

Country Name	The Project on Urban Transport Improvement for Kathmandu Valley
Nepal	

I. Project Outline

Background	In Kathmandu, Nepal, along with the population increase, the number of registered vehicles, including motorcycles, was increasing, resulting into traffic congestion in the city. Although the government of Nepal (GON) was striving to avoid traffic congestion through improvement of the road network, the traffic infrastructure was still insufficient to cope with the ever-increasing traffic volume. In addition, the overall orientation of GON on the development of the whole Kathmandu Valley was not very clearly defined. JICA conducted the Master Plan study in 1993 and this contributed to the improvement of traffic condition in Kathmandu Valley. However, the updated Urban Transport Master Plan was necessary as a consequence of rapid urbanization and increased traffic volume caused by rapid population growth.	
Objectives of the Project	This project aimed at development of the Master Plan for comprehensive urban transport of the Kathmandu Valley and the Pre-Feasibility Studies for selected prioritized project(s), thereby contributing to improvement of urban transport and sound development of the Kathmandu Valley. 1. Expected Goals through the proposed plan ¹ : Sound development of the Kathmandu Valley which improves the quality of life of the citizens and the environment will be achieved.	
Activities of the Project	1. Project Site: Kathmandu Valley, which covers 5 municipalities of Kathmandu, Lalitpur, Bhaktapur, Thimi and Kirtipur and vicinity area of 3 districts of Kathmandu, Lalitpur and Bhaktapur. 2. Main Activities: Conduct of complement traffic surveys, Study on future traffic demand forecast, Establishment of urban transport master plan, Formulation of Implementation Plan and Pre-Feasibility Studies for selected prioritized project(s), Seminar and workshops for consensus building and capacity development 3. Inputs (to carry out above activities)	
	Japanese Side 1) Mission members: 16 persons 2) Trainees Received: 8 persons	Nepalese Side 1) Staff Allocated: 20 persons
Project Period	(ex-ante) June 2014 – November 2015 (actual) June 2014 – May 2017	Project Cost (ex-ante) 250 million yen, (actual) 339 million yen
Implementing Agency	Department of Roads (DOR), Ministry of Physical Infrastructure and Transport (MOPIT) Kathmandu Valley Development Authority (KVDA)	
Cooperation Agency in Japan	Eight-Japan Engineering Consultants Inc. Nippon Koei Co., Ltd. Tamano Consultants Co., Ltd.	

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

• In judgement in ex-post evaluation, the influence of the great earthquake in April 2015, which was one of the worst natural disasters in Nepal and caused considerable physical and human damages, was taken into consideration as unexpected external conditions. Consideration was also given to the fact that the project conducted the emergency rehabilitation of KB Road (between Lokanthali and Kausaltar) as an additional component after the earthquake.

1 Relevance

<Consistency with the Development Policy of Nepal at the Time of Ex-Ante Evaluation>

In the National Transport Policy formulated in 2001 by the Ministry of Physical Planning and Works (MOPPW, now MOPIT), it was stated that a long-, medium- and short-term master plan should be compiled on transport infrastructure to be developed in urban areas, with which development works would be implemented. In the Vision Paper (2007) by MOPPW, it was stipulated that junction improvement, road upgrading and network expansion should be launched in order to relieve traffic congestion.

<Consistency with the Development Needs of Nepal at the Time of Ex-Ante Evaluation>

The GON had not formulated a plan for the development of the Kathmandu Valley with clear and consistent vision and the lack of the comprehensive plan led to the urban sprawl without adequate transport infrastructure and the extended areas vulnerable to natural disasters such as earthquake.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

In "Country Assistance Policy for Nepal" (2012), one of the three priority areas was assistance to development of social infrastructure and social system toward sustainable and balanced economic growth. In the priority area, assistance in transport infrastructure is included.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement for the Objectives at the Time of Project Completion>

¹ The degree of achievement of expected goals is not to be assessed in principle at the time of ex-post evaluation, since it is defined as the medium-to-long-term goals which will be attained as a result of crystallizing the proposed plan ("output" of the project).

The development study project was successfully carried out and the development of the Master Plan and the Pre-Feasibility Study (on T-M flyover²) was completed and compiled in documents by the end of the project. The documents described detailed information on proposed projects as well as the results of the strategic environmental assessment of the proposed projects were compiled as follows: (Volume I) Present Conditions, (Volume II) Master Plan and Pilot Project, (Volume III) Appendices. The Master Plan and the Pre-Feasibility Study were accepted by implementing agencies as a planning document for reference in planning new projects. During the implementation of the project, capacity building was carried out for DOR, KVDA, organizations under the Ministry of Urban Development (MOUD), and municipalities through the development of the Master Plan and also by actual OJT for their respective road construction projects.

<Utilization Status of the Proposed Plan at the Time of Ex-post Evaluation>

The project plans proposed in the Master Plan and the Pre-Feasibility Study have been partially utilized at the time of ex-post evaluation. As to the Indicator 1, the Master Plan and the Pre-Feasibility Study Report were not officially endorsed by the cabinet. Although the plan was proposed for approval by the DOR to the MOPIT, MOPIT high level authorities did not submit it to the Cabinet for approval as they found that the Master Plan was dynamic and needed to be changed over time. However, project plans recommended by the Master Plan were respected, and the MOPIT, DOR, Department of Transport Management (DOTM), KVDA and related agencies are planning to implement the selected programs/projects³. Moreover, the essence of the recommendations of the Master Plan was applied on the Five-Year National Plan Approach Paper (2019/20-2023/24). Since the completion of the project, the priority of the GON has shifted partly because of the earthquake in 2015 and partly because of the traffic condition change in Kathmandu caused by the improvement of River Corridors and the Ring Road South. Regarding the traffic condition in Kathmandu, the Ring Road South was constructed by the DOR with the support of the Chinese Government, which resulted in the diversion of bulk of traffic. At first, the DOR was positive to implement T-M flyover. However, after considerable discussion between JICA and DOR, the T-M flyover project's feasibility was in question. In response to GON request, JICA again conducted the Data Collection Survey for the Traffic Improvement in Kathmandu valley in 2019. The Data Collection Survey recommended that the T-M flyover need not be constructed at this time and, instead of the construction of T-M flyover, only traffic management with increasing the number of lanes in the intersections in Tripureshwor, Thapathali and Maitighar (comprising the intersection which would bring the same impact as T-M Flyover) was recommended. Regarding the Indicator 2, although the progress is slower than expected as described before, some of the important projects recommended by the Master Plan were approved and are currently in the implementing stage. In the Master Plan, 17 items are identified to be implemented in specific target period (short-term (-2020) and middle term (2021-2025)). Out of the 17 items, specific actions have already been taken and in progress for 9 items⁴, in spite of the policy change of the implementing agencies. Some budgets have been allocated for Suryabinayak Dhulikhel Road and Koteshwar Junction Improvement Roads. Similarly, the DOR has initiated the improvement of the road bypassing the Koteshwar Junction by connecting Lalitpur with Thimi (after Jadibuti towards Bhaktapur) on own budget. Apart from that, the different GON agencies are involved in the construction of the River Corridors and other important priority projects on their own budget or from the support of donors.

<Status of Achievement for Expected Goals through the Proposed Plan at the Time of Ex-post Evaluation>

Expected Goals through the proposed plan is partially achieved at the time of ex-post evaluation. As to the Indicator 1, there are some improvements in traffic conditions, according to interview with persons in charge at the implementing agencies. This is because of the construction and improvement of River Corridors, improvement of the Ring Road South from Kalanki to Koteshwar, improvement of Koteshwar Junction, diversion road improvement, traffic management at some of the intersections, widening of the existing roads, etc. This has some impact on the mitigation of traffic congestion as new roads are introduced, existing road capacity has improved and the traffic management is strengthened including installation of traffic signals by own fund. As per the traffic accidents, although the total number of accidents has increased from 5,530 in 2017 to 10,030 in 2020, the fatality decreased from 182 in 2017 to 153 in 2020. It is considered that the number of serious accidents has been decreasing due to improved roads, although the total number of accidents are increasing as the traffic volume has increased after the road improvement. The main reason of decrease in the fatal accident in spite of the increase in the number of accidents is the traffic awareness campaign by different agencies, improvement of road crossing by construction of pedestrian bridges, using the traffic gun for monitoring the speeding vehicle in some limited roads, etc. In regard to the Indicator 2, signs of sound development of Kathmandu Valley have been recognized to some extent. Formulation of Physical Development Plan of Kathmandu Valley Development Plan is under process. Two cities (Bhaktapur and Changunarayan, Gundu-Balkot and Tokha) out of three new cities after municipal merger have already formulated a plan for urban development. However, the implementation and the budget for the plan has not been confirmed yet partly because of the lack of manpower, for example, lack of planners at KVDA. Not much progress for the disaster management has been observed due to lack of expertise. Regarding the Indicator 3, the impact of capacity building has been recognized to some extent. For example, DOR improved some portion of the road by self-planning, and MOUD improved the River Corridors by self-planning. Some capacity building for coordination and planning has been done by having interaction meetings and information sharing, especially by personal basis and individual initiation. Notable changes are; realization of the importance of infrastructures like underpass and flyovers despite high cost, realization of need of signalized system and installing the traffic signals by own fund in numerous intersections.

<Other Impacts at the Time of Ex-post Evaluation>

The project was classified as Category B based on the JICA Guidelines for Environmental and Social Considerations (April, 2010). At the time of ex-post evaluation, no negative impact caused by the project has been observed. As to the impact of the proposed projects, strategic environment assessment was conducted during the project and the results were compiled in the Master Plan. According to the results of the strategic environment assessment, some of the projects proposed in the Master Plan and the Pre-Feasibility Study Report were defined as Category B but none of them were defined as Category A. At the time of ex-post evaluation, no actual construction work of the propose projects has been launched

² Flyover between Tripreshwor and Maitighar

³ The Master Plan itself need not be approved by the Cabinet to implement the selected programs/projects.

⁴ Based on the priority change of GON after the project, 9 on-going items formerly described in the Master Plan were reorganized in the projects as presented in the table below.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is fair.

Status of Achievement of Utilization Status of the Proposed Plan and Expected Goals through the Proposed Plan

Aim	Indicators	Results								
(Utilization Status of the Proposed Plan) The Master Plan and the results of Pre-Feasibility Study are approved and launched by the Government of Nepal (GON).	Indicator 1 The Comprehensive Urban Transport Master Plan is approved by GON and its contents are reflected into related legal plans and utilized for the formulation of the related legal plans.	(Ex-post Evaluation) partially achieved • The Master Plan and the Pre-Feasibility Study Report were not officially endorsed by the Cabinet. The MOPIT high level authorities did not submit them to the Cabinet for approval as they found that the Master Plan was dynamic and needed to be changed over time. Since project completion, the priority of the GON has shifted because the traffic condition in Kathmandu has changed. However, the implementing agencies and related agencies are planning to implement the selected programs/projects and the essence of the recommendations of the Master Plan was applied on the Five-Year National Plan Approach Paper (2019/20-2023/24). • As the T-M flyover project's feasibility was in question, JICA again conducted the Data Collection Survey for the Traffic Improvement in Kathmandu valley in 2019. The Data Collection Survey recommended that the T-M flyover need not be constructed at this time.	source : Five-Year Plan Approach Paper (2019/20-2023/24), Interview with MOPIT, DOR and KVDA							
	Indicator 2 The policies, sectoral plans and the projects proposed by the Comprehensive Urban Transport Master Plan are launched.	(Ex-post Evaluation) partially achieved • Some of the important projects recommended by the Master Plan were approved and are currently in the implementing stage. As the table below indicates, nine items out of 17 to be implemented in short- and middle-term in the Master Plan are in progress. <table border="1" data-bbox="523 831 1292 1160"> <tbody> <tr> <td data-bbox="523 831 879 898">Suryabinayak Dhulikhel Road and Koteshwar Junction Roads</td> <td data-bbox="879 831 1292 898">DOR has been allocated some budgets for improvement.</td> </tr> <tr> <td data-bbox="523 898 879 965">Road bypassing the Koteshwor Junction</td> <td data-bbox="879 898 1292 965">DOR initiated improvement on its own budget.</td> </tr> <tr> <td data-bbox="523 965 879 1055">River Corridors and some other important priority projects</td> <td data-bbox="879 965 1292 1055">Different GON agencies are involved in the construction on their own budget or from the support of donors.</td> </tr> <tr> <td data-bbox="523 1055 879 1160">T-M flyover (Pre-Feasibility Study)</td> <td data-bbox="879 1055 1292 1160">The Data Collection Survey conducted by JICA in 2019 recommended that the T-M Flyover need not be constructed.</td> </tr> </tbody> </table>	Suryabinayak Dhulikhel Road and Koteshwar Junction Roads	DOR has been allocated some budgets for improvement.	Road bypassing the Koteshwor Junction	DOR initiated improvement on its own budget.	River Corridors and some other important priority projects	Different GON agencies are involved in the construction on their own budget or from the support of donors.	T-M flyover (Pre-Feasibility Study)	The Data Collection Survey conducted by JICA in 2019 recommended that the T-M Flyover need not be constructed.
Suryabinayak Dhulikhel Road and Koteshwar Junction Roads	DOR has been allocated some budgets for improvement.									
Road bypassing the Koteshwor Junction	DOR initiated improvement on its own budget.									
River Corridors and some other important priority projects	Different GON agencies are involved in the construction on their own budget or from the support of donors.									
T-M flyover (Pre-Feasibility Study)	The Data Collection Survey conducted by JICA in 2019 recommended that the T-M Flyover need not be constructed.									
(Expected Goals through the Proposed Plan) Sound development of the Kathmandu Valley which improves the quality of life of the citizens and the environment will be achieved.	Indicator 1 Improvement of urban transport (reduced traffic congestion, improved utilization of public transport and the quality of services, decrease in traffic accident, etc.)	(Ex-post Evaluation) partially achieved • Some improvements in traffic conditions have been observed. -Traffic congestion is mitigated as new roads are introduced, existing road capacity has improved and the traffic management is strengthened including installation of traffic signals by own fund. -Although the total number of accidents has increased from 5,530 in 2017 to 10,030 in 2020, the fatality decreased from 182 in 2017 to 153 in 2020. It is considered that the number of serious accident has been decreasing due to improved roads, although the total number of accidents are increasing as the traffic volume has increased after the road improvement. The main reason of decrease in the fatal accident in spite of the increase in the number of accidents is the traffic awareness campaign by different agencies, improvement of road crossing by construction of pedestrian bridges, using the traffic gun for monitoring the speeding vehicle in some limited roads, etc.	source : Interview with MOPIT, DOR, KVDA, MOUD, Traffic Police, Observation by JICA Nepal Office							
	Indicator 2 Sound development of the Kathmandu Valley (formulation and approval of land use plan, implementation of promotion and regulations of land use, development of urban facilities, improvement of disaster management (improvement of disaster-prone areas, development of evacuation routes, strengthening of emergency transport	(Ex-post Evaluation) partially achieved • Signs of sound development of Kathmandu Valley have been recognized to some extent. -Formulation of Physical Development Plan of Kathmandu Valley is under process. Two cities (Bhaktapur and Changunarayan, Gundu-Balkot and Tokha) out of three new cities after municipal merger have already planned for urban development. However, the implementation and the budget for the plan has not been confirmed yet. -Not much progress for the disaster management has been observed due to lack of expertise.	source : Interview with KVDA							

	network, etc.))		
	Indicator 3 Strengthening of the capabilities of relevant agencies on the comprehensive planning/coordination of the urban transport and urban development in the Kathmandu Valley	(Ex-post Evaluation) partially achieved • The impact of capacity building has been recognized to some extent. -DOR improved some portion of the road by self-planning. -MOUD improved the River Corridors by self-planning. • Some capacity building for coordination and planning has been done, with notable changes as follows. -Realization of the importance of infrastructures like underpass and flyovers despite high cost. -Realization of need of signalized system and installing the traffic signals by own fund in numerous intersections.	source : Interview with MOPIT, DOR and KVTA

3 Efficiency

Both the project cost and the project period exceeded the plan (ratio against the plan: 136% and 194%, respectively). The outputs of the project were produced as planned. Because of the earthquake occurred in 2015, it required more time to finalize the planned hazard analysis than expected. In addition, the project conducted the emergency rehabilitation of KB Road after the earthquake and it was found that there was a risk to be collapsed if the stronger earthquake hit the Kathmandu valley in the future. Because of this, it was decided to conduct a survey and preliminary design for the reinforcement of the road rehabilitation. Taking this fact into consideration, the efficiency of the project is fair (also refer to “Special Perspectives Considered”).

4 Sustainability

<Policy Aspect>

The Five-Year National Plan (2019/20-2023/24) states that the transport sector has an important role to play in accelerating the socio-economic development of the country, facilitating trade, business, and services in addition to enhancing unhindered access for the general public. One of the objectives of the Plan is to ensure smooth traffic movement through appropriate measures for protection maintenance and road safety.

< Institutional/Organizational Aspect>

At MOPIT, there was a minor organizational reform after project completion but the organization is functioning without major problem. The proposed project plans and the related recommendations presented by the Master Plan were taken into account for planning and preparation of new projects as a regular activity at MOPIT. The number of staff has not increased and the current staff needs to work for as many activities as they did before JICA supported Master Plan study. Therefore, this has affected the dissemination of the recommendations of the Master Plan to other organizations such as KVTA, DOTM and municipalities. However, this has not hampered for their day-to-day activities. At KVDA, according to interview, they are in shortage of expertise staff such as urban planners and disaster management experts. Although they have been carrying out their day-to-day work, it may be a problem if some specific additional work is assigned as they have limited time.

<Technical Aspect>

At MOPIT, the staff has developed necessary skills and knowledge to continuously disseminate and conduct the activities related to the project plans proposed by the project through the interactions with the development study team during the project as well as through JICA’s other support like trainings and the Data Collection Survey conducted in 2019. At KVTA, there is shortage of technical staff as mentioned above.

<Financial Aspect>

Although there is no budget specifically allocated to dissemination of the proposed project plans and the related recommendations of the Master Plan, some budget has been allocated as per regular projects for some of the proposed projects as described in the above Effectiveness/Impact.

<Evaluation Result>

In light of the above, slight problems have been observed in terms of the institutional/organizational, technical and financial aspects of the implementing agency. Therefore, the sustainability of the effectiveness through the project is fair.

5 Summary of the Evaluation

The objective of the project was achieved by the time of project completion as planned, by submitting the Master Plan and the Pre-Feasibility Study Report. The Master Plan and the Pre-Feasibility Study Report were not officially endorsed by the GON as the priority of the GON has shifted due to the change of the traffic conditions in Kathmandu partly due to the earthquake in 2015. However, some of the important projects recommended by the Master Plan were approved and are currently in the implementing stage and some improvements in traffic conditions, such as mitigation of traffic congestion, have been observed. Therefore, the effectiveness/impact is fair. On sustainability, further strengthening of manpower and technical capacity is required at MOPIT and KVDA and more budget allocation is necessary, but sustainability in policy aspect is ensured, therefore, the sustainability of related agencies is fair. Regarding efficiency, the project was affected by the earthquake in 2015, and the both project cost and project period exceeded the plan. Considering all of the above points, this project is evaluated to be partially satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- The implementing agencies should efficiently share the result of the Master Plan among all the stakeholders within the implementing agencies as well as related stakeholders in other organizations to realize its intended objective efficiently. The Master Plan should be updated according to the target year and reflected in the planning and policy documents concretely.
- It is also important to align the Master Plan formulation schedule with the timing of the formulation and renewal of plans and policy documents. Moreover, clarifying the positioning of the Master Plan and how to input it to the planning and policy documents should be important as well.

Lessons Learned for JICA:

- Regarding the formulation of new projects proposed in the Master Plan, the response of JICA to the recommendation of the Master Plan was slower than expected due to the lengthy internal discussion among the various departments within JICA HQs. and Nepal Office. This was because the Master Plan did not capture traffic condition changes in Kathmandu caused by the improvement of River Corridors and the Ring Road South and the influence of the earthquake in 2015. Therefore, the Data Collection Survey was conducted to address the fast changing condition of the traffic scenario in Kathmandu Valley and depicted a different scenario. To avoid this, it would be necessary that the new project formulation process should be shortened as much as possible and that JICA's technical monitoring capacity should be strengthened during the development study itself.
- To share the Master Plan efficiently with the implementation agency, it is also important that the personnel at the implementing agencies has sufficient technical capacity. Therefore, it will be effective to formulate the project plan including technical capacity development of the implementing agencies based on the capacity assessment in the planning stage.