



# TTC (Traffic Training Center) NCTS (National Center for Transportation Studies) Project

## Reasons for taking up this project

Transport Training Center (TTC) is a center which was established in University of the Philippines Diliman in Quezon City, a suburb of Manila, in 1977. In the 7 years from 1977 to 1984 aid was provided from Japan via Project Technical Cooperation. Furthermore, in 1992, the National Center for Transportation Studies (NCTS) was established with the goal of expanding the training department of the TTC and constructing a center furnished with advanced research facilities, and aid was conducted for the 7 years until 1999 as a technical cooperation joint enterprise. In the latter half of the 1970s motorization arrived in large Asian cities, and as a variety of traffic problems were exposed, there were insufficient government officials and engineers to appropriately handle these traffic issues. Therefore, TTC was started up with the goal of training personnel who can survey and design traffic projects, maintain traffic facilities, implement traffic control, etc., and many personnel were trained to work on resolving the traffic issues. And while NCTS was established in the form of an expansion of TTC, and university education concerning traffic engineering and traffic planning was conducted, many educators to be involved in this education turned out and played a central role in leading the implementation of traffic projects in the Philippines. These efforts of TTC and subsequently NCTS have received high praise as examples of successful long-term support of training personnel involved in traffic infrastructure and projects and capacity building in related government agencies.

The Japan Society of Civil Engineers takes up these efforts of TTC and subsequently NCTS, because

- 1) In the early stages of the start of motorization the need to train personnel to work on solving traffic problems was recognized, and TTC was started as a research center where training was conducted targeting many government officials.
- 2) NCTS was developed from TTC to cooperate with university education which produced many people who completed master's and doctoral courses as well as many university instructors to act as leaders.
- 3) They fulfilled a central role in the promotion of scholarly activities such as the Eastern Asia Society for Transportation Studies (EASTS) and also played an important role on the academic side.
- 4) JICA also contributed on the practical side such as cooperating in various development surveys it implemented.

# 1 Project Background

The Pan-Philippines Highway (Japan-Philippines friendship road) was constructed, which our country implemented as postwar compensation to the Philippines, and subsequently in the traffic master plan for the Manila Metropolitan Area, the lack of road traffic engineers in the Philippines was recognized, and there was strong demand for an agency to cultivate personnel to solve this issue which led to the establishment of TTC

in the Philippines.

The NCTS project followed TTC, and expanded TTC from one of the training agencies in the research center in the College of Engineering, University of the Philippines Diliman into a degree awarding agency, and it was established based on the idea that it was necessary to cultivate leaders so that Filipino people could cultivate human resources on their own.

# 2 Project Chronology

## 2.1 Establishment and Activity of TTC

Cooperation of TTC

April 1977-April 1981	JICA Project Technical Cooperation Initial Period (RD Period)	4 years
April 1981-April 1983	Cooperation extension period	2 years
April 1983-April 1984	Follow-up cooperation	1 year
March 1982 November 1982	Introduction Seminar (TTC Third country training) First holding of the training	The normal third country training cooperation period is 5 years.

From 1971 to 1975 “Manila Metropolitan Area Traffic Facilities Planning Survey” and “Manila Metropolitan Area Traffic Radial Road R-10 Planning Survey” were implemented, and based on these a traffic master plan for Manila’s large cities was drafted. This “Manila Metropolitan Area Traffic Facilities Planning Survey” was led by professor Takashi Inoue, Department of Engineering, University of Tokyo, so this professor had an opportunity to talk with minister of public works Baltazar Aquino, where it was recognized that there is a lack of road traffic engineers in the Philippines and it is necessary to train personnel to improve these issues, which gave birth to the proposal to establish a center to cultivate

human resources involved in road traffic. In April 1977 this proposal materialized, a Record of Discussion (R/D) memorandum of agreement was exchanged regarding the cooperation on the Transport Training Center (TTC), and the project was started. Because TTC was a joint enterprise between the Japanese and Philippine governments, the Japan side dispatched Japanese experts, provided equipment, and received trainees to Japan as a part of the JICA’s Project Technical Cooperation. The Philippines side provided facilities and staff as a special unit in the research centers of the College of Engineering, University of the Philippines Diliman. The budget was administered by the Philippines Ministry of Public Highways

(MPH) and from 1980 by the Ministry of Transportation and Communications (MOTC).

The 3 courses of traffic planning, traffic engineering, and traffic management were created as education programs in TTC, and instructor training was conducted at the same time as training practice from theoretical and practical sides were implemented for engineers from the ministry of public works, road traffic police force, metropolitan area police, residential environment ministry,

transport and communication ministry, etc.

At the end of the training, which lasted from 1978 to 1983, a total of 392 personnel were produced comprising 104 in traffic planning, 100 in traffic engineering, and 188 in traffic management, and these personnel were subsequently appointed in government agencies. From 1983 until the establishment of NCTS in 1992, follow-ups were conducted centering on third country training\*1.

## 2.2 Establishment and Activity of NCTS

Cooperation of NCTS

April 1992-March 1999	JICA Project Technical Cooperation	7 years
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Furthermore, based on the success of cooperation in TTC, NCTS was undertaken as a technical cooperation joint enterprise from 1992 intended to construct a center that expanded the training department of the TTC and furnished it with advanced research facilities. The NCTS worked toward university training as the only agency in the Philippines specializing in the field of traffic. (Figure 1)

Aiming specifically to contribute to the improvement of research activities in the traffic field, research regarding general traffic policy was conducted and by 1999, 29 technical papers were published. Subsequently, by 2002, 66 research papers were published in domestic and international academic societies.

In the cooperation on the NCTS project, 21 graduates were produced from 1992 to 1999 at the College of Engineering and School of Urban and Regional Planning, University of the Philippines Diliman. Looking at a breakdown of this, 6 graduated

from Master of Engineering and Traffic Engineering courses, while 15 graduated from Traffic Planning Science Masters degree and Town Planning Science/Traffic Planning courses. Since 1994, when it was decided that this university would offer Masters degrees in the traffic field, it has produced a total of 58 graduates, 25 of whom are employed by government agencies, 20 by academic research institutions, and 13 by private companies.



Figure 1: NCTS Building

\*1 Training implemented by JICA aimed at enabling a developing country subject to technology transfer the skills it has acquired from Japan to other countries in the same region.

## 3 Project Features

### 3.1 Promotion Base of Academic Activities in the Traffic Field

TTC and NCTS did not simply produce many personnel who had received specialized training in traffic engineering and traffic planning, but have also contributed greatly to the formation of a human network centered around these personnel. Specifically, the Transportation Science Society of the Philippines (TSSP) was established with the goal of exchange between the academic, government, and private sectors and the training of young

researchers in July 1993 focusing on NCTS instructors and NCTS training graduates. Furthermore, The Eastern Asia Society for Transportation Society (EASTS) was established in November 1994 in the same way as the Transportation Science Society of the Philippines with the cooperation of traffic societies established in various Asian countries. The 1st International Conference was held in Manila, and NCTS played a vital role in its administration.

### 3.2 Contributions to the Traffic Infrastructure Maintenance in Asia

TTC and NCTS have not only contributed to personnel training in the Philippines but also greatly contributed to the training of government officials in various Asian countries. Specifically, JICA has implemented third country training targeting government officials in various Asian countries in TTC and NCTS. At TTC, cooperation (third country training) was implemented in ASCOTT (A Senior Course On Transport Technology), and at NCTS in EXTRAM (Executives' Forum on Urban Environment and Transport Development Management).

A total of 12 people participated in the 1st holding of ASCOTT from Sri Lanka, Thailand, Indonesia, Malaysia, Singapore, and the Philippines, and training in the 3 courses of traffic planning, traffic engineering, and traffic management for each country was implemented based upon country reports from the countries. Experts from Japan also participated in this third country training, and it was continued until 1992 under the leadership of the

Philippines's TTC. On the other hand, at EXTRAM training and information exchange was conducted for government officials from Asian countries including Sri Lanka, Thailand, Indonesia, Malaysia, and Singapore, the contents of which were traffic issues in each of the countries and measures for said issues. The knowledge and information gained at EXTRAM accumulated at NCTS, resulting in the increase of its value as a traffic research center.

At NCTS, various efforts were made to supplement the allowance required to cover the personnel training beyond the existing framework and structure of cooperation. In order to create future instructors for the University of the Philippines Diliman from NCTS students, support was implemented with the understanding of each university for obtaining doctorate degrees at the University of Tsukuba, Tokyo Institute of Technology, Tokyo University of Marine Science and Technology (at the time), Yokohama National University, and the University

of Tokyo. Furthermore, in order to gather excellent human resources in the traffic field, a scholarship system was established through encouragement in the countries of those involved in the NCTS project. Since 1999, through a research exchange program via the university-based method of the Japan Society for the Promotion of Science (JSPS), researchers from 20 universities represented

by University of Tsukuba promoted exchange and joint research between Japan and the Philippines based on the theme of “urban development and environmental control”, and cooperation was also carried out, which led to the education of NCTS-related researchers through activities such as these.

## 4 Learned Lessons

Through the implementation of the TTC/NCTS projects, in TTC 392 people were returned to their posts at the agencies they belonged to with proof of completion of the formal training (education), and in NCTS 21 Masters course students were produced, showing the success of “technology transfer” in personnel training.

Capacity development in technical assistance means providing assistance not limited to personnel training but also including improving institutions, systems and society as a whole. In the TTC/NCTS projects, more than 35 years ago, research centers were placed in the University of the Philippines Diliman and training of personnel in the fields of traffic engineering

and traffic planning were started, while the centers were also expanded to research institutions directly controlled by universities which also possess the educational function of a graduate school master’s course, and government officials who received training there and engineers who obtained degrees there being involved in traffic policy went as far as to have a large influence on society, making it one of the best examples of capacity development.

In order to advance infrastructure development in developing countries it is necessary to advance the capacity development of the country overall, and the experiences in TTC and NCTS over many years have given us valuable lessons.

Interview was conducted for this paper with the following person, and it was drafted by the Infrastructure International Cooperation and Contribution Archives WG of Japan Society of Civil Engineers. We wish to thank Mr. Morichi here.

### Biography

#### Shigeru Morichi

Director of the Policy Research Center,  
National Graduate Institute for Policy Studies (GRIPS)  
He is professor emeritus of Tokyo Institute of  
Technology and of the University of Tokyo and he was

the 92<sup>th</sup> president of JSCE.  
He was the first professor for the NCTS project as a  
JICA expert and a visiting professor of University of the  
Philippines from 1992-93.