



Technical Assistance Report

Project Number: 50381
Transaction Technical Assistance (TRTA)
April 2017

MYA: Greater Mekong Subregion East-West Economic Corridor Highway Development Project (Financed by Japan Fund for Poverty Reduction)

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 20 March 2017)

Currency unit	–	Myanmar Kyat (K)
MK1.00	=	\$0.00073
\$1.00	=	MK 1,362

ABBREVIATIONS

ADB	–	Asian Development Bank
EWEC	–	East West Economic Corridor
GMS	–	Greater Mekong Subregion
JICA	–	Japan International Cooperation Agency
MOC	–	Ministry of Construction
TA	–	technical assistance

NOTE

In this report, "\$" refers to US dollars.

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TECHNICAL ASSISTANCE FOR PROJECT PREPARATION

A. Justification

1. A project preparatory technical assistance¹ is required to prepare: (a) a planning study, which will recommend the final alignment, standards and phasing for a new Bago-Kyaikto highway and an indicative alignment for a new Yangon-Bago link, (b) a feasibility study as well as safeguard documents for the new Bago-Kyaikto highway, on the basis of the alignment and standards selected by the government at the end of the planning study, (c) a pre-feasibility study for the new Yangon-Bago link, and (d) an implementation plan including documentation to support ADB processing of the subsequent loan for the new Bago-Kyaikto highway.

2. The Asian Development Bank (ADB) and the Japan International Cooperation Agency (JICA) have agreed to cooperate during the preparation of the Greater Mekong Subregion (GMS) East-West Economic Corridor (EWEC) Highway Development Project, which will construct a new Bago-Kyaikto highway. ADB will be responsible for studies related to the project's highway sections, and JICA will be responsible studies related to the new Sittaung bridge. The ADB-financed consultant will integrate the findings of the JICA study into the overall feasibility and safeguard reports.

B. Major Outputs and Activities

3. The major outputs and activities are summarized in Table 1.

Table 1: Summary of Major Outputs and Activities

Major Activities / Outputs	Expected Completion Date
Mobilization	June 2017
Inception report	August 2017 (month 1.5)
Planning study report	November 2017 (month 5)
<ul style="list-style-type: none"> • Traffic projections • Final alignment for the new Bago-Kyaikto highway • Standards (e.g. possible grade separation) and phasing of capacity for the Bago-Kyaikto and Yangon-Bago links • Scope for private sector participation in operations of Bago-Kyaikto and financing of the Yangon-Bago link • Preliminary environmental impact assessment and resettlement plan of new Bago-Kyaikto highway • Alternative analysis • Recommendations for operations and maintenance organization 	
Pre-feasibility study report: Yangon-Bago link	April 2018 (month 10)
<ul style="list-style-type: none"> • Basic design including alignment • Economic analysis • Rapid assessment of environmental and social impacts • Implementation and financing recommendations • Public consultations materials 	
Feasibility study report: New Bago-Kyaikto highway	April 2018 (month 10)
<ul style="list-style-type: none"> • Preliminary design • Cost estimates 	

¹ The TA is classified as transaction technical assistance (TRTA) under the Staff Instruction on Business Processes for Transaction Technical Assistance. Prior to introduction of the staff instruction, this TA was prepared following the operations manual on technical assistance (issued on 13 December 2013).

Major Activities / Outputs	Expected Completion Date
<ul style="list-style-type: none"> • Tolling and operations study • Economic analysis • Financial analysis • Rural road access program for local communities • Social and poverty analysis • Safety design report and safety management and awareness program • Social development and gender action plan • Resettlement plan (or Resettlement and Ethnic Group Development Plan if applicable) • Environmental Impact Assessment • Public consultations materials 	
Public consultations	May 2018 (month 11)
<ul style="list-style-type: none"> • Public consultations report, including recommendations for detailed design stage 	
Implementation plan and ADB documentation	June 2018 (month 12)
<ul style="list-style-type: none"> • Implementation plan: schedule, organization • Financing plan • Procurement plan and master bidding documents • Financial management and procurement assessments • Institutional development plan for MOC 	
Draft Final Report	July 2018 (month 13)
Final Report	September 2018 (month 15)

MOC = Ministry of Construction.

Source: Asian Development Bank.

C. Cost Estimate and Proposed Financing Arrangement

4. The technical assistance (TA) is estimated to cost \$2.05 million, of which \$2.0 million will be financed on a grant basis by the Japan Fund for Poverty Reduction (JFPR) and administered by ADB. The government will provide counterpart staff support. The detailed cost estimates and financing plan are presented in Table 2.

Table 2: Cost Estimates and Financing Plan
(\$'000)

Item	Total Cost
Japan Fund for Poverty Reduction ^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (52.5 person-months)	1,230.0
ii. National consultants (90 person-months)	190.0
b. International and local travel	100.0
c. Reports and communications	10.0
2. Equipment (computer, printer, etc.) ^b	20.0
3. Workshops, training, seminars, and conferences ^c	20.0
4. Surveys	250.0
5. Miscellaneous administration and support costs	25.0
6. Contingencies	155.0
Total	2,000.0

^a Administered by the Asian Development Bank. The value of the government counterpart in-kind contribution is estimated at 2.5% of the total technical assistance cost.

^b Equipment.

Type	Cost
Office and highway design equipment and software	\$20,000

Note: Equipment will be turned over at the end of the technical assistance to the Executing Agency.

^c Workshops, training, seminars, and conferences

Purpose	Venue
Consultations on feasibility study	Yangon, Bago, Kyaikto, Nay Pyi Taw

Source: Asian Development Bank.

D. Consulting Services

5. ADB will recruit a consulting firm for a total estimated 52.5 person-months international consultant input and 90 person-months national consultant input. ADB will recruit the feasibility study consultant under quality-cost based selection method (90:10 quality to cost ratio), using output-based terms of reference, and full technical proposal. Illustrative consultant team requirements are in Table 3. The consultant will propose a team with adequate capacity to deliver the required outputs.

Table 3: Consulting Services Requirement – Feasibility Study Consultant

Positions	Estimated Person-months
International	
Team leader / transport planner	11.0
Highway design engineer	10.0
Transport economist / traffic modeler	5.0
Financing / private sector specialist	3.0
Hydrology engineer	3.0
Pavement / geotechnical specialist	1.5
Bridge engineer	2.5
Procurement specialist	1.0
Highway maintenance and operations specialist	1.0
Road safety specialist	2.0
Environmental specialist	5.0
Social safeguards specialist	5.0
Social development specialist	2.5
National	
Deputy team leader / highway engineer	11.0
Highway and bridge design engineers / design team	34.0
Social development specialists / survey team	20.0
Environmental specialists / survey team	20.0
Economist / Financial specialist	5.0

Source: Asian Development Bank.

6. The team leader / transport planner, supported by the deputy team leader, will prepare the planning study, coordinate the feasibility study and pre-feasibility study, lead public consultations, propose an organization for project construction and operations, identify a program of rural access roads, prepare the project implementation plan including for financial management, and prepare the institutional development plan of the Ministry of Construction (MOC) to manage arterial highways. The highway design engineer will lead the preparation of the preliminary engineering report for the new Bago-Kyaikto highway and basic engineering report for the Yangon-Bago link, coordinate the local design team, surveys, and specialist inputs of other engineers, prepare cost estimates and construction plan, and provide inputs to support the planning study and procurement plan. Hydrology, pavement / geotechnical specialists, and bridge engineer will prepare sub-reports on pavement study, hydrology study, embankment study, and structures. The highway maintenance and operations specialist will prepare the sub-report on highway operations

and identify associated costs. The road safety specialist will ensure the preliminary design meets good international safety standards, and prepare a safety management and awareness program. The national highway and bridge design engineering team will among others undertake or supervise technical surveys, undertake engineering and hydrology studies, prepare drawings, and analyze rate and materials availability.

7. The transport economist/traffic modeler will design and supervise traffic surveys (e.g. origin/destination, traffic counts, shipper's survey, stated preference survey), update and validate a regional traffic model, prepare economic and trade projections, prepare traffic forecasts, recommend alternative project configurations including number of lanes, test various toll schedules, prepare a cost-benefit analysis and sensitivity analysis, and compile the results for each Subproject in an economic analysis report meeting ADB's Guidelines for the Economic Analysis of Project (1997, as amended from time to time). The financing/private sector specialist will identify the possible scope for private sector participation for each of the two subprojects, prepare the tolling sub-report, set up a financial model and prepare a financing plan and financial analysis meeting ADB's Guidelines for the Financial Analysis of Projects (2013, as amended from time to time). The national economist/financial specialist will assist the two international experts.

8. The environment specialist, supported by the local environmental team, will lead the development of the Environmental Impact Assessment (EIA) for the new Bago-Kyaikto highway.² This will include (i) organizing and supervising various environmental baseline surveys,³ (ii) preparing the assessment, (iii) preparing the environmental management plan, and (iv) organizing environmental consultations. The social safeguards specialist, supported by the local social development team, will lead the preparation of the Resettlement Plan for the new Bago-Kyaikto highway, and propose an income restoration program. The consultant will assess the presence of ethnic groups in the project area, and if required, will prepare a Resettlement and Ethnic Group Development Plan, in lieu of the Resettlement Plan. The social and environmental plans will be developed in accordance with ADB's Safeguard Policy Statement (SPS, 2009), as well as JICA and the government's applicable guidelines and regulations. The consultants will also assist the MOC during the review of the EIA and Resettlement Plan by ADB, JICA and Myanmar's Ministry of Natural Resources and Environmental Conservation. The social development consultant will prepare a socio-economic baseline survey and a social and poverty assessment strategy, including gender disaggregated data. He/she will help scope out the complementary rural road access program, and other activities aiming at increasing economic opportunities for communities, and particularly women, which will form part of the projects social development and gender action plan.⁴

E. Implementation Arrangements

9. The technical assistance will be administered by ADB. The executing agency will be the MOC, and the implementing agency will be MOC's Department of Highways. It is expected that

² The ADB-financed consultant will prepare separate as well as joint environmental impact assessments and resettlement plans covering the ADB and JICA sections of the project, integrating the results of the JICA consultant social and environmental studies. JICA agreed to develop the project in accordance with ADB Safeguard Policy Statement (2009).

³ The EIA will be based on primary data and require acquiring baseline studies on air quality, water quality, biodiversity, noise and other parameters of concern, as well as performing noise and vibration modelling to assess the impact of the project in the operation phase.

⁴ The consultant will also assess the HIV/AIDS, communicable disease, human trafficking, and labor standards risks and determine whether the standard provisions in civil works contracts would be sufficient, or any additional public and community awareness would be necessary.

government counterpart contribution will be mainly in the form of counterpart staff, and facilitation to obtain data and arrange meetings, while the TA consultants will finance office accommodation, transportation including site visits, and all surveys. Project development will be supervised by a project management committee and a technical committee composed of MOC, JICA and ADB representatives. JICA agreed to make available to the consultant (i) the data, information, maps, surveys and interim reports compiled during the pre-feasibility study, (ii) the traffic model developed for the preparation of the National Transport Master Plan and updated for the pre-feasibility study, and (iii) reports to be prepared and information to be collected during JICA's parallel feasibility study. The TA proceeds will be disbursed in accordance with ADB's Technical Assistance Disbursement Handbook (2010, as amended from time to time) and in compliance with the 2016 JFPR policy guidelines.

10. The proposed TA processing and implementation schedule is listed in Table 4.

Table 4: Technical Assistance Processing and Implementation Schedule

Major Milestones	Expected Completion Date
Reconnaissance Mission	December 2016
Consultant advertising	February 2017
Interdepartmental Review Meeting	March 2017
TA approval	April 2017
Consultant mobilization	June 2017
TA completion	October 2018
TA closing	January 2019

TA = technical assistance.

Source: Asian Development Bank.