Social Republic of Viet Nam

Ex Post Evaluation of the Japanese Technical Cooperation Project
"Traffic Safety Human Resources Development in Hanoi"

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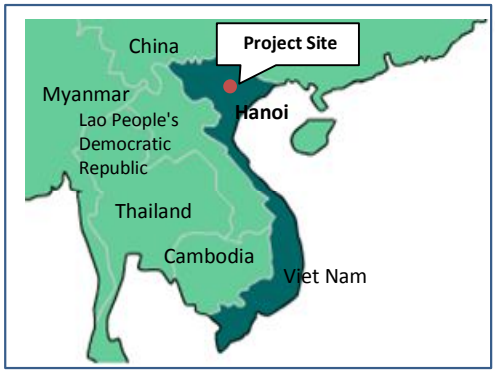
0. Summary

This project aimed at developing the human resources of traffic safety-related officers in Hanoi, namely, traffic police officers, traffic inspectors, traffic management and road facility officers, and traffic safety education-related officers in order to improve the city's traffic safety measures and to further reduce traffic accidents in Hanoi.

This project objective is consistent with the development policy and development needs of Vietnam, as well as with the Official Development Assistance policy (ODA) of Japan. The project approach is also appropriate. Therefore, the relevance of the project is high. The study confirmed that traffic safety-related indicators and the awareness of Hanoi citizens regarding traffic safety have been improving. In light of these facts, the effectiveness/impact of the project is also high. On the other hand, the efficiency of the project is low. All the inputs were necessary to achieve the project objective and were used appropriately; however, the project period and cost have exceeded the plan. As for the project's sustainability, the Vietnamese government still considers its policy to enhance traffic safety to be one of its top priorities, and the financing aspect of it is also positive, because traffic-related penalties and fines have been increasing. Hence, the sustainability is high.

In light of the above, this project is evaluated to be satisfactory.

1. Project Description



Project Location

A Police Officer Controlling Road Traffic

1.1 Background

As a result of rapid economic growth and motorization in Vietnam, the number of fatalities caused by traffic accidents reached a peak of over 13,000. The government of Vietnam recognized that traffic accidents were one of the most critical social issues facing the country, so, to this end, in 1997, it established the National Traffic Safety Committee (NTSC) and local traffic safety committees in each province to implement traffic safety measures. In spite of government efforts, the number of annual fatalities caused by traffic accidents still remained at over 10,000.

In Hanoi, the capital city of Vietnam, the Hanoi Traffic Safety Committee (HTSC) was established, and various traffic safety measures were undertaken. Despite a decrease in the number of road traffic accidents, there still are a high number of fatalities caused by traffic accidents. In response to this situation, comprehensive measures—including improved traffic facilities, greater safety consciousness on the part of road users and pedestrians, the operation of effective traffic safety controls, and enhanced traffic safety-related officers' abilities—were strongly needed. It is within this context that the Hanoi People's Committee (HPC) requested that the government of Japan conduct a technical cooperation project on traffic safety human resources development for Hanoi City. JICA and HPC started the project on "Traffic Safety Human Resources Development" in July 2006.

1.2 Project Outline

Overall Goal		Road traffic conditions are improved
Project Objective		Traffic safety measures in Hanoi are improved
Outputs	Output 1	To establish a system for the planning, implementation, and evaluation of comprehensive traffic safety measures in Hanoi
	Output 2	To improve the abilities of traffic police officers in the Hanoi Traffic Police Division
	Output 3	To improve the abilities of traffic inspectors in the Hanoi Department of Transport
	Output 4	To improve the abilities of officers in the Hanoi Department of Transport
	Output 5	To improve the abilities of officers on the Hanoi Traffic Safety Committee for traffic safety education
Inputs		Japanese Side: 1. Experts 18 for Short-Term 2. 55 Trainees received（including local cost share） 3. 16 Trainees for Third-Country Training Programs (total) 4. Equipment 25.14 million yen 5. Local Cost 103.46 million yen (including local experts' hiring cost) Vietnamese Side: 1. 37 Counterparts 2. Local Cost (13.91 million yen)

	3. Cost for Comprehensive Traffic Safety Pilot Projects (about 28.80 million yen) 4. Land and Facilities (Project Office and 2 Training Rooms)
Total Cost	617 million yen
Period of Cooperation	July 2006 – March 2009 Extended Period: April 2009 – March 2010
Implementing Agency	Hanoi People's Committee, Hanoi Department of Transport (HDOT), Hanoi Traffic Police Division (HTPD), Hanoi Traffic Safety Committee (HTSC), Police Academy, and University of Construction
Cooperation Agency in Japan	National Police Agency
Related Projects	・Study on National Traffic Accidents (Basic Survey 2001-2002) ・Program on Strengthening Road Traffic Safety (2002) ・Program on Strengthening Road Traffic Safety (Phase II) (2003) ・Basic Study on Road Traffic Safety in Hanoi (2003-2004) ・Master Plan Study on National Road Traffic Safety (2007-2009)

1.3 Outline of the Terminal Evaluation

1.3.1 Achievement of Overall Goal

Specific numerical indicators for the overall goal were not established at the time of the terminal evaluation. Nevertheless, project-related stakeholders believed that the overall goal would be achieved if traffic safety measures in Hanoi were improved, based on the fact that traffic accident-related indicators—such as the number of traffic accidents, deaths, and injuries—have been decreasing in the nation as well as in Hanoi City since the introduction of traffic safety measures.

Meanwhile, the Traffic Safety Campaign undertaken in the Comprehensive Traffic Safety Pilot Project raised Hanoi citizens' awareness of traffic safety and changed their behavior at the pilot project site[1]. Furthermore, it was decided that newly introduced technologies such as left-turn signals, pedestrian signals, and lane separation in the pilot project would be expanded to other places. The projects have also strengthened coordination with other educational and training institutions; and with organizations in traffic safety.

1.3.2 Achievement of Project Objective

The project objective had been mostly achieved by the end of the project period; therefore, its effectiveness is high. The test results at the end of the course and the progress of the pilot projects confirmed that the human resources of all traffic

[1] An intersection improvement was conducted at the road section at Chhua Boc – To Thant Thung, ChuaBoc – Tay Son, and Thai Ha – Trung Liet; and road section improvement was conducted at Tai Ha – Chua Boc in the Comprehensive Traffic Safety Pilot Project.

safety-related institutions undertaking Hanoi's traffic safety measures had improved. In respect to the establishment of a system for the planning, implementation, and evaluation of comprehensive traffic safety measures in Hanoi, further efforts will be required to complete the system by strengthening the cooperation among subcommittees that were established within HTSC before the project completion.

1.3.3 Recommendations

For project activities, the following were recommended: 1) to reset measurable and objective indicators, 2) to sustain training programs for traffic police officers, traffic inspectors, and traffic engineers, 3) to institutionalize the technologies and skills acquired through Capacity Development Pilot Projects, 4) to complete the remaining tasks on the Comprehensive Traffic Safety Pilot Project, and 5) to enhance cooperation in order to prepare the "Traffic Safety Plan" and the "Human Resources Development Plan."

In addition, the evaluation team recommended extending the project for one more year because Output 1, "To establish a system for the planning, implementation, and evaluation of comprehensive traffic safety measures in Hanoi," had not been fully achieved due to a lack of time for a detailed study, administrative restructuring, and so on.

2. Outline of the Evaluation Study

2.1 External Evaluator

Mimi Sheikh, International Development Center of Japan Inc.

2.2 Duration of Evaluation Study

Duration of the Study: December 2012 – December 2013

Duration of the Field Study: March 31 – April 16, 2013, and June 23 – June 28, 2013

2.3 Constraints during the Evaluation Study

Staff numbers and budget information from HDOT, HTPD, and HTSC were not provided because those represent Hanoi City's confidential information. Therefore, the evaluation on budget sustainability was determined by the information obtained through interviews with the upper-level management of traffic safety-related institutions, and by the trend of revenues collected through fines or administrative sanctions from traffic control activities that are the main budget source of HTSC. Also, there was difficulty in measuring effectiveness, because indicators to measure the achievement of the project objective at the time of the project's completion were not properly and objectively verifiable. Thus, the indicators were reviewed and redefined, and, if needed, alternative or additional indicators were established to evaluate the achievement of the project at the

time of ex post evaluation.

3. Results of the Evaluation (Overall Rating: B[2])

3.1 Relevance (Rating: ③[3])

3.1.1 Relevance to the Development Plan of Vietnam

The government of Vietnam started in earnest to improve the nation's traffic safety by establishing NTSC and local traffic safety committees. The 8th Socio-Economic Development Plan (SEDP) (2006-2010) reviewed the result of the 7th SEDP and pointed out that the national policy's outcome for traffic safety was not satisfactory. The government described the importance of traffic safety improvement in the chapter on National Defense and Safety, one of the priority sectors of the 8th SEDP. Based on this policy, HTSC has been taking measures to improve traffic safety in Hanoi. HTSC has been producing the city's traffic safety plan every five years, in accordance with the timing of the revision of the National Traffic Safety Program. The Traffic Safety Plan (2011-2015) and the Human Resources Development Plan (2011-2015) were posited as outcomes in the project, and HPC was expecting to use these plans after the project. Therefore, the objective and the activities of the project are considered to be relevant to the development policy of Vietnam for the period from the project planning to the project completion.

3.1.2 Relevance to the Development Needs of Vietnam

At the time of the project planning (2005), the number of road traffic accidents in Hanoi was 1,122, with 539 dead and 817 injured. The number of road traffic accidents and injuries decreased from 1995 to 2004; on the other hand, the number of fatalities increased from 291 in 1999 to 532 in 2002.

As for road traffic accidents by vehicle type, 37% of total road traffic accidents involved automobiles and 56% involved motorcycles, so the incidences of motorcycle accidents were higher than those of automobiles. Looking at the four-year trend from 1999 to 2003, pedestrian-caused accidents decreased, with not much change in motorcycle accidents, while automobile accidents increased from 30.7% to 37.2% during the same period. Thus, the enforcement of road traffic controls on automobiles as well as motorcycles was urgently required.

At the time of the project completion (2010), the number of road traffic accidents in Hanoi was 1,102, with 807 dead and 478 injured. Compared to the time of the project planning (2005), the number of traffic accidents decreased from 1,122 to 1,109, and the

[2] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory
[3] ③: High, ② Fair, ① Low

injured also decreased from 817 to 478. Only fatalities increased, from 539 to 807. Looking at the causes of traffic accidents, collisions of automobiles and motorcycles had risen along with an increase in the number of automobile users[4].

Due to this situation, appropriate measures for traffic safety-related officers to further improve the city's traffic safety were still needed, even at the time of the project's completion. According to interviews with counterparts, the need for more traffic safety knowledge and skills increased, post project completion.

3.1.3 Relevance to Japan's ODA Policy

The Country Assistance Program for Vietnam (2004) gave priority to the development of transportation as one way to develop the nation's economy, and it highlighted a focus on assistance for major international and domestic transportation trunk lines. The section on policy for power and transportation in the JICA Country Assistance Program in 2004 and 2006 described growing issues with traffic problems, such as traffic congestion and traffic accidents in large cities, due to an increase in the number of motorcycle users, and it further pointed out the necessity for providing assistance to improve traffic safety. Therefore, this project is considered to be in line with Japan's ODA policy.

3.1.4 Relevance of Project Approach

The traffic safety measures in Japan are based on the 3E (Enforcement, Engineering, and Education) approach, and this concept was used in this project[5]. In Hanoi City, HTPD is responsible for "Enforcement," which encompasses traffic regulation and traffic control on roads, and traffic analysis[6]. The Traffic Inspectors of HDOT are also responsible for "Enforcement," which encompasses illegal parking and overloaded vehicles[7]. HDOT is responsible for "Engineering." [8] The Propaganda and Education Subcommittee established in HTSC is responsible for "Education." [9] HTSC undertakes overall management of all the institutions related to the 3Es. However, unlike Japan, where all

[4] The number of automobile and motorcycle registrations increased year on year. Comparing 2005 with 2010, it increased by 3.4 times for automobiles and 2.8 times for motorcycles.
[5] Traffic accidents happen when hidden risks in "vehicles" and "roads" occur by chance and are caused by the dangerous behavior of "humans," such as a driver and a pedestrian. In response to this fact, traffic safety measures pay attention to three factors, namely "human," "vehicle," and "road environment." 3E measures stand for "Enforcement," the traffic instruction, control, and traffic accident investigations to manage road environments; "Engineering," the traffic safety facility improvements such as road signs, road indications, and traffic lights to manage automobiles; and "Education," the driver education, pedestrian and road user education to manage humans. The National Police Agency centrally manages 3E and usually takes measures in combinations of the 3Es to improve traffic safety.
[6] It corresponds to Output 2.
[7] It corresponds to Output 3.
[8] It corresponds to Output 4.
[9] It corresponds to Output 5.

3Es are managed by the National Police Agency, in Vietnam the line Ministries are more than one: For example, HDOT is under the Ministry of Transportation but HTPD is under the Ministry of Public Security. Because HDOT and HTPD have different line Ministries, institutional cooperation is not easy.

This project aimed to change the project's approach from an institutional to a cross-institutional approach. To do so, first, the project made traffic safety-related officers participate in short-term training in order to improve their abilities and, second, it also made them participate in pilot projects so that they could experience the synergistic effects resulting from cooperation among institutions. Through these activities, the project aimed to shift traffic safety measures from a vertical arrangement to a horizontal arrangement. Considering the fact that the concept of 3E itself was not known in either Hanoi City or anywhere in Vietnam in 2006, when the project started, the project approach was relevant.

On the other hand, it should be pointed out that the project summary in the Project Design Matrix (PDM) was vague, and the scope of the project and the role of each institution were also not clearly stated. These created different understandings of the project objective among stakeholders. In view of the actual project situation, the project objective, "Traffic safety measures in Hanoi are improved," could have been changed to "Traffic safety measures based on the 3E concept are undertaken through the improvement of the abilities of traffic safety-related officers in Hanoi"; and the overall goal, "Road traffic conditions are improved," could have been replaced with "The number of traffic accidents will decrease as a result of improved traffic rules and manners in Hanoi." These changes make clearer what the project was originally aiming for. However, the project approach has no effect on the relevance of the project, since this is not a problem of the logic of PDM itself.

This project has been highly relevant with the country's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high.

3.2 Effectiveness and Impact[10] (Rating:③)

3.2.1 Effectiveness

3.2.1.1 Project Output

1) Output 1: To establish a system for the planning, implementation, and evaluation of comprehensive traffic safety measures in Hanoi.

The Traffic Safety Plan (2011-2015) and Human Resources Development Plan (2011-2015) had not been completed at the time of the terminal evaluation; however, they

[10] Sub-rating for Effectiveness is to be considered with Impact

were completed during the extended project period. The detailed outputs are as follows:

- Drafts for the Traffic Safety Plan (2011-2015) and Human Resources Development Plan (2011-2015) were prepared before the end of the third year of the project, and the reports were finalized in both English and Vietnamese during the fourth year.
- According to interviews with the project counterparts, both plans were positioned as important documents for the traffic safety policy of Hanoi City, since these were the first practical, as well as comprehensive, plans, despite the fact that Hanoi City had been preparing traffic safety plans by line offices before the project.

Considering these points, it is concluded that the system for the planning, implementation, and evaluation of comprehensive traffic safety measures in Hanoi was established.

2) Output 2: To improve the abilities of traffic police officers in the Hanoi Traffic Police Division.

Two indicators were established for Output 2: 1) the degree of improvement in the traffic enforcement abilities of the traffic police officers in HTPD and 2) the number of suggestions or actions taken to improve the traffic safety in Hanoi by HTPD. The following facts were confirmed by interviewing the project counterparts and through a questionnaire survey[11]:

- While 120 trainees were planned for the project, 359 traffic police officers attended the short-term training course that was developed in collaboration with educational institutions such as the Police Academy and the Construction University. The course evaluation report showed that all trainees passed the final examination with a high score of more than 70 percent.
- The number of suggestions or actions taken to improve traffic safety in Hanoi by HTPD could not be counted, because those were undertaken in daily work activities. According to the questionnaire survey of traffic safety-related staff, 4 of 11 HTPD police officers answered that they proposed new projects and activities by using the skills and knowledge gained from the project during the project period.
- The Comprehensive Traffic Safety Pilot Project and Capacity Development (CD)

[11] Two types of questionnaire surveys were undertaken in this evaluation. One was for 95 (73 project participants and 22 nonparticipants) traffic safety-related officers from HTPD, HDOT, the Propaganda and Education Division of HTSC, and the Propaganda and Education Board of Hanoi Party Committee, and another one was for 100 Hanoi citizens, with whom an interview-based questionnaire survey was conducted.

Pilot Project were planned and implemented to improve the human resources capacity of traffic safety officers. These pilot projects gave them practical opportunities to learn new knowledge and technology, and they were highly regarded by HTPD.

- In the questionnaire survey for officers at HTPD[12], to the question, "Did you acquire new skills and knowledge through participation in the project?" all 11 respondents answered "Strongly Agree" or "Agree" (see Table 1).

Table 1 Degree of Learning by Participating in the Project (n=73[13])

	HTPD	HDOT Inspectors	HDOT Traffic management & Road Facility Officers	Propaganda & Education
Strongly agree	2	2	1	6
Agree	9	38	11	1
Neither agree nor disagree	0	1	1	0
Disagree	0	0	0	0
Strongly disagree	0	1	0	0
Total project participants	11	42	13	7

Source: Questionnaire survey for traffic safety-related officers

From the above results, it is concluded that the traffic police officers of HTPD improved their abilities through the project.

3) Output 3: To improve the abilities of traffic inspectors in the Hanoi Department of Transport.

Two indicators were established for Output 3: 1) the degree of improvement in the traffic enforcement abilities of traffic inspectors in HDOT and 2) the number of suggestions or actions taken to improve the traffic safety in Hanoi by traffic inspectors. The following facts were confirmed by interviewing the project counterparts and through a questionnaire survey:

- The number of traffic inspectors who attended the short-term training was more than 90, almost as planned.

[12] This excludes 10 non-project participants of a total of 21 respondents from HTPD.
[13] This is the result of 73 answers, the project participants, of a total 95 traffic safety officers who answered the questionnaire survey.

- The course evaluation report showed that more than 60% of the trainees passed the final examination with a high score.
- Traffic inspectors who participated in a pilot project commented that, "Traffic inspectors' activities were more recognized after the project" and "It was a good opportunity to learn new practical skills and equipment for traffic regulation," and they highly regarded the activity outcomes.
- In the questionnaire survey for traffic inspectors of HDOT, to the question, "Did you acquire new skills and knowledge through participation in the project?" 41 of 42 respondents answered "Strongly Agree" or "Agree" (see Table 1).

- The Japanese experts confirmed in interviews that the traffic inspectors who participated in the planning of the Traffic Safety Plan (2011-2015) and Human Resources Development Plan (2011-2015) improved their planning abilities.
- The number of suggestions or actions taken to improve traffic safety in Hanoi by the traffic inspectors could not be counted, because those were undertaken during daily work activities. According to the questionnaire survey for traffic safety-related officers, 32 of 42 traffic inspectors in HDOT answered that they proposed new projects and activities by using the skills and knowledge gained from the project during the project period.
- The number of arrests by traffic inspectors increased from 28,026 at the time of the project's start to 45,587 by the time of the project's completion. According to interviews with the traffic inspectors, it was not only the number of arrests but also the quality of traffic control that improved; for example, inspectors recognized the improvement in their parking control management skills.

From the above results, it is concluded that the traffic inspectors in HDOT improved their abilities through the project.

4) Output 4: To improve the abilities of officers in the Hanoi Department of Transport.

Two indicators were established for Output 4: 1) the degree of improvement in the abilities of traffic management and road facility officers in HDOT, and 2) the number of suggestions or actions taken to improve traffic safety in Hanoi by the traffic officers in HDOT. The following facts were confirmed by interviewing the project counterparts and through a questionnaire survey:

- The number of traffic management and road facility officers in HDOT who attended the short-term training amounts to more than 86, close to the planned amount of 90.

- The course evaluation report showed that more than 80% of trainees passed the final examination with a high score of more than 60%. The ownership of traffic management and road facility officers in HDOT in the pilot projects was high, compared to other HDOT officers.

- In the questionnaire survey for traffic management or facility officers at HDOT[14], to the question, "Did you acquire new skills and knowledge through participation in the project?" 12 of 13 respondents answered "Strongly Agree" or "Agree" (see Table 1).

- The participation of HDOT officers in the Traffic Safety Standing Group Capacity Development Pilot Project was low at the beginning of the project. However, improvement in their participation and ability was observed during the last extended fourth year of the project through the preparation of the Traffic Safety Plan and Human Resources Development Plan.
- The number of suggestions or actions taken to improve traffic safety in Hanoi by the traffic management and road facility officers could not be counted, because those were undertaken during daily work activities. According to the questionnaire survey for traffic safety-related officers, 8 of 13 traffic management and road facility officers in HDOT answered that they proposed new projects and activities by using the skills and knowledge gained from the project before the project ended.
- At the time of project completion, more than 90% of drivers followed the rules of the road with lane separations, which were introduced by the Comprehensive Traffic Safety Pilot Project. Also, lane changes and road conflicts with motorbikes dropped[15].

From the above results, it is concluded that traffic management and road facility officers in HDOT improved their abilities through the project.

5) Output 5: To improve the abilities of officers on the Hanoi Traffic Safety Committee in traffic safety education.

Three indicators were established for Output 5: 1) the number of cases and manuals for traffic safety education and propaganda activities, 2) the number of developed core staff, and 3) the number of suggestions or actions taken to improve traffic safety in Hanoi by

[14] This excludes 9 non-project participants of a total 22 respondents from traffic management or facility officers at HDOT.
[15] Project Completion Report

education- and propaganda-related staff. Because these indicators had not been measured numerically, the following facts were used for evaluation analysis:

- According to interviews with the project counterparts, they learned new ways to develop a traffic safety culture and to effectively undertake propaganda and education activities by participating in the pilot projects and short-term training, and by implementing the traffic safety month campaign in the project. Initially, the propaganda and education division of HTSC was the only counterpart in this field; however, the project later included the Propaganda and Education Board of the Hanoi Party Committee in order to expand the project outcome. This enabled the project to utilize the Committee's large community-based network.
- In the questionnaire survey for the members of the Propaganda and Education Subcommittee[16], to the question, "Did you acquire new skills and knowledge through participation in the project?" 7 of 7 respondents answered "Strongly Agree" or "Agree" (see Table 1).
- The project was financially, as well as technically, supported by Yamaha, which helped produce a booklet on how to safely ride motorcycles. Also, counterparts of the subcommittee had opportunities to receive training at Yamaha's Kakegawa Technical Center and also at Hondas traffic safety education center in Suzuka. The counterparts highly regarded the knowledge and experience gained from this assistance in cooperation with the private companies[17].

From the above results, it is concluded that the abilities of officers on the Hanoi Traffic Safety Committee for traffic safety education improved their abilities through the project.

3.2.1.2 Achievement of Project Objectives

In order to measure the achievement level of the project objective, a degree of improvement in traffic safety measures conducted by HTPD and HDOT—including improvements in traffic control and traffic safety propaganda activities—was established. Interviews with the counterparts and a questionnaire survey found the following:

- Based on interviews with the project counterparts and Japanese experts, the performance of traffic safety-related institutions improved by the time of the project's completion.

16 This excludes 3 non-project participants of a total 10 respondents from the members of the Propaganda and Education Subcommittee

17 YAMAHA and HONDA have been continually implementing traffic safety activities such as offering classes on how to ride a motorcycle and distributing traffic safety pamphlets as a part of Corporate Social Responsibility (CSR).

- The number of arrests by HTPD traffic officers enormously increased from 93,543 cases at the time of the project's planning to 850,008 cases at the time of the project's completion[18].
- The number of administrative sanctions given by HDOT traffic inspectors increased from 28,026 cases at the time of the project's planning to 45,587 cases at the time of the project's completion[19].

- In the results of a questionnaire survey of 100 Hanoi citizens, 82 respondents felt that the performance of traffic safety-related officers had improved, while 18 respondents felt it not improved at all.
- In the results of a questionnaire survey of 95 traffic safety-related officers in Hanoi, more than half the respondents answered "Extremely Improved" and "Very improved" to the improvement of institutional abilities in traffic safety (see Table 2). These abilities include 1) a system for the planning, implementation, and evaluation of comprehensive traffic safety measures; 2) the traffic enforcement ability of traffic police officers in HTPD; 3) the traffic enforcement ability of traffic inspectors in HDOT; 4) the ability of HDOT officers for traffic management and road facilities; 5) the ability of HTSC officers for traffic safety education and propaganda activities; and 6) the ability of officers at the Propaganda and Education Board of the Hanoi Party Committee for traffic safety education and propaganda activities.

Table 2 Degree of Improvement of Traffic Safety-Related Officers by Participation in the Project (Comparison of before and after the project) n=95

	a. System for planning, implementation, and evaluation of comprehensive traffic safety measures		b.Ability of traffic policemen of HTPD for traffic enforcement		c. Ability of traffic inspectors of HDOT for traffic enforcement		d. Ability of HDOT officers for traffic management and road facilities		e. Ability of HTSC officers for traffic safety education and propaganda activities		f. Ability of officers at Propaganda and Education Board of Hanoi Party Committee for traffic safety education and propaganda activities	
Extremely improved	23	24%	16	17%	16	17%	19	20%	17	18%	18	19%
Very improved	33	35%	43	45%	47	49%	48	51%	51	54%	39	41%
Moderately improved	27	28%	28	29%	25	26%	21	22%	21	22%	28	29%
Slightly improved	12	13%	8	8%	7	7%	7	7%	6	6%	10	11%
Not at all Improved	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total	95	100%	95	100%	95	100%	95	100%	95	100%	95	100%

Source: Questionnaire survey of traffic safety-related officers

[18] The improvement was achieved partially due to the project, but also due to the fact that the city increased the number of police officers on the street and improved the treatment of police officers.
[19] ditto

- Based on interviews with the Japanese experts and project counterparts, the results of Outputs 2, 3, 4, and 5 were incorporated into the Traffic Safety Plan (2011-2015) and Human Resources Development Plan (2011-2015).

Output 1 to Output 5 were all achieved as planned, and the performance of traffic safety-related officers improved from before the project to after the project, as the results of the questionnaire survey of traffic safety-related officers and Hanoi citizens demonstrate. This project has largely achieved its objective; therefore, its effectiveness is high.

3.2.2 Impact

3.2.2.1 Achievement of Overall Goal

In order to measure the level of achievement of the overall goal, "The road traffic conditions are improved," two indicators were established for the project. They are 1) the number of road traffic accidents, fatalities, and injuries; and 2) the improvement in the traffic manners of Hanoi citizens (monitoring study on traffic violations). The following information was gathered through interviewing the counterparts and conducting a questionnaire survey:

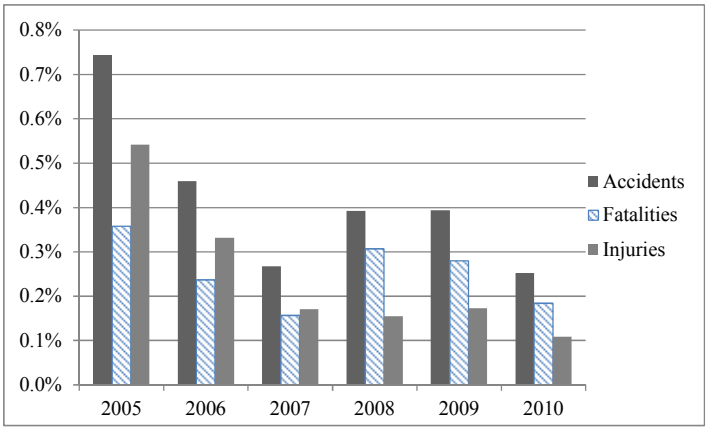
1) Indicator 1: The number of road traffic accidents, fatalities, and injuries

- As shown in Table 3, the total number of accidents has decreased from 2,478 cases in 2005 to 2,219 in 2011 (the newest data). The breakdown of this shows that the number of road traffic accidents and injuries decreased from the project planning time in 2005 to 2011 and that fatalities increased during the same period. Meanwhile, considering the fact that the number of registered automobiles increased by 3.7 times from 2005 to 2010 and motorcycles by 2.8 times, the rates of accidents, fatalities, and injuries per vehicle declined, respectively, as shown in Figure 1. Thus, it is concluded that road traffic safety in Hanoi has been improving.

Table 3 Road Traffic Accidents in Hanoi (2005-2011) (unit: persons)

	Accidents	Fatalities	Injuries	Total
2005	1122	539	817	2,478
2006	1017	522	734	2,273
2007	852	497	544	1,893
2008	1,113	868	438	2,419
2009	1,207	856	531	2,594
2010	1,109	807	478	2,394
2011	1,027	749	443	2,219

Source: HTPD provided data



Source: Evaluator based on the internal data of HTPD

Figure 1 Rate of Accidents, Fatalities, and Injuries per Vehicle (2005 - 2010) (%)

2) Indicator 2: The improvement in road traffic manners of Hanoi citizens (monitoring study on traffic violations)

- As shown in Table 4, the results of a questionnaire survey of Hanoi citizens show that most of the respondents think that the road traffic manners, behaviors, awareness, and knowledge of Hanoi citizens has improved in the last seven years[20].

Table 4 Question to 100 Hanoi Citizens: The Change in Awareness of Traffic Safety in the Last Seven Years (unit: person n=100)

	Did you improve road traffic safety manners/behavior improve?	Do you think that road traffic safety manners/behavior of people living and working in Hanoi have improved?	Do you think that Your awareness/knowledge has improved?	Do you think that Awareness/knowledge of people living and working in HN has improved?
Extremely improved	3	2	0	1
Very improved	54	12	44	12
Moderately improved	37	40	48	45
Slightly improved	6	35	8	34
Not at all Improved	0	11	0	8
Total	100	100	100	100

Source: Questionnaire survey of Hanoi citizens

- In the questionnaire survey of 95 traffic safety-related officers, to the question "Do you think that the road traffic manners of Hanoi citizens have improved

[20] Motorcycle users have been required to wear a helmet by law since December 15, 2007 in Vietnam, and this mostly has become a daily practice today. This new rule might have a positive effect on the change in awareness of Hanoi citizens in traffic safety, to some extent.

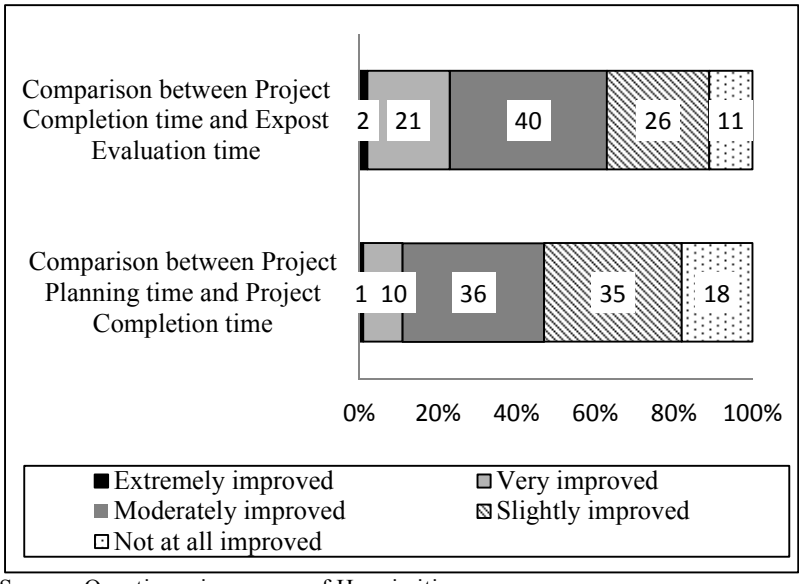
comparing today (2013) to 2006?" 22 respondents answered "Strongly Agree," 77 answered "Agree," none answered "Neither Agree nor Disagree," one answered "Disagree," and none answered "Strongly Disagree." It shows that, much like Hanoi citizens, most traffic safety-related officers feel that the traffic safety manners of Hanoi citizens have improved.

Based on the above, the overall goal was largely achieved, according to its target indicators; therefore, its impact is high.

3.2.2.2 Other Impacts

1) Improved evaluation by Hanoi citizens on the performance of traffic safety-related officers

The results of a questionnaire survey of Hanoi citizens show in Figure 2 that the proportion of "Extremely Improved" and "Very Improved" ratings between the project completion time (2010) and the time of the ex post evaluation (2013) was larger than that between the project planning time (2005) and the project completion time (2010). Answers of "Not At All Improved" decreased from 18 persons at the time of the project implementation to 11 at the time of the project completion. Therefore, the evaluation by Hanoi citizens on the performance of traffic safety-related officers had improved even after the project.



Source: Questionnaire survey of Hanoi citizens

Figure 2 Question to 100 Hanoi Citizens: Assessing the Performance of Traffic Safety-Related Officers (unit: person) (n=100)

To the question, "What improvement in the ability of traffic-related officers do you

notice?" most respondents gave "The number of traffic lights increased" as the biggest improvement during the project implementation period (2006-2010). However, after the project in 2010, the number of positive opinions on "Traffic control of police officers improved," "The road flow also improved" and "The traffic safety-related announcements improved" increased, as shown in Table 5. The evaluation of Hanoi citizens on the quality and reliability of police officers did not change over time.

Table 5 Question to 100 Hanoi Citizens: Improved Aspects of the Performance of Traffic Safety Officers (unit: person)
(n=100 multiple answers allowed)

	Police officers are more visible on streets	Police officers are stricter in terms of enforcement of traffic rules and regulations.	Police officers manage road traffic flow on roads better	Quality of police officers in general has improved	Policemen are more reliable	Road condition is improved	More traffic signs are set up on roads	More traffic safety education related announcements (newspaper, road posters, radio, propaganda, etc.)	Others
Project Implementation Period (2006-2010) valid answers = 82	30	33	33	8	1	46	32	28	6
After Project Completion (after 2010) valid answers = 89	44	60	44	15	2	48	59	42	5

Source: Questionnaire survey of Hanoi citizens

2) Increase in the number of arrests

The number of road traffic arrests by HTPD traffic officers was 93,543 cases in 2005, and it increased to 986,640 in 2011. Administrative sanctions given by HDOT traffic inspectors more than doubled, from 28,026 in 2006 to 72,384 in 2012. Based on interviewing the project counterparts and Japanese experts, the reasons behind the increase in the number of arrests are that the government of Vietnam, in considering the importance of strengthening traffic safety, increased the number of traffic officers and traffic inspectors, and it introduced a reward system that reflects the results of the traffic control activities of traffic officers and inspectors.

3) Nationwide expansion of project activities

Arrest Recording Forms software developed by the project counterparts were adopted as a common form in Hanoi city and then it is used as national forms nowadays. Although the size of traffic safety culture promotion activities was reduced after the project, the activities continue today. The traffic safety campaign of the month, which was experimentally implemented during the project, was later adopted nationally. It made September the national traffic safety month and created a traffic safety campaign distributed through mass media such as TV, radio, and newspapers. Opinions suggest that a series of such activities helped to raise Hanoi citizens' awareness of traffic safety and

caused a behavioural change in following traffic rules.

Considering the points above as the project objectives, a degree of improvement in traffic safety measures conducted by HTPD and HDOT, including improvements in traffic control and traffic safety propaganda activities, was achieved. From the following positive facts, the overall goal as initially planned was: the rates of accidents, fatalities, and injuries per vehicle all decreased; the number of arrests by traffic police officers and traffic inspectors increased; the results of pilot projects were expanded to other locations; and the traffic manners of Hanoi citizens improved. Thus, this project has largely achieved its objectives; therefore its effectiveness is high.

Column: Action to Improve People's Awareness and Understanding of Traffic Safety

The lane separation to divide automobile and motorcycle traffic, one of the technologies transferred by the project, was introduced on Trang Kath Chan street ~ Dai Co Viet street for the first time in Hanoi, and is today installed in eight locations. The Department of Transport of Ho Chin Minh visited Hanoi City to observe the new system and started to introduce it in Ho Chin Ming City as well.

A permanently installed lane-separation in Hanoi City; automobile on the left and motorcycle on the right.

The reason why the introduction of the lane separation spread rapidly was because the project objective fully introduced the system in the middle of the city. At the time when the system was introduced, there were opinions that the pilot project should be installed in a suburban area, because it is rather dangerous when automobiles and motorcycles cut through the lane separation road to go over to small roads on the roadside in the city area. Sometimes, temporary separation zoning accessories and signs were stolen at night. Nevertheless, the project team intentionally introduced it in an urban area, on the city's most heavily travelled road, because the project team believed that, if more people experience and recognize the outcome and effectiveness of the lane separation, it would eventually lead to changes in Hanoi citizens' behaviors. Today, four years after the project's completion, the lane separation is highly recognized by Hanoi citizens and the effect is widely accepted, as the project team anticipated.

3.3 Efficiency (Rating: ①)

3.3.1 Inputs

Inputs	Plan	Actual Performance
Japanese Side		
(1) Experts	0 for the Long-Term 6 for the Short-Term	0 for the Long-Term 15 for the Short-Term
(2)Trainees received	3 – 5 persons per year (determined by discussions) Fields of training: N/A	Total 55 persons Fields of training: traffic safety planning, traffic enforcement, regulation system, traffic accident analysis, and traffic safety study / development
(3)Third-Country Training Programs	Fields of training: N/A	Total 16 persons Fields of training: traffic safety culture (Thailand), traffic accident analysis (Korea), and traffic planning in urban areas (Philippines)
(4) Equipment	Training equipment and office equipment, etc.	About 25.41 million yen (office equipment and various equipment for traffic enforcement and regulation)
(5) Local Cost	Expenses for training/ seminars, printing for training materials, intersections and road construction, and traffic safety campaign activities	103.46 million yen (expenses for local experts, document printing, car rental, and sub-contract (Project Completion Report))
(6) Others	N/A	Construction cost for Comprehensive Pilot Project[21]: about 71.73 million yen
Total Project Cost	389 million yen	617 million yen
Vietnamese Side		
(1) Counterparts	Accordingly	37 persons from HTSC, HDOT, HTPD, and Propaganda and Education Board of Hanoi Party Committee
(2) Land, building, equipment	Work space, utilities, allowance for training	Facilities (project office and 2 training rooms)
(3) Local Cost	Budget necessary for the project	About 13.91 million yen
(4) Others	N/A	About 28.80 million yen

[21] The cost was for improvement of intersections and roads at the pilot project site.

		for Comprehensive Pilot Project[22], shared cost for the second- and fourth-year training in Japan[23]

Source: JICA documents

3.3.1.1 Elements of Inputs

Problems with the quality of inputs were not found in the results of interviews or answers from the project counterparts. Local experts were hired in addition to the Japanese experts for this project. Some of the local experts were retirees from HDOT and HTPD, therefore they were familiar with the political environment in which the project counterparts operated and were highly trusted by the project counterparts. These local experts supplemented the abilities of the Japanese experts to maintain and improve communication with the Vietnamese side and proposed ways to transfer Japanese technology and knowledge taking into accounts the local context of Hanoi City. This cooperative arrangement between the Japanese experts and the local experts was highly regarded by the Vietnamese side.

3.3.1.2 Project Cost

The actual project cost was approximately 617 million yen. This was significantly higher than the planned cost of 389 million yen (159% of the original plan). One of the reasons for the increase was the increase in project inputs as a result of the project extension. Furthermore, the budget for the project at the time of the project planning, especially the cost estimates for the pilot projects, was insufficient, since there were no relevant aims to improve traffic safety in the technical cooperation project conducted by JICA in the past. A common opinion of the project counterparts was that the overall project budget was not enough, even though the project actually spent more resources than the initial plan envisioned. The counterparts pointed out that the Vietnamese side partially paid the expenses for the construction of the pilot projects and for traveling costs for training in Japan, and they also felt that the equipment for traffic regulation and enforcement provided in the project was not enough to achieve the project objective.

3.3.1.3 Period of Cooperation

The project period was longer than planned because the project was extended for one

[22] Vietnam partially paid the construction cost for improvement of intersections and roads at the pilot project site because the pilot project cost increased more than planned.
[23] Of 55 trainees, the cost for sending 15 trainees to Japan was shared between Japan and Vietnam.

year. The reasons for the extension was a delay in the allocation of counterparts, which affected the smooth implementation of the project and consequently caused delays in all activities, especially the Traffic Safety Plan (2011-2015) and Human Resources Development Plan (2011-2015) of Output 1—"To establish a system for the planning, implementation, and evaluation of comprehensive traffic safety measures in Hanoi"—which were not prepared within the planned period.

From the above, all elements of inputs were necessary and appropriately used, however, both the project cost and period of cooperation significantly exceeded the plan, therefore efficiency of the project is low.

3.4 Sustainability (Rating: ③)

3.4.1 Related Policy toward the Project

The 9th SEDP (2011-2015) described the importance of traffic safety in regard to the gradual increase in traffic volume in urban areas under the infrastructure development section. An international conference on Vietnam's traffic safety was held on November 22, 2012, in Hanoi. At the conference, Mr. Nguyen Xuan Phuc, Deputy Prime Minister of Vietnam, stated, "The Vietnam government took multiple measures to improve traffic safety in an exhaustive manner in the last few years and developed infrastructure focusing on the development of a transportation network." And he further announced, "The government of Vietnam will aim to reduce the number of deaths and injuries caused by traffic accidents by 50% by 2020 to achieve the '10 years Action for traffic safety from 2011 to 2020' which was advocated by the United Nations."

The Traffic Safety Plan (2011-2015) and Human Resources Development Plan (2011-2015) prepared in the project were considered among Hanoi City's most important documents for traffic safety strategy at the time of the ex post evaluation, and they are referred to when the five-year plan and annual traffic safety plans are prepared by traffic safety-related administrative organizations.

It is also confirmed that Hanoi City also prepares five-year plans and annual plans for each safety-related administrative organization in line with the National Road Safety Strategy (2020-2030), and the two plans produced by the project are used as references. Thus, the sustainability of policy toward the project is high.

3.4.2 Institutional and Operational Aspects of the Implementing Agency

Hanoi's traffic safety is still managed by HTPD, HDOT, and the propaganda and education division of HTSC as of today, and institutional change has not been found since the time of the project planning. As a result of merging the Ha Tai province into Hanoi City in December 2008, HTSC was restructured and the role of the 3Es—

Enforcement, Engineering, and Education—was further clarified within the committee. HTSC, in charge of the preparation and implementation of traffic safety policy, established three subcommittees based on the 3E concept: 1) a road user traffic control subcommittee formed by HTPD and traffic inspectors in HDOT, 2) a road traffic safety infrastructure subcommittee formed by the management and facilities of HDOT, and 3) a propaganda and education subcommittee formed by the propaganda and education division of HTSC and the Propaganda and Education Board of the Hanoi Party Committee. These three subcommittees meet once a month and exchange their opinions and coordinate their activities[24].

All project counterparts commented that the communication and coordination among traffic safety-related institutions had largely improved. For example, citizens' opinions obtained through propaganda and education activities were transferred to the road traffic safety infrastructure subcommittee, and this resulted in the installation of new pedestrian traffic lights and a lane separation. On the other hand, not many such examples were found, and counterparts believe that these efforts should be further encouraged.

3.4.3 Technical Aspects of the Implementing Agency

In the initial plan at the project's design, the officers from HDOT and HTPD were to be trained to become lecturers, and these trained lecturers would continue the training courses after the project. However, this was changed to short-term training in cooperation with external institutions such as the Police Academy and the Construction University. The reason was that the project faced difficulties in selecting people to become lecturer candidates because most of the traffic safety officers did not have basic knowledge and skills in traffic engineering.

It is confirmed in this evaluation study that the transferred technology and knowledge, partially modified or upgraded, are still taught today at the Police Academy for HTPD officers and at general training courses for HDOT officers. Also, based on the questionnaire survey of traffic safety-related officers, the officers who gained technical know-how from the project shared it with their colleagues and their subordinates.

In addition, some of the Japanese experts have been members of "The Project for Strengthening the Traffic Police Training in Various Police Colleges of Vietnam (2010-2013)[25]" and/or "The Project for Improving Public Transportation in Hanoi

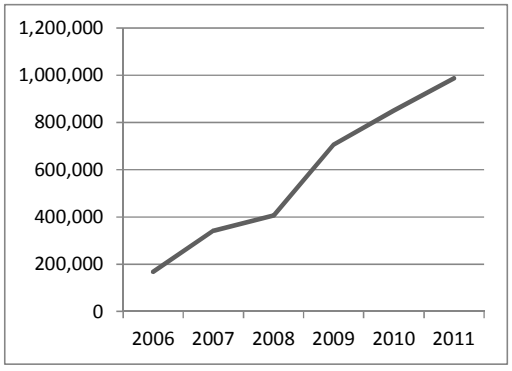
[24] HTSC is a subsidiary body of HPC. Three subcommittees, 1) a road user traffic control subcommittee, 2) a road traffic safety infrastructure subcommittee, and 3) a propaganda and education subcommittee, were established under HTSC. The operation of HTSC is managed by the secretariat of HTSC.

[25] The project aims to improve the quality of instructors of traffic police officers at the Police Academy by reviewing training curricula and training methods for 1) road traffic law and traffic safety education, 2) traffic regulation and traffic management, 3) traffic control, and 4) traffic accident data collection and analysis. The project also assists in preparing the action plans to strengthen policy for traffic safety measures. This is the success of the three pilot projects for capacity development, "Traffic Accident Analysis (Traffic

(2011-2014)[26]" and continue to give technical advice to project counterparts even today. This continuous relationship with the project counterparts after the project is an important factor in increasing the sustainability of the transferred technology and knowledge and bringing about positive impacts, such as the decrease in the number of road traffic accidents and the performance improvement of traffic safety officers as discussed in 3.2.2.

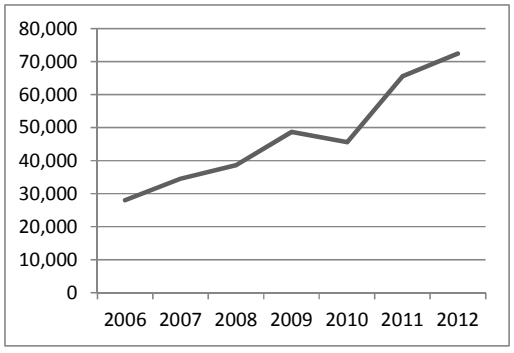
3.4.4 Financial Aspects of the Implementing Agency

The budget of HDOT, HTPD, and the Propaganda and Education Division of HTSC is supported by the budgets of multiple institutions such as HTSC, Hanoi City, and central governments including the Ministry of Construction and Ministry of Public Security. The evaluator attempted to extract the budget strictly related to traffic safety from the counterpart institutions to see the budget trend; however, it was impossible. Alternatively, the results of interviews with the counterparts and the trend of fines and penalties from administrative sanctions collected by traffic control activities, which become the HTSC budget, were reviewed for this evaluation[27]. As a result, the budget of the counterparts has been increasing from the time of the project completion, and the number of arrests by HTPD and the penalties imposed by traffic inspectors have both been increasing as well[28]. Thus, it can be concluded that no problem is observed in regard to financial aspects.



Source : Internal document of counterpart

Figure 3 The Number of Arrests for Traffic Violations by HTPD (2006-2011) (unit: case)



Source : Internal document of counterpart

Figure 4 The Number of Arrests for Road Violations by HDOT Inspectorate (2006-2012) (unit: case)

accident data management and analysis)" stated in Output 2 of this project.

[26] The project aims to propose measures to shift Hanoi citizens' travel mode from personal vehicles to public transportation in order to reduce heavy traffic congestion within the city area. The project does not relate to this project directly, however, the project is known as "TRAHUDII," which is named after this project "TRAHUDI."

[27] The revenue from traffic control is allocated according to the following ratios: 10% for Secretariat of HTSC, 70% for subcommittees and 20% for other administrative and treasury activities.

[28] The number cannot be publicly disclosed since this is an internal document, however, the evaluator checked the document and confirmed the amount of fines and penalties collected have been continuously increasing.

In light of the above, no major problems have been observed in the policy background, or in the structural, technical, or financial aspects of the executing agency; therefore, sustainability of the project effects is high.

4. Conclusion, Lessons Learned, and Recommendations

4.1 Conclusion

This project aimed at developing the human resources of the traffic safety-related officers in Hanoi, namely traffic police officers, traffic inspectors, traffic management and road facility officers, and traffic safety education-related officers in order to improve the city's traffic safety measures, and, further, to reduce traffic accidents in Hanoi.

This project objective is consistent with the development policy and development needs of Vietnam, and with the Official Development Assistance policy (ODA) of Japan. The project approach is also appropriate. Therefore, the relevance of the project is high. The study confirmed that the traffic safety-related indicators and the consciousness of Hanoi citizens toward traffic safety have been improving. In light of these facts, the effectiveness/impact of the project is also high. On the other hand, the efficiency of the project is low. All the inputs were necessary to achieve the project objective and were used appropriately, however, the project period and cost exceeded the plan. As for the project sustainability, the policy to enhance traffic safety is still considered by the Vietnamese government as one of its priorities, and the financial aspect is also positive because traffic-related penalties and fines have been increasing. Hence, the sustainability is high.

In light of the above, this project is evaluated to be satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

<u>Further strengthening 3E through implementing pilot projects</u>

Based on the traffic safety concept of 3E (Enforcement, Engineering, Education), HTSC monthly meetings have been organized with the traffic safety-related agencies to increase institutional cooperation among HTPD, HDOT, HTSC, the Propaganda and Education division of HTSC, and the Propaganda and Education Board of Hanoi Party Committee. An improvement is observed: The communication among subcommittees improved, and an annual plan is prepared. However, actual project cases and cooperation plans are still limited.

The project final report produced by the project team in March 2010 recommended

identifying comprehensive traffic safety projects and then implementing them on the selected road sections as pilot projects every year. This project confirmed that lecture-type training in combination with onsite practices is effective in developing the human resources of the traffic safety sector. Once again, it is suggested to strengthen 3E through the implementation of pilot projects aside from the monthly meetings currently organized by HTSC.

Traffic accident analysis is expected to be improved due to the outcome of the Project for Strengthening the Traffic Police Training in Various Police Colleges of Vietnam, which is currently being undertaken by JICA. It is important that the improved traffic safety-related data generated from the project are shared with HDOT, HTSC, and the Propaganda and Education division of HTSC, and the Propaganda and Education Board of Hanoi Party Committee under the leadership of HTPD. One idea is for HTSC to coordinate a series of planning procedures. For example, HTPD can organize a workshop and invite the related agencies to share traffic analysis results before the preparation of each agency's annual plan for traffic safety. Then the related agencies can include specific measures in the annual plan based on discussions during the workshop.

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

1) Effectiveness of applying the 3E approach and lecture-type training in combination with onsite practices to improve human resources development in traffic safety

The 3E approach is effective in countries where the traffic safety culture is still underdeveloped. Individual Es can be strengthened where necessary after the 3E concept is widely adopted in the country. Furthermore, it is important to use both lecture-type training and onsite practices in the activities.

2) Conditions for cooperation with external educational agencies as an option in training

Although lecture-type training is one of the important activities that strengthen the abilities of traffic safety-related officers, developing a new training curriculum and training lecturers in the project is not always realistic in terms of limited human resources and the time constraints on counterparts. This was realized in the early stages of the project, so the curriculum was developed in the project but the lecturers were brought in from external institutions. The lecturers' teaching materials were modified and some were newly developed, if necessary, in cooperation with the Japanese experts. As a result, this approach produced a great result.

As lecture-type training is conducted to develop human resources in traffic safety in other countries' training, the possibility of cooperating with existing training institutions should be considered at the project-planning phase. When the project decides to cooperate with external educational institutions, the training routine plan should be prepared before the project ends to ensure the sustainability of training courses after the project.

3) Clearly identifying project scope and sharing it among project stakeholders

As was pointed out in the analysis on Efficiency, although the actual project budget and period greatly exceeded the plan, project counterparts felt that the overall inputs for this project from JICA were limited, especially the amount of equipment provided for traffic control. One of the reasons for this is that the counterparts did not properly understand the characteristics of the project type and the technical cooperation. In order to avoid such a situation, it is important to build a common understanding between the Japanese side and the counterpart side about project scope: the project goals and how much of the goals are expected to be achieved during the early stages of the project period. Furthermore, when multiple stakeholders are involved, as in this project, it is better to put the agreement on the project scope in writing.

4) Describe specific and clear goals and indicators in PDM

As was pointed out in the analysis on Relevance, the existing Project Design Matrix (PDM) did not clearly explain the scope of the project. For example, "A degree of improvement in traffic safety measures conducted by HTPD and HDOT" is established as an indicator of the project objective "Traffic measures in Hanoi are improved." From this project objective and indicator, it is not clearly understood what and how much to improve, despite the fact there are various issues to undertake in traffic safety measures. As an alternative idea, "The performance of traffic safety-related agencies are to improve and traffic safety measures are undertaken based on the 3E approach" can be established as a project objective with indicators such as 1) the number of pilot projects identified based on the 3E concept, 2) the number of traffic accidents at pilot project sites, 3) the degree of change in the awareness of traffic safety-related officers, and 4) the degree of change in the awareness of Hanoi citizens of traffic safety. The indicators should be compared before and after the project. Likewise, the overall goal, "The road traffic conditions are improved," can be replaced with "The number of traffic accidents will decrease as a result of improved traffic rules and manners in Hanoi," and indicators should be established accordingly.

5) Consider the possibility of cooperating with private companies in the traffic safety sector

The Propaganda and Education Board of the Hanoi Party Committee received financial support from Yamaha to produce traffic safety booklets for motorcycles. Also, they had opportunities to attend training at the training centres of Yamaha and Honda in Japan. Such cooperation with a private company can be applied to similar projects in other countries where the market share of Japanese automobiles and motorcycles is considerable. It may be worth looking into this possibility with the Japanese experts at the beginning of the project.