

Assistance with Development of Railway Legal Systems and Reinforcement of Regulatory Entities

-System-building for urban transportation laws-

Railway laws

Preparation of Rules and Regulations under Urban Mass Rapid Transit Act (Dhaka, Bangladesh 2015)

Assistance was provided to the Dhaka Transport Coordination Board, the regulatory and supervisory body for urban railways in Dhaka, with the development of a legal system by formulating its Urban Mass Rapid Transit Act (Metro Rail Act), its subordinate, and an accompanying legal system. In addition, railway technical standards were legislated.



Cabinet determination of Urban Transportation Law

Technical Assistance Project to Strengthen the Capacity of Regulator in Hanoi City (Vietnam 2013)

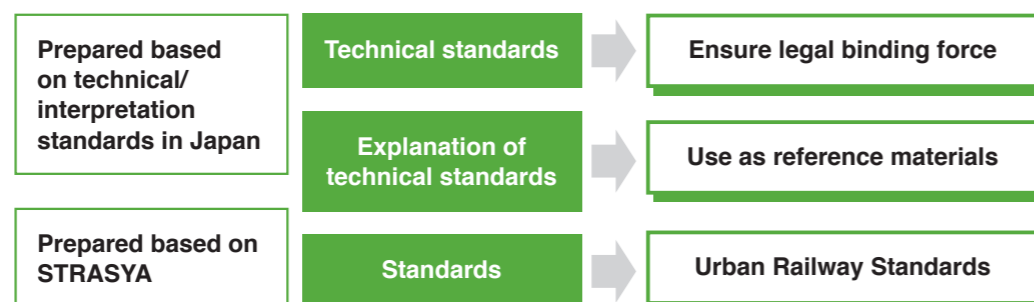
Assistance was provided with the formulation of systems for railway company management by a regulatory body and the formulation of fare and subsidy systems.

Ministerial Ordinances / Regulations

Study on Building the National Technical Regulation and Standard Set for Railway (Vietnam 2009)

General criteria and standards for urban railways in the Socialist Republic of Vietnam, including standards on technical criteria related to driving, maintenance criteria for various technical fields, and criteria for driving, civil engineering/electrical facilities, and rolling stock, were formulated.

Technical standards



Assistance with Establishment of Operating Organization

-Organization-building and internal rules creation for operating railways-

Management Consulting Services for Jakarta MRT System Project (Indonesia 2012-2014)

Advice necessary for the operation and management of PT MRT Jakarta, which was established in 2008, was provided. Simultaneously, assistance with improving the management capability of the Special Capital Region of Jakarta, the implementing entity for this project, was provided. Additionally, as the city planned on introducing a railway system manufactured in Japan, materials introducing the status of O&M at Japanese railway operators were prepared and provided.



Onsite meeting in Jakarta

Technical Assistance Project to Establish O&M of Metropolitan Railway Lines in Hanoi City (Vietnam 2013-2016)

Assistance was provided to the Hanoi Metropolitan Railway Management Board with the establishment of an O&M company for Lines 2, 2A, and 3 of the Hanoi Metropolitan Railway, as well as the establishment of departments pertaining to railway operation. Basic plans for regulations and manuals were also prepared to serve as the foundation of operations, such as management plans for sustainable corporate activities, draft regulations pertaining to safety and HR, and draft maintenance manuals.

Project for Support of Set up of O&M Company of Urban Railways in Ho Chi Minh City (Vietnam 2011-2013)

Assistance was provided with the establishment of an urban railway operation company with a preparation unit for setting up the O&M company that was established by the Management Authority of Urban Railways (MAUR) in Ho Chi Minh City as its counterpart. Through this support endeavor, the necessary procedures were established for the MAUR to draw up the project plan required for registering the establishment of the operation company, and the approval for the company establishment plan from the Ho Chi Minh People's Committee was given. Furthermore, support was also provided in the preparation of Articles of the O&M company, as well as organizational regulations, working regulations, conditions of carriage, and other documents that form the framework of a railway operating organization.



On-site meeting (JET members and Vietnamese counterparts)



Basic training in operation management

Assistance with Establishing Pre-Opening O&M Framework

-In preparation for implementation of safe and reliable operations-

Support provided to operating entities Support provided to operating and regulatory entities

■ Operation and Maintenance Consulting Services (OMCS) for Project of Jakarta MRT System Phase 1 Lebak Bulus - Bundaran HI (Indonesia 2016)

For MRT Jakarta, the project implemented the establishment of an O&M system mainly for the preparation of the Jakarta Urban Railway opening, preparation of various regulations and manuals, support for establishing the organization, and training for the staff.

The first "all-Japan" subway in Southeast Asia has opened for business. Japan's railway technologies and know-how were applied to ensure high quality in every aspect of the project, including construction, facility maintenance, operation systems, and management. Prior to its opening, training was conducted for each O&M field. In the process, the Japanese style of pointing and calling came to be widely used.



Pointing and calling by railway staff

■ Project on Technical Assistance for Mass Rapid Transit Safety Management System of Line 6 (Dhaka, Bangladesh 2020)

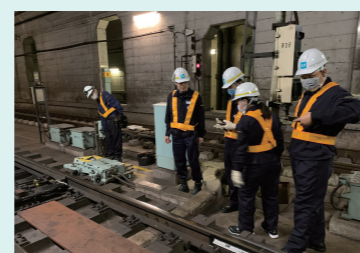
By dispatching a team of specialists and conducting training, assistance was provided with the preparation of manuals and regulations related to safety and establishment and implementation of a safety management framework for Dhaka Mass Transit Company Limited.



Dhaka MRT Line 6

■ Project on Strengthening Management Ability of O&M Company for the Opening of Urban Railway Line 1 in Ho Chi Minh City (Vietnam 2017)

For the Ho Chi Minh Urban Railway Company, this project provided support for the preparation of regulations and manuals for each department, support for internal training, and specialized training (e.g., station work, driver, track maintenance) was conducted in Japan for selected trainees who completed the internal training.



Specialized training in Japan

Assistance with Improvement of Post-Opening O&M Capability

-Aiming for higher-quality railway operations-

Support provided to regulatory entities

■ O&M Consulting Services 2nd Stage (OMCS 2) for Jakarta MRT Project (Indonesia 2020)

This project provides O&M support to PT. MRT Jakarta (MRTJ), the operator of the Jakarta Urban Railway, which started operations in March 2019. It includes heavy maintenance for rolling stock, the first time that was performed since the railway opened.

This project supports the safe and reliable practice of heavy maintenance, which requires a high level of technical skill in rolling stock maintenance. While the impact of COVID-19 has compelled the project to review the whole maintenance plan, proposals have been made that were adjusted to match the actual situation of MRTJ.



Removing air-conditioning unit from car body

■ Project on Indian Freight Transportation of Dedicated Freight Corridor (India 2018)

For the Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL), support was provided with the establishment of an efficient operation and management system, and a technology transfer was conducted to improve capacity and efficiency of freight transport.



Freight transport in India

■ Project for Capacity Development on Indian Railway Safety (India 2018)

For the Indian Commission of Railway Safety, which was investigating railway accidents in the country, training was administered on methods of preparing investigation reports and conducting hearings with related parties based on accident investigation reports released in Japan's railway sector in the past. Advice was then given on the establishment of a safety management system for the organization.



Accident investigation training administered in Japan

Assistance with Repairing and Improving Railway Facilities

-Making railways safer and more convenient-

[Source (articles and photos)] "ODA Visualization Site," JICA

■ Jabodetabek Railway Capacity Enhancement (Indonesia 2014)

In support of alleviating the dire traffic congestion on the roads of greater Jakarta, assistance was provided with expanding rolling stock depot, improving railway systems (including electric power and safety equipment), and procuring rolling stock in order to improve the passenger transport capacity of Jabodetabek Railway.

[Amount of loan under agreement] 16.322 billion yen



■ Railway Double-Tracking on Java South Line (Central Java) (Indonesia 2008)

The island of Java in the Republic of Indonesia had been heavily dependent on road transport. In order to shift the means of transport to railways and facilitate greater transport efficiency, assistance was rendered with areas that included civil engineering/track/bridge construction for double-tracking the Cirebon-Kroya-Kutoarjo section on the Java South Line located in central Java, as well as the improvement of signal communication equipment.

[Amount of loan under agreement] 18.819 billion yen



■ Capacity Enhancement of Mass Transit Systems in Metro Manila (Philippines 2013)

In Metro Manila of the Republic of the Philippines, traffic congestion had become progressively serious, with the promotion of a shift to a mass transit system posing a considerable challenge. With a view to resolving that challenge, assistance was provided with the extension of the northern part of LRT Line 1 in the Province of Cavite, which has experienced a significant increase in population, as well as the extension of the eastern part of LRT Line 2 in the cities of Marikina and Antipolo.

[Amount of loan under agreement] 43.252 billion yen



■ Hanoi-HCMC Railway Bridges Safety Improvement Project (Vietnam 2013)

To help guarantee the safety of the South-North Railway (Hanoi-Ho Chi Minh Line) that links Socialist Republic of Vietnam's north, central, and south areas, as well as to augment the transport capacity of and shorten travelling time on that line, support was provided, including the rebuilding of 44 bridges that had deteriorated considerably over time.

[Amount of loan under agreement] 13.79 billion yen



Assistance with Human Resource Development

-Creating human resources to uphold the railways of tomorrow-

■ Technical Assistance Project to Establish the Philippine Railway Institute (2018-2023)

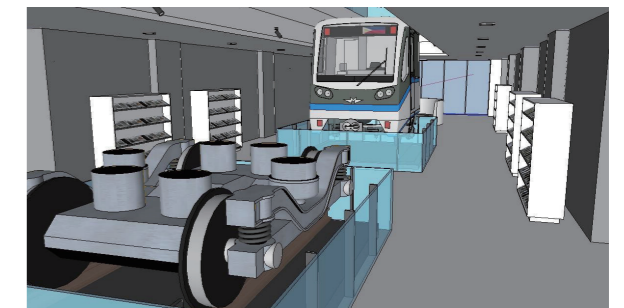
In the regions of the Republic of the Philippines that surround Metro Manila, numerous railway projects are currently underway. It is estimated that roughly 15,000 railway personnel members will be needed to operate those railways. With that in mind, based on the need to continuously develop high-quality O&M personnel, the Philippine government decided to establish the Philippine Railway Institute

as a human resource development and supervisory body, and asked the JICA to assist with its establishment.

The functions that this state-operated training center is expected to undertake include the regulation and supervision of human resource development, associated training administration, and research and development.



Philippine Railway Institute (Under construction)



Training facility (Image following completion)

■ Preparatory Survey on Greater Cairo Metro Line No. 4 Fire Management Policy based on Japanese Standard and Practice (Egypt 2011)

This training was administered for the purpose of having members of the government of the Arab Republic of Egypt operate Japanese disaster prevention standards and disaster prevention equipment adequately. To have them form an understanding of those standards as well as grasp

the state of fire countermeasures in Japan, tours of stations, control centers, and other subway facilities in Japan were given. Tours of the Yokohama City Fire Bureau and a firefighting school were also conducted to introduce initiatives geared towards subway fires and the state of associated training.



Scene from tour of Otemachi Station Disaster Prevention Control Office



Breathing apparatus always at the ready at station offices

JICA Railway Project Map

① Republic of Indonesia

- Construction of Jakarta Mass Rapid Transit Project
- Jabodetabek Railway Capacity Enhancement
- Railway Double Tracking on Java South Line
- Construction of Railway Double Tracking of Cikampek-Cirebon
- Counterpart Training for Jakarta MRT Project

② Republic of the Philippines

- North-South Commuter Railway Project
- North-South Commuter Railway Extension Project
- Metro Manila Subway Project
- Capacity Enhancement of Mass Transit Systems in Metro Manila
- Metro Rail Transit Line 3 Rehabilitation Project
- Metro Manila LRT Line 1 Capacity Expansion Project
- Metro Manila Strategic Mass Rail Transit DEV. Project
- Improvement and Modernization of Commuter Line South Project
- Technical Assistance Project to Establish the Philippine Railway Institute

③ Socialist Republic of Viet Nam

- Ho Chi Minh City Urban Railway Construction Project
- Hanoi City Urban Railway Construction Project (Line 1)
- Hanoi-HCMC Railway Bridges Safety Improvement Project
- Data Collection Survey for Urban Railway's Technical Regulation
- Study on Building the National Technical Regulation and Standard Set for Railway
- Technical Assistance Project to Strengthen the Capacity of Regulator and to Establish Operation and Maintenance of Metropolitan Railway Lines in Hanoi City
- Special Assistance for Project Implementation for establishment of an organization for the operation and maintenance of metropolitan railway lines in Hanoi city
- Project for Support of Set up of Operation and Maintenance Company of Urban Railways in Ho Chi Minh City
- Special Assistance for Project Implementation for Preparation of Management System of Urban Railways in Ho Chi Minh City
- Project on Strengthening Management Ability of Operation and Maintenance Company for the Opening of Urban Railway Line 1 in Ho Chi Minh City

④ Kingdom of Thailand

- Mass Transit System Project in Bangkok (Red Line)
- Mass Transit System Project in Bangkok (Purple Line)
- MRTA Initial System Project (Blue Line)
- Thailand Feasibility Survey for Stabilized Quality Parts Supply for Railway Vehicle Maintenance and Quality Management Capacity Improvement

⑤ People's Republic of Bangladesh

- Dhaka Mass Rapid Transit Development Project (Line 1)
- Dhaka Mass Rapid Transit Development Project
- Jamuna Railway Bridge Construction Project
- Rules and Technical Standards for Dhaka Metrorail System
- Institutional Building Assistance for Dhaka Urban Transport Network Development
- Project on Technical Assistance for Mass Rapid Transit Safety Management System of Line 6

⑥ India

- Delhi Mass Rapid Transport System Project
- Bangalore Metro Rail Project
- Kolkata East-West Metro Project
- Dedicated Freight Corridor Project
- Chennai Metro Project
- Mumbai Metro Line 3 Project
- Ahmedabad Metro Project
- Follow-up Study for Mumbai-Ahmedabad High Speed Railway Corridor
- Project for Capacity Development on Indian Railway Safety
- Technical Assistance Project on Indian Freight Transportation of Dedicated Freight Corridor
- Preparation of Basic Manual on Railway Operation and Maintenance for the Indian High Speed Rail Corporation

⑦ Mongolia

- Feasibility Survey for Introducing Efficient Railway Track Maintenance Work in Mongolia

⑧ Republic of Uzbekistan

- Capacity Development on Upgrading Track Maintenance and Train Operations Skills related to Tashguzar-Kumkurgan New Railway Line

⑨ Republic of Turkey

- Bosphorus Rail Tube Crossing Project
- Bosphorus Rail Tube Crossing (Safety Management)

⑩ Arab Republic of Egypt

- Greater Cairo Metro Line No.4 Phase 1 Project
- Preparatory Survey on Greater Cairo Metro Line No.4 Fire Management Policy based on Japanese Standard and Practice

⑪ Republic of Ghana

- Study for Safety Operation and Management of Railway in the Republic of Ghana

⑫ Democratic Republic of the Congo

- SCTP (Societe Commerciale de Transport et des Ports)'s Staff Training in Japan for Technical Assistance on Diesel Locomotive Maintenance

⑬ Republic of South Africa

- Republic of South Africa Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Projects "Efficient Management of Railway Facility (Track) by Sleeper Anchor"

