the proposed plans of the government, the actual implementation period of the Action Program should be re-interpreted to the period 2009-2013.

- (7) Proposed Action Program is an integration of different sectoral programs into a comprehensive program: Transport Engineering (9), Transport Operation (1), Traffic Enforcement (8), Traffic Safety Education and Traffic Safety Culture Development (6), Medical Emergency (3) and Institutional Improvement (4), for a total of 31 programs.
- (8) Estimated investment cost is USD1,351 million (about VND22,289 billion) million for the next 5 years, where 55% of the total investment is for engineering improvement followed by enforcement sector with 24% share in total required investment. License and vehicle system improvement and medical emergency improvement share approximately 8% of the total respectively. Those investments are mainly for the hardware improvement such as safety facilities, nationwide communication system, among others. Investment share for Education sector on the other hand is smaller because focus for these sectors are soft components such as human resource development which requires much lesser investment as compared with infrastructure and equipments investments in the other sectors. The economic internal rate of return (EIRR) for said investment is showing a high EIRR of 21%, which economically justifies the Action Program.

10.2 Recommendation

Proposed national road traffic safety Master Plan will be a basic policy and guideline for the national government. Local governments shall be required to prepare their own Traffic Safety Development Plan based on the policy and guideline. The Master Plan and Action Program include all the ongoing measures and efforts, but the following are some of the major recommendations:

- (1) Mission of the Road Traffic Safety Development Policy: A Kindhearted Traffic Accident-Free Society
- (2) Proposed targets toward 2020 are:
 - (i) To reduce the number of fatalities into half (based on 2007 figures).
 - (ii) To strengthen the capability and functions of the organizations involved in road traffic safety and to develop new organizations and rules/regulations necessary to ensure sustainability of traffic safety measures.
- (3) Proposed basic strategies in the implementation of the traffic safety measures in the Master Plan are in two areas, Basic Planning Policies and Implementation Strategies:

Basic Planning Policies

- (i) Covering the three elements of Person, Vehicle and Road Traffic Environment, six (6) measure areas are identified for implementation of effective and efficient traffic safety measures.
 - Development of Safe Road Traffic Environment
 - Enhancement of Safe Driving
 - Ensuring Safety in Vehicles
 - Effective and Efficient Traffic Control and Enforcement

- Enhancement of Traffic Safety Education and Propaganda
- Development of Post-Accident Countermeasures (Medical Emergency)

(ii) Institutional development

(iii) Human and financial resource development

Implementation Strategies

a) Comprehensive traffic safety development

b) Traffic safety culture development

c) Technological innovation

(4) Proposed focus areas to reduce the number of traffic accident fatalities are: (i) Motorcycle, (ii) National Highways, (iii) Urban areas and its Conurbation, (iv) Young Population, (v) Commercial Vehicles, and (vi) Post-accident measures.

(5) Intersectoral institution and resource development for sustainable traffic safety development proposes three institutional development programs:

(i) Administrative Enhancement Programs that includes enhancement of NTSC and PTSC,

(ii) Research and Development Program for the proposed Traffic Safety Center, and

(iii) Resource Development Program that includes Traffic Safety Foundation, new Vehicle Tax System and Traffic Safety Human Resource Development.

(6) Sectoral Traffic Safety Measures

(i) Transport Engineering (MOT): Traffic safety facilities shall be improved based on the function of the road network including National Highways, Urban Roads, local roads as well as Expressways. In addition to the facility improvement, the following systemic reforms shall be implemented and introduced;

- Traffic Safety Audit System
- Traffic Impact Assessment system
- Traffic Safety Project Monitoring and Maintenance System

(ii) Transport Operation (MOT): Two important systems are proposed in this sector. One is new license and inspection system for motorcycle, the other one is Safe Driving Management System for transport companies which will identify transport operators' responsibility on the traffic accident.

(iii) Traffic Enforcement (MOPS): for the traffic enforcement sector, current efforts on the human resource development and modernization of the enforcement activities, as well as traffic accident database development shall be further strengthened in order to meet the rapid expansion of the motorization.

(iv) Traffic Safety Education (MOET): The Study has proposed a comprehensive traffic safety education system not only in school education, but also community education with the concept of "Participation, Experience and Practice" so as to develop a desirable traffic safety culture (behavior) among the people of

Vietnam.

- (v) Traffic Accident Medical Emergency (MOH): Medical emergency system in Vietnam is presently under the development stage, so that it is difficult to develop effective system for the traffic accident emergency alone. In the short-term period, it is proposed that 115 emergency system be disseminated to the people for better access and use of the system. But the insurance system, including the Compulsory Liability Insurance, should be urgently improved.
- (7) Recommendation on the Human Resource Development: Two types of human resource development will be required. One is to educate leaders and experts from various concerned organizations and another is to develop adequate manpower to implement the proposed traffic safety measures, such as traffic police and traffic engineers. The leaders and experts will be provided advanced training in the proposed Traffic Safety Center. Traffic Police and Traffic Engineers will be educated in the higher educational institutes such as universities and academies.
- (8) Recommendation on the Financial Resource Development: One of the significant issues in the successful implementation of both the Master Plan and the Action Program is the availability and source of funding. In order to ensure smooth implementation of the proposed traffic safety measures, the availability of sufficient budget will be indispensable. Since the present available fund resources are very limited, other alternative sources of funds should therefore be urgently developed. The Study proposes a Traffic Safety Fund for Traffic Safety Culture development and other road user charges for overall traffic safety measures. The new license and inspection system for motorcycle is expected to increase the responsibility of the motorcycle users, and at same time, the surcharges from fees can be one of the potential fund resources.
- (9) Comprehensive Traffic Safety Action Program is proposed for the coming Five (5) years in order to achieve the proposed three target as follows:
 - (i) Majority of road users have formed the inherent habit of respecting all traffic rules.
 - (ii) A reduction of 5.2 - 6% in traffic accidents per year against previous year, in terms of the absolute number of fatalities.
 - (iii) Strengthening of the capability and functions of the organizations involved in road traffic safety.