



Project Concept Paper

Project Number: 47087
January 2018

Proposed Loan Myanmar: Railway Modernization Project

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 5 January 2018)

Currency unit	–	Kyat (MK)
MK1.00	=	\$0.0007
\$1.00	=	MK1,354

ABBREVIATIONS

ADB	–	Asian Development Bank
km	–	kilometers
kph	–	kilometers per hour
MIS	–	management information system
MOTC	–	Ministry of Transport and Communications
MR	–	Myanma Railways
M RTP	–	Myanma Railways Transformation Plan
MYT-Plan	–	Myanmar National Transport Master Plan
TOR	–	terms of reference
TRTA	–	transaction technical assistance

NOTES

In this report, "\$" refers to United States dollars, unless otherwise stated.

Vice-President	Stephen Groff, Operations 2
Director General	Ramesh Subramaniam, Southeast Asia Department (SERD)
Director	Hiroaki Yamaguchi, Transport and Communication Division, SERD
Team leader	Takeshi Fukayama, Transport Specialist, SERD
Team members	Angelica Fernando, Operations officer, SERD
	Valerie Lisack, Transport Specialist, SERD
	Melody Ovenden, Social Development Specialist (Resettlement), SERD
	Kyaw Thu, Infrastructure Specialist, SERD
	Shinsuke Kawazu, Senior Counsel, Office of the General Counsel
	Adrien Veron-Okamoto, Transport Specialist, SERD
	Franzella Pinky Villanueva, Senior Operations Assistant, SERD
	Khine Wynn, Associate Safeguards Officer, SERD
Peer reviewer	Markus Roesner, Principal Transport Specialist, South Asia Department

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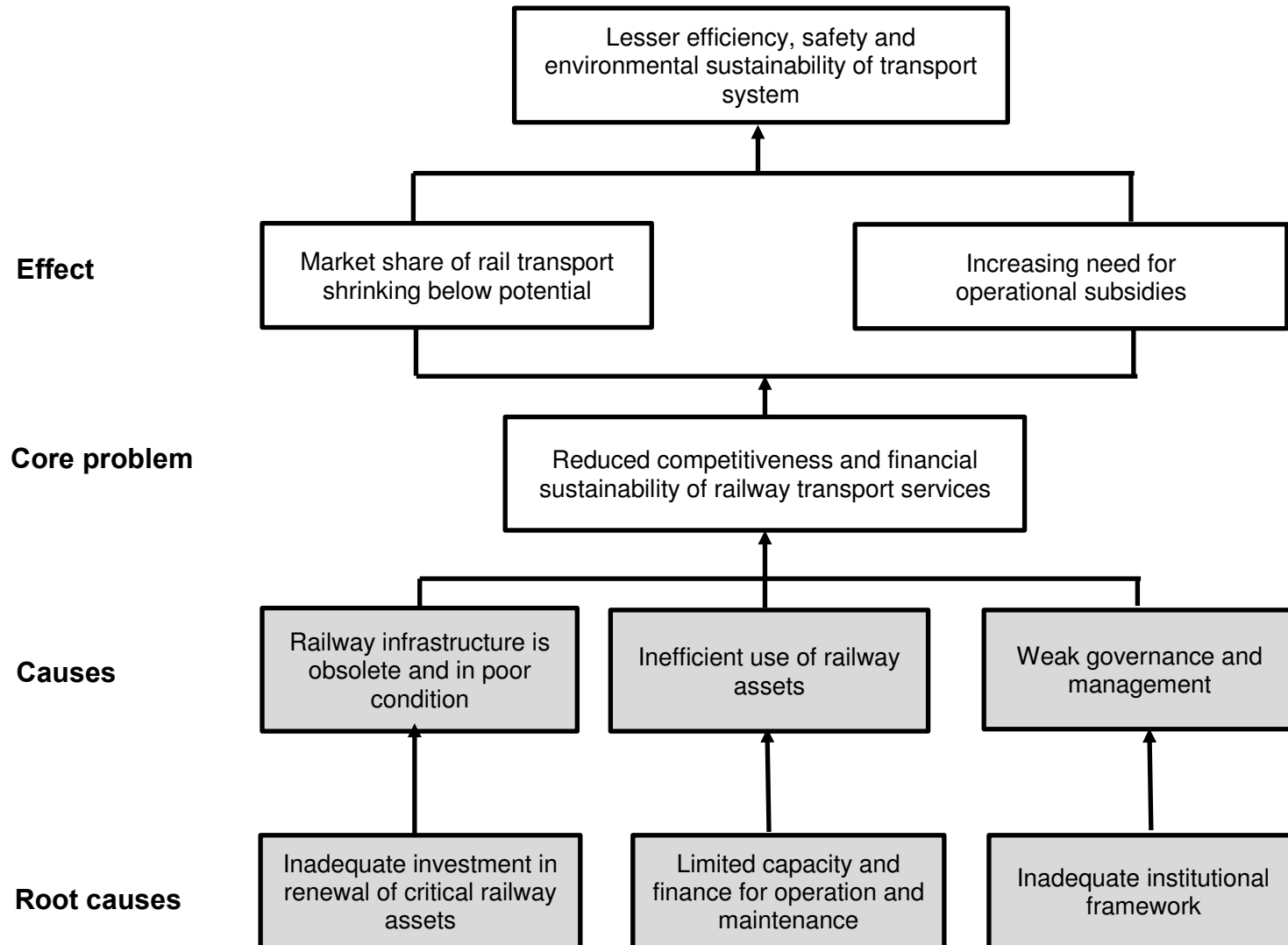
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PROJECT AT A GLANCE

1. Basic Data		Project Number: 47087-006	
Project Name	Railway Modernization Project	Department /Division	SERD/SETC
Country Borrower	Republic of the Union of Myanmar Republic of the Union of Myanmar	Executing Agency	Ministry of Transport and Communications
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Transport	Rail transport (non-urban)		60.00
		Total	60.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Adaptation (\$ million)	20.00
		Climate Change impact on the Project	Medium
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Institutional development	Some gender elements (SGE) ✓	
Knowledge solutions (KNS)	Organizational development		
Partnerships (PAR)	Knowledge sharing activities		
	International finance institutions (IFI)		
	Official cofinancing		
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	Yes	Rural	Medium
Household Targeting	No	Urban	Medium
SDG Targeting	Yes		
SDG Goals	SDG9		
6. Risk Categorization:	Low		
7. Safeguard Categorization	Environment: B Involuntary Resettlement: B Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		60.00	
Sovereign Project (Concessional Loan): Ordinary capital resources		60.00	
Cofinancing		60.00	
To be determined - Grant (Not ADB Administered)		15.00	
To be determined - Loan (Not ADB Administered)		45.00	
Counterpart		10.00	
Government		10.00	
Total		130.00	

PROBLEM TREE



I. THE PROJECT

A. Rationale

1. The Government of the Republic of Union of Myanmar has requested Asian Development Bank (ADB) assistance for railway modernization. The proposed project will improve the railway sector's competitiveness and sustainability by (i) rehabilitating the Yangon-Pyay line (238 kilometers [km]); (ii) modernizing Myanmar Railways' (MR) track maintenance practices; and (iii) strengthening MR's institutional capacity.

2. **Sector context.** Myanmar is at a milestone in its transition into a market economy and democracy. After decades of isolation and stagnation, the country has, since 2011, been undergoing a fundamental political, economic, and social transformation. Achieving the country's high growth potential will require continued reforms and structural transformation, especially in advancing major investments in infrastructure, developing relevant capacities and skills, and enhancing the business environment. Due to underinvestment and neglect, Myanmar's infrastructure lags its Association of Southeast Asian Nations neighbors. High transport costs and associated limited access to markets and services are among the main causes of poverty and regional inequality. Modernizing the transport system is a national priority.

3. Although road is a dominating in transport sector, Myanmar's railway system, with a network of approximately 6,000 km, is another crucial mode of transport in the country. ADB's strategic review of the transport sector in 2016 estimated that transport by rail has the potential to capture 7% of Myanmar's long-distance transport market for freight and up to 30% for passenger.¹ Quality railways can develop a competitive advantage against road-based transport when rail services are attractive in terms of speed, reliability and safety, while offering affordable rates. Achieving the railways' potential will require considerable investment to modernize the infrastructure² and transformation of the railway operator into an efficient and business-oriented organization. In those conditions, railways can be an efficient, modern, safe, and environmentally friendly transportation system contributing to national development.

4. **Myanma Railways.** MR—the national railway operator—is set as a government agency under the Ministry of Transport and Communications (MOTC). MR has suffered a long erosion of its competitiveness since 1990, which accelerated after 2012 when the government opened-up the economy. The rail modal share in passenger dropped from 44% (1990) to 10% (2013), while that of freight dropped from 14% to 5%.³ The quality of MR's passenger services has declined, in terms of speed and comfort of riding trains. Many passengers have shifted to more expensive, but also more comfortable and faster bus services. Because of decreasing ridership, MR's financial deficit has widened from MK 21 billion (\$15 million) in fiscal year 2012 to MK 57 billion (\$40 million) in fiscal year 2016. Revenue does not even cover the cash operating expenses (*i.e.* expenses exclusive of pensions, depreciation and financing costs).

5. **Issues.** The poor condition of the main line track is the main constraint to efficient rail operations. During the era of military-led administration, MR made considerable capital expenditures. Those are used, however, mostly to expand the network in rural areas with social development and national connectivity objectives. Meanwhile, the main lines were less prioritized although their maintenance and upgrading would have brought higher economic benefits. Poor

¹ ADB. 2016. *Myanmar Transport Sector Policy Note: How to Reduce Transport Costs*. Manila.

² Required invest amount for railway sector in Myanmar is estimated approximately \$3 billion by 2030.

³ ADB. 2016. *Myanmar Transport Sector Policy Note: Railways*. Manila.

track condition now leads MR to reduce train speeds to 20–30 miles per hour (mph) or 30–45 kilometers per hour (kph)—well below the lines' design speed of 50 mph or 80 kph. This makes rail trips slow and uncomfortable, and is a cause for minor derailments, which impacts reliability and safety.

6. MR's efficiency is also constrained by its technologies and practices. After decades of isolation and minimal budgets, operation of MR is now severely outdated. Track maintenance is carried out manually, while in modern railways this activity is mechanized and thus highly capital intensive. Signaling and telecommunication systems are outdated, which limits the capacity of lines and trains' commercial speed, while being a safety hazard. MR's back-office operations are entirely paper-based, with very few computers in use and limited electronic data transmission. By comparison, modern railways consider management information systems (MIS) vital to proper decision-making, optimizing the use of assets and adjusting to market demand.

7. MR management has insufficient autonomy and incentives to develop initiatives to rationalize operations and orient investments towards the most pressing needs. The Ministry of Rail Transport (MRT, absorbed into the MOTC in 2016) was responsible for any budgeting, planning, procurement, and staff and services decisions, stifling MR's initiative. In such context, political considerations primed over MR's business needs.

8. **Transformation Plan.** The government's strategy is to restore the railway system as a competitive and financially sustainable mode by rationalizing operations, improving sector governance and modernizing the infrastructure. With support from ADB, MOTC and MR have been developing a medium-term business plan to restore MR's competitiveness and financial sustainability—the Myanmar Railways Transformation Plan (MRTP). MRTP will reorient MR operations to increase efficiency and asset utilization, and improve the quality of services offered. Already, MOTC has re-focused capital investments in the 2017 budget towards the main lines, and discontinued several rail services where benefits did not justify the high operation costs. Under MRTP, the government will establish a more efficient institutional framework governing management and financial relationships between itself and MR. MR's management will be strengthened through internal reorganization by business lines, and the development of MIS. MRTP's objective is above-rail costs to be fully covered by revenues and moderately increased traffic within four years.

9. During project preparation, the government will define in coordination with ADB a set of key policy actions under MRTP, which will be implemented in the next 2 to 3 years, including some prior to ADB project approval. Policy actions will concern the following areas of MR: (i) increased financing for track maintenance; (ii) rationalization of services and rolling stock; (iii) financial restructuring; (iv) internal reorganization; (v) development of MIS; and (vi) governance improvements. Before loan approval, MOTC will address a policy letter expressing the government's commitment to implement these key policy actions during the time of the project. The policy actions will support the government's objectives and ensure effective use of the assets financed by the ADB loan.

10. **Yangon-Pyay Line.** The Yangon-Pyay line is Myanmar's first rail line, dating 1877. It is a part of the Western North-South Corridor (Yangon-Pyay-Magway-Mandalay), which is a priority corridor of Myanmar National Transport Plan (MYT-Plan),⁴ including 33% of Myanmar's population and 42% of the gross domestic product. The improvement of the section between

⁴ Japan International Cooperation Agency. 2014. *The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar, Final Report, Executive Summary*. Tokyo.

Yangon, the largest city in Myanmar with a population of 5.2 million, and Pyay, a historic trading city along the Ayeyarwaddy River, is a priority project of MYT-Plan. Currently five passenger trains a day are running in the Yangon-Pyay section including the trains running in a part of the whole section. The current bus service for Yangon-Pyay is 6 hours (average speed of 40 kph), while that for rail is 8.5 hours (average speed of 28 kph). Tariff is \$4–\$6 for bus and \$2 for rail. In 2016, the line carried 1.7 million passengers. The modernization of the railway in Yangon-Pyay section will geographically complement ADB's road sector investments, which are on other non-competing major corridors. The Yangon-Pyay rail line section needs rehabilitation of the rails, joints, ballast, as well as upgrading of the signaling and telecommunication systems. The need for modernization of rolling stock will be assessed during project preparation.

11. **Strategic context.** The project is in line with the government's strategy and coordinated with other development partners' efforts. MRTP prioritizes four corridors for upgrading (Yangon-Mandalay, Mandalay-Myitkina, Yangon-Pyay and Yangon-Mawlamyine), which is consistent with the MYT-Plan. MOTC requested ADB support to rehabilitate the Yangon-Pyay line. The Japan International Cooperation Agency (JICA) is already financing the reconstruction of the Yangon-Mandalay line, and the Export-Import Bank of Korea is preparing a project to improve on the Mandalay-Myitkina line. The government has initiated on its own resources the improvement of the Yangon-Mawlamyine line. Coordination with other donors such as JICA and Korea International Cooperation Agency, especially regarding areas of technical assistance, will be explored during the project processing.

12. The project will build upon a strong policy dialogue with ADB.⁵ The project is in line with ADB strategies, namely: (i) 2017–2021 Myanmar Country Partnership Strategy; transport is a priority sector of the strategy, under which ADB is to finance the modernization of segments of major transport corridors, and complement the investments with support for policy reform and capacity building, including institutional restructuring;⁶ (ii) the strategic framework on Greater Mekong Subregion Economic Cooperation Program, which recommends to broaden the scope of the transport program to railways,⁷ (iii) the direction of regional integration to which the Greater Mekong Railway Association is aiming,⁸ and (iv) the midterm review of ADB's Strategy 2020, under which ADB is to increase ADB lending in the railway sector.⁹

13. **Climate financing.** The project will help mitigate climate change by reducing greenhouse gases by shifting demand from the road transport to rail. Rail transport makes a more efficient use of energy than road transport. The exact amount and carbon dioxide emission reduction scale will be determined during due diligence.

B. Proposed Solutions

14. The project will improve MR competitiveness and sustainability. Its outputs will be:

- (i) **Railway infrastructure for the Yangon–Pyay section rehabilitated.** The line is

⁵ ADB. 2014. *Technical Assistance to the Republic of Myanmar for Transport Sector Reform and Modernization*. Manila (TA 8788-MYA).

⁶ ADB. 2017. *Country Partnership Strategy, Myanmar, 2017–2021: Building the Foundations of Inclusive Growth*. Manila.

⁷ ADB. 2011. *The Greater Mekong Subregion Economic Cooperation Program Strategic Framework 2012–2022*. Manila.

⁸ ADB. 2016. *Technical Assistance for Connecting the Railways of the Greater Mekong Subregion into Regional Cooperation*. Manila (TA 9123-REG).

⁹ ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

single-track and not electrified. The project will (a) rehabilitate track over most of the route, and (b) strengthen bridges. The opportunity to improve the signaling and telecommunication system will be assessed during project preparation. The rehabilitation works will be determined with the objective of reducing the travel time of Yangon-Pyay from the current 8.5 hours to 6–6.5 hours, which is equivalent to current bus service. The operating speed will be 80 kph maximum, allowing 17-ton axle load and a structure gauge clearance which enables the use of containers. These improvements will restore the lines' competitiveness against buses and trucks, and lead to an increase in traffic and revenues. The better track condition will improve the efficiency of railway operation and help reduce operation costs.

- (ii) **Track maintenance modernized.** The project will develop MR's capacity to carry out semi-mechanized maintenance. The project will finance technical advice, develop an asset management system, purchase maintenance equipment, and assist in track maintenance outsourcing. The equipment and advice will be directly applied to maintenance works on selected lines, which MR will provide counterpart financing. Track condition on the lines will improve after the maintenance.
- (iii) **Strengthened MR institutional capacity.** The project will provide technical assistance to help implement MRTP in areas to be defined during project preparation. In line with the MRTP, the project will help develop MIS in MR by constructing a basic information technology infrastructure, linking key centers, and then implementing individual systems capable of subsequent integration (*i.e.* payroll system, inventory control system, and personnel system). MR will finance the development of the physical information technology infrastructure, while the project will finance system development and training.

15. These outputs will result in the outcome of improved competitiveness and financial sustainability of MR, which will be monitored by such indicators as reducing travel time on the improved Yangon-Pyay line and improvement of MR-wide financial ratios. The project impact will be developing an efficient, modern, safe, and environmentally-friendly transportation system. The impact, outcome and outputs are summarized in the preliminary design and monitoring framework (Appendix 1).

16. **ADB's value addition.** ADB's value addition will be applied in the following areas. First, ADB will help increase the executing and implementing agencies' asset management capacity. Through providing railway maintenance equipment and machines along with trainings for the maintenance, it will be designed to sustainable railway maintenance methodology and practices of asset management indigenize in MR. Second, ADB will extend its policy and institutional assistance to MOTC and MR to implement the MRTP, drawing from ADB's experience with reform initiatives in other railway agencies in the world. Thirdly, ADB will facilitate adaption of appropriate modern railway technology which will fit to the condition of the railway section.

C. Proposed Financing Plans and Modality

17. The project is estimated to cost \$130 million. ADB will provide a loan of \$60 million from ordinary capital resources (concessional loan) to finance design and supervision consultants, as well as the purchase of equipment, material, and works to rehabilitate the infrastructure and install MIS. Cofinanciers will be explored during project preparation to finance signaling/telecommunication and/or maintenance equipment, MIS systems, and technical assistance consulting services to implement the MRTP. Proposed government counterpart finance will include in-kind contribution such as ballast, rail, concrete sleepers, hardware for MIS, and taxes and duties.

Table 1: Indicative Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (Concessional loan)	60.0	46.2
Cofinancier (loan/grant)	60.0	46.2
Government	10.0	7.6
Total	130.0	100.0

Source: Asian Development Bank.

D. Implementation Arrangements

Table 2: Indicative Implementation Arrangements

Aspects	Arrangements
Indicative implementation period	May 2019–December 2025
Indicative completion date	31 December 2025
Management	
(i) Executing agency	Ministry of Transport and Communications
(ii) Key implementing agency	Myanma Railways

Source: Asian Development Bank.

II. PROJECT PREPARATION AND READINESS

18. The project will be prepared with support from an ongoing transaction technical assistance (TRTA) Facility (footnote 5). The TRTA will carry out the technical preparation of the project, draft the documentation for ADB loan processing, and provide procurement assistance. Individual consultants were recruited to assess the technical requirements for the project, prepare preliminary technical studies with MR (track renewal plan, bridge strengthening plan, etc.) and develop a railway sector roadmap. After project concept approval, a consulting firm will be recruited to complete technical preparation, prepare the environmental safeguards documentation (Category B assumed), prepare the ADB project documentation including economic analysis, and procurement assessment, and assist MOTC and MR in finalizing designs and then in procurement, to achieve “high readiness.” Individual consultants providing services across the facility will prepare the financial management assessment and social safeguards assessments and planning documents. No resettlement impact is foreseen as works will be limited to the existing track platform and bridges within the established right of way; a resettlement framework will be prepared to address unanticipated impacts (involuntary resettlement Category B, indigenous people Category C). Gender analysis will be conducted as a part of due diligence.

III. DELIBERATIVE AND DECISION-MAKING ITEMS

A. Risk Categorization

19. The project is categorized as low risk, following the determinants in para. 5 of the Staff Instructions on Business Processes for Sovereign Operations.

B. Project Procurement Classification

20. The proposed project procurement classification is A (Appendix 2).

C. Scope of Due Diligence

Due Diligence Outputs	To be undertaken by
Development coordination	Staff
Economic analysis	Staff, TRTA Consultant
Financial management assessment, financial evaluation, and financial analysis	TRTA Consultant
Safeguard screening and categorization results	Staff
Initial poverty and social analysis	Staff
Project administration manual	Staff, TRTA Consultant
Risk assessment and management plan	Staff
Safeguard documents on environment, involuntary resettlement, and/or indigenous peoples	TRTA Consultant
Sector assessment	Staff
Summary poverty reduction and social strategy	TRTA Consultant
Gender analysis	Staff, TRTA Consultant

TRTA = transaction technical assistance.

Source: Asian Development Bank.

D. Processing Schedule and Sector Group's Participation

Table 3: Processing Schedule by Milestone

Milestones	Expected Completion Date
Concept clearance	Q1 2018
Loan fact finding	Q2 2018
Staff review meeting	Q3 2018
Loan negotiations	Q1 2019
Board consideration	Q2 2019
Loan signing	Q3 2019
Loan effectiveness	Q4 2019

Q = quarter.

Source: Asian Development Bank.

E. Key Processing Issues and Mitigation Measures

Table 4: Issues, Approaches, and Mitigation Measures

Key Processing Issues	Proposed Approaches and/or Mitigation Measures
Implementation of MRTTP	Timely mobilization (by Q1 2018) of TA consultants who will work closely with MOTC and MR top management and MR middle management. Close monitoring by ADB for the implementation milestones.
Enhancement of public awareness on safety and usage of railways	Communication with public will be strengthened in such areas as safety awareness along the railway and attracting usage of railways as a part of activities supported by supervising consultants.

ADB = Asian Development Bank; MOTC = Ministry of Transport and Communications; MR = Myanmar Railways; MRTTP = Myanmar Railways Transformation Plan; Q = quarter; TA = technical assistance.

PRELIMINARY DESIGN AND MONITORING FRAMEWORK

Impacts the Project is Aligned with Efficient, modern, safe, and environmentally-friendly transportation system developed (The Myanmar National Transport Master Plan) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
Outcome Competitiveness and sustainability in railway sector improved	By 2026 a. Travel time for passenger trains from Yangon to Pyay reduced to 6.0–6.5 hours (2017 baseline: 8.5 hours) b. MR's cost coverage ratio for above rail structure improved to XX (2016 baseline: XX)	a–b. MR annual report	Slow progress in the implementation of the transformation plan Other donors' delayed project progress
Outputs 1. Railway infrastructure for the Yangon–Pyay section rehabilitated 2. Track maintenance modernized 3. MR's institutional capacity strengthened	By 2024 1a. 238 km rail track rehabilitated (2017 baseline: 0) 1b. Modern signaling and telecommunication system installed (2017 baseline: 0) 1c. Gender responsive and accessible facilities implemented (2017 baseline: 0) 2a. Equipment and machinery for maintenance installed (2017 baseline: 0) 2b. Knowledge and competency of XX staff (MR) in track maintenance improved (2017 baseline: 0) 3a. At least 3 modules of management information system installed (2017 baseline: 0) 3b. Knowledge and competency of XX staff	1a–3c. MR's project progress reports and project completion report	Delays in Government clearances and approvals of key deliverable

^a Japan International Cooperation Agency. 2014. The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar, Final Report, Executive Summary. Tokyo.

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
	(XX are women) (MR) in management information system improved (2017 baseline: 0) 3c. XX targets of MR transformation plan substantially reached (2017 baseline: 0)		
Key Activities with Milestones			
1. Railway infrastructure for the Yangon–Pyay section upgraded 1.1 Bid tenders of rehabilitation work of track by Q2 2019 1.2 Complete rehabilitation of 238 km rail track I by Q4 2024 1.3 Bid tenders of plant for signaling and telecommunication system by Q4 2023 1.4 Complete supply, install, and commission of signaling and telecommunication system by Q4 2024 2. Track maintenance modernized 2.1 Bid tenders of goods for equipment and machinery for maintenance by Q2 2019 2.2 Completion of supplying equipment and machinery for maintenance by Q4 2020 2.3 Provide training of maintenance by Q4 2021 2.4 Complete maintenance works by MR by Q4 2023 3. MR's institutional capacity strengthened 3.1 Bid tenders of management information system by Q2 2019 3.2 Install and make operational first phase of management information system by Q4 2023 3.3 Provide training for management information system by Q4 2024 3.4 Implement MR transformation plan by Q4 2023			
Project Management Activities			
Project management and construction supervision consultants recruited by Q2 2019 Procurement packages awarded by Q2 2019			
Inputs			
ADB: \$60 million (concessional loan) Cofinancier: \$60 million (loan/grant) Government and MR: \$10 million			
Assumptions for Partner Financing			
To be determined depending on cofinancier.			

ADB = Asian Development Bank; km=kilometers; MR = Myanma Railways; Q = quarter.

^a Japan International Cooperation Agency. 2014. *The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar, Final Report, Executive Summary*. Tokyo.

Source: Asian Development Bank.

PROJECT PROCUREMENT CLASSIFICATION

Characteristic	Assessor's Rating:
Is the procurement environment risk for this project assessed to be <i>high</i> based on the country and sector and/or agency risk assessments?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are multiple (typically more than three) and/or diverse executing agencies and/or implementing agencies envisaged during project implementation? Do they lack prior experience in implementation under an ADB-financed project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
Are multiple contract packages and/or complex and high-value contracts (compared with recent externally financed projects in the developing member country [DMC]) expected?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Does the project plan to use innovative contracts (public-private partnership, performance-based, design and build, operation and maintenance, etc.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
Are contracts distributed in more than three geographical locations?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
Are there significant ongoing contractual and/or procurement issues under ADB (or other externally) financed projects? Has misprocurement been declared in the DMC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
Does the DMC have prolonged procurement lead times, experience implementation delays, or otherwise consistently fail to meet procurement time frames?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Do executing and/or implementing agencies lack capacity to manage new and ongoing procurement? Have executing and/or implementing agencies requested ADB for procurement support under previous projects?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Regional department's overall recommendation (Takeshi Fukayama)	
Overall project categorization recommended	<input checked="" type="checkbox"/> Category A <input type="checkbox"/> Category B
The project procurement risk is proposed to be considered high. This is the first ADB-financed railway project for the executing agency and implementing agency. The procurement design may need to consider multiple packages for different type subsystems.	
OSFMD's recommendation (Vijay Akasam)	
OSFMD confirms the classification (Category A) during interdepartmental circulation of the project concept paper.	

TECHNICAL ASSISTANCE FACILITY UTILIZATION UPDATE

1. The technical assistance (TA) for the Transport Sector Reform and Modernization was approved on 11 December 2014 in an amount of \$1,000,000, which was then increased by \$500,000 on 30 October 2015.¹ On 16 June 2017, ADB approved a Phase 2 of the TA, including an increase in TA amount of \$2,000,000 and the conversion of the TA into a transaction technical assistance (TRTA) facility. As of 12 December 2017, contract awards totaled \$2,111,560 and disbursements totaled \$1,575,832.

2. The TRTA facility (Phase 2) supports the processing and initial implementation of four projects: (i) Greater Mekong Subregion Highway Modernization Project (2017), (ii) Rural Roads and Access Project (2018), (iii) Railway Modernization Project (2019), and (iv) Yangon Urban Transport Project (2019). The TRTA facility (Phase 2) activities include project support and institutional support activities (Table A3-1).

Table A3.1: Technical Assistance Facility Phase 2 Activities

Subsector	Related ADB Projects	Project Support	Institutional Support
Transport-wide	Cross-sector		Establishment of MOTC Policy and Planning Department
Roads	- Greater Mekong Subregion Highway Modernization Project (2017) - Rural Roads and Access Project (2018)	Project implementation support*	Establishment of the road user charges fund Operational guide for the rural road and access program
Railways	- Railway Modernization Project (2019)	Project preparation and readiness	Implementation of MRTP including rail freight costing model
Urban Transport	- Yangon Urban Transport Project (2019)	Project preparation complements**	TRTA strengthening

MOTC = Ministry of Transport and Communications; MRTP = Myanmar Railways Transformation Plan; TRTA = transaction technical assistance.

* Activities will complement those financed under the project transaction TAs (TA 9184-MYA and TA 8987-MYA).

** Project feasibility study will be carried out under a parallel Cities Development Initiative for Asia financed technical assistance.

3. **Railway Modernization Project Support.** The TRTA facility will carry out the technical preparation of the project, draft the documentation for the Asian Development Bank (ADB) loan processing, and provide procurement assistance. ADB already recruited individual consultants with expertise in railway sector management, track management, and rail bridge engineering to assess the technical requirements for the project, prepare preliminary technical studies with Myanmar Railways (MR) for track renewal plan and bridge strengthening plan, and develop a railway sector roadmap. After the project concept approval, ADB will recruit a consulting firm to complete technical preparation, prepare the ADB project documentation including due diligence requirements, and assist the Ministry of Transport and Communications (MOTC) and MR in procurement. Individual consultants supporting various projects under the TRTA facility will develop social assessments and safeguards plans, and the financial management assessment.

¹ ADB. 2014. *Technical Assistance to Myanmar for the Transport Sector Reform and Modernization*. Manila (TA 8788-MYA).

4. **Myanma Railways Transformation Plan.** The TRTA facility consultants will also support the implementation of the Myanma Railways Transformation Plan by: (a) advising on rail sector governance: establishment of rail division in MOTC, new financial framework for rail infrastructure maintenance and for non-profitable services, preparation for corporatization of MR, and internal reorganization of MR by business lines; (b) developing a rail freight costing model usable for commercial pricing; (c) preparing a rolling stock rationalization plan; and (d) preparing concept plans for the development of basic information technology infrastructure, operational information systems, track asset management system, and bridge asset management system.

3. The outputs and activities specific to the Railway Modernization Project that the TRTA facility will develop to prepare the ADB-financed project are described in Table A3-2.

Table A3.2: Summary of Major Outputs and Activities

Outputs	Delivery Dates	Key Activities with Milestones
Project preliminary preparation report	30 November 2017	1.1 Track maintenance/upgrading plan 1.2 Bridge repair and maintenance plan 1.3 Signaling improvement plan 1.4 Management Information Systems conceptual plan 1.4 Preliminary implementation plan 1.5 Preliminary cost estimates 1.6 Economic analysis
Detailed preparation study	30 June 2018	2.1 Engineering study (including signaling study and implementation plan) 2.2 Cost estimates 2.3 Procurement plan 2.5 Financial analysis 2.6 Project Administration Manual
Safeguards and due diligence documentation	30 June 2018	3.1 Initial Environmental Evaluation with Environmental Management Plan 3.2 Social Poverty Strategy 3.3 Resettlement Framework 3.4 Procurement Assessment 3.5 Financial Management Assessment
Policy and institutional assistance	30 March 2018	4.1 Myanmar Railways Transformation Plan (final version) 4.2 Policy letter and matrix 4.3 Due diligence on status of implementation of reforms 4.4 Institutional strengthening plan and terms of reference
Procurement support	30 August 2018	5.1 Bidding documents and drawings 5.2 Procurement and consultant recruitment assistance

6. **Resources under TRTA facility.** The updated consultants' input allocation from the TRTA facility is presented in Table A3.3. The updated allocation of consultant inputs to the consulting firm is presented in Table A3.4. and the updated cost estimates and financial plan for the consulting firm are presented in Table A3.4. No change is required to the TA facility cost estimates and financing plan. It is confirmed that (i) the TRTA facility has adequate resources; and (ii) the updated terms of reference for consultants (Appendix 3) are sufficient to undertake the activities required to deliver the outputs for the ensuing railway modernization project.

Table A3.3: Updated Consultants' Input Allocation (Individual Consultants – Phase 2)
(person-month)

Item	Input Allocation	Allocation by Project				
	Current	Greater Mekong Subregion Highway Modernization Project	Rural Roads and Access Project	Railway Modernization Project	Yangon Urban Transport Project	Transport sector cross-support
Indicative risk category		complex	low-risk	complex	complex	
International Consultants						
Institutional development specialist	3.0	1.0				2.0
Railway advisor / railway costing specialist	6.0			6.0		
Road sector management specialist	5.0	3.0	2.0			
Rural road engineer	1.5		1.5			
Rail track management specialist	5.0			5.0		
Rail bridge engineer	4.0			4.0		
Business restructuring / legal advisor	3.0	1.5				1.5
Transport / project management specialist	5.0	3.0		1.0	1.0	
Public transport specialist	6.0				6.0	
Environmental specialist	4.0			2.0	2.0	
Social safeguards/ resettlement specialist	6.0	2.0		1.0	3.0	
Financial management specialist	2.0			1.0	1.0	
Total	50.5	10.5	3.5	20.0	13.0	3.5
National Consultants						
Transport coordinator	22.0					22.0
Urban sector specialist*	6.0				6.0	
Executive assistant*	22.0					22.0
Total	50.0				6.0	44.0

Source: Asian Development Bank.

Table A3.4: Updated Consultants' Input Allocation (Consulting Firm)
(person-month)

	Person-months
International Consultants	
Team leader/Rail Engineer	9.0
Bridge Engineer	2.5
Environmental Specialist	1.5
Signaling and Telecommunications Specialist	1.5
Rail Management Information Specialist	2.0
Procurement and Contracts Specialist	4.5
Total	20.0
National Consultants	
Rail Engineer/Deputy Team Leader	4.0
Bridge Engineers (2 positions)	8.0
Environmental Specialist	2.0
Costing Engineer	3.0
Social/Gender Specialist	3.0
CAD Engineer	4.0
Total	32.0

Source: Asian Development Bank.

Table A3.5: Railway Modernization Consulting Firm – Cost Estimates and Financing Plan (\$'000)

Item	TA Facility (unchanged – for reference only)	Railway Modernization Project – Consulting Firm
Asian Development Bank ^a		
1. Consultants		
a. Remuneration and per diem		
i. International consultants	2,500.0	460.0
ii. National consultants	205.0	90.0
b. International and local travel	325.0	110.0
c. Reports and communications	25.0	8.0
2. Equipment ^b	2.0	0.0
3. Workshops, training, and seminars ^c	135.0	0.0
4. Surveys and studies ^d	75.0	50.0
5. Miscellaneous costs	5.0	0.0
6. Contingencies	228.0	32.0
Total	3,500.0	750.0

TERMS OF REFERENCE OF CONSULTANTS

1. The transaction technical assistance facility supports four projects. The terms of reference (TOR) of individual consultants (already recruited, for reference) and the consulting firm related to the Myanmar: Railway Modernization Project are described below.

A. Individual Consultants (already recruited)

2. The following consultants were already recruited and/or extended to prepare the project preliminary preparation report, and contribute further to project preparation.

- (i) **Transport/Project Management Specialist** (international, up to additional 5 person-months) will, for all transport projects under preparation or implementation, and particularly road sector ones: (i) recommend project procurement and implementation arrangements, (ii) review draft bidding documents (including technical requirements such as specifications and drawings), bid evaluation reports and other procurement-related documents, (iii) draft terms of reference for implementation consultants, and facilitate their recruitment by the executing agencies, and (iv) contribute to the preparation of documentation for Asian Development Bank (ADB) missions and ADB Board review and approval of project.
- (ii) **Railway Advisor/Railway Costing Specialist** (international, up to additional 6 person-months) will: (i) develop with Myanmar Railways (MR) the scope and approach to a Myanmar Railway Modernization Project suitable for consideration by ADB and other development partners; (ii) advise on policy and institutional changes required to implement the project and meet sector objectives (i.e. better efficiency, governance, and sustainability of the railway sector), (iii) review and advise on the implementation of the Myanmar Railways Transformation Plan (MRTP) by the Ministry of Transport and Communications (MOTC) and MR; (iv) prepare an MR rolling stock rationalization plan; (v) prepare the TOR of a feasibility study for the initial development of a data infrastructure and management information systems to be implemented by MR, and supervise its implementation. Using the costing model developed in previous study phases: (vi) recommend further rationalization of MR's non-profitable services, and new business development; (vii) update the MRTP's medium-term financial analysis of MR, and prepare the project's financial analysis per ADB's Guidelines for the Financial Analysis of Projects (2005); and (viii) prepare the project's economic analysis per ADB's Guidelines for the Economic Analysis of Projects (2017).
- (iii) **Railway Track Management Specialist** (international, up to additional 5 person-months) will work with MR to: (i) define the strategy for renewing and modernizing the Yangon-Pyay railway line and the project's technical objectives; (ii) assess the condition of the track and related workshops and machinery, and determine elements that require renewal; (iii) prepare the track renewal plan including: (a) re-ballasting plan, (b) tamping plan, (c) re-railing/welding plan; (iv) recommend a management and contractual approach to the implementation of the renewal works, assessing track elements that MR can provide or implement; (v) define an initial phase of a program to semi-mechanize MR's track maintenance, including preparing a list of equipment, identifying a maintenance program where they will be used, and advising on procurement, outsourcing and knowledge transfer; (vi)

recommend the technical specifications for the related equipment and works; and (vii) advise and train MR in more modern track maintenance practices.

- (iv) **Railway Bridge Engineer** (international, up to additional 4 person-months) will work with MR to: (i) assess the condition of the rail bridges on the Yangon-Pyay railway line and determine those that should be replaced, strengthened or repaired, (ii) prepare a program of works to be implemented as part of the track renewal works, (iii) recommend the technical configuration and specifications for the replaced and/or strengthened bridges, (iv) establish a framework for a bridge management system in MR, (v) undertake initial data collection on a demonstration basis, and (vi) train MR in using a bridge management system.
- (v) **Transport Coordinator** (national, up to 22 person-months) will provide operational support and coordination to ADB transport projects including: (a) monitor and follow-up on executing agency agreed actions in mission aide-memoire, project administration manuals prescriptions, and loan covenants, (b) collect information to prepare individual project performance reports, (c) facilitate preparation of disbursement claims by executing agencies, (d) liaise with the government on mission preparation and government's internal reviews of project documents, (e) organize events such as workshops, training and media events, and (f) supervising support services for the international consultants and ADB missions.
- (vi) **Social Development/Safeguards Specialist** (international, up to 6.0 person-months) will have a degree in social development or related field, and at least 8 years of experience in social safeguards management including for development partner projects. The consultant (i) advise on social requirements for the preparation of the pipeline transport projects, carry out preliminary reviews, and draft social safeguards categorization forms, (ii) develop with the government strategies for social mitigation and development under the projects, (iii) define the scope and coordinate social surveys, (iv) organize consultations, (v) draft resettlement plans, social and poverty assessments, in accordance with ADB Safeguard Policy Statement and guidelines, and (vi) facilitate implementation of approved social safeguards plans.
- (vii) **Financial Management Specialist** (international, 2.0 person-months) will be an accountant or have a degree in a related field, and experience in preparing financial management assessments for ADB projects. The consultant will prepare financial management assessments and inputs to ADB project documentation for the pipeline transport projects in accordance for ADB's Technical Guidance Note on Financial Management Assessment (2015). The purpose of the assessment is to (i) identify the capacity, procedural, and organizational constraints that could hinder effective project implementation and agree on an action plan with the executing agency and/or implementing agency to address these constraints; and (ii) determine the overall financial management risk, and establish appropriate review and supervision processes to mitigate these risks. The financial management specialist will: (i) assess the strength and weaknesses in project financial management practices and capacity from the perspective of (a) organizational and staff capacity; (b) information management; (c) financial management practices; and (d) effectiveness; (ii) identify and evaluate financial management and internal control risks at the project level; and (iii) propose risk

mitigation and management strategies and/or activities with appropriate timelines and suggested responsibilities.

B. Railway Modernization Project Preparation, Engineering and Procurement Consultant—Consulting Firm Outline Terms of Reference

3. The Project Preparation, Engineering and Procurement Consultant will be recruited by ADB to complete the technical and safeguards preparation of the project and support pre-implementation activities until loan effectiveness. These TORs update the scope of the TA regarding the project preparation consulting firm.

a. The Project

4. The project comprises three components. The project's main component (Component 1) is the track renewal of about 148 miles (238 kilometers) of the Yangon to Pyay rail line, which is single track meter-gage. The objective of the component is to reduce increase maximum train speeds on the line from about 50 kilometers per hour (kph) to 80 kph, enabling among others a reduction in train time from 8.5 to 5.5 hours and to increase the allowable axle load from 12 tons to 17 tons. The scope of the main component includes:

- Replacing the existing rail with continuously welded rail (using flashbutt welding).
- Placing new ballast, and eliminating localized depressions in the top of the formation.
- Widening or repairing the existing formation in specified locations.
- Replacing minor bridges with new slabs over existing abutments which will be repaired.
- Repairing large bridges, and construction of one new medium-size bridge in a flood-prone area including its approaches on embankment over about 500 meters.

It also possibly includes:

- Installing modern signaling and telecommunication (this is still under discussion with MR)

5. MOTC is the project executing agency. MR is the project implementing agency. MR is expected to supply and distribute materials for the works (ballast, rail, bridge slabs, and track components), which will be implemented by two contractors (one for works, one for signaling and communications if proceeded with), and a project supervision and management Consultant. The works are expected to be implemented over a period of three years. Separately from the project, MR is expected to procure new rollingstock.

6. The project will also procure new equipment for semi-mechanized maintenance (Component 2), and finance the installation of selected Management Information System (MIS) modules (Component 3). Each component will feature training. ADB may also finance a parallel policy advisory technical assistance.

7. The project cost is tentatively estimated to be \$130 million, which will be financed by ADB with a \$60 million concessional loan, a cofinancier to be confirmed for \$60 million, and the government for \$10 million, to be provided in-kind.

8. ADB financed in 2016 and 2017 the preparation of the MRTP, which is a business plan for MR which features the gradual modernization of MR. The upgrading of the Yangon-Pyay line is one of the priority investments under the plan.

9. ADB has been carrying out with MR since July 2017 a preliminary project report of the Yangon-Pyay line upgrading component. The study's report is expected in November 2017. It will include preliminary (a) assessment of the current line, (b) specifications for track and bridge works, including detailed listings of track formation repair and widening needs, level crossing restoration, bridge condition reports and slab replacement program, and conceptual design for new bridge, (c) preliminary analysis of signaling and telecommunication requirements, (d) traffic forecasts and preliminary economic and financial analysis, (e) cost estimates, (f) implementation plan, and (g) outline scope of Component 2 and 3. In 2017, ADB also financed a pre-feasibility study for the development of MIS hardware in key locations of MR.

10. The Request for Proposal for this assignment will include in attachment (i) draft MRTP, (ii) preliminary project study, and (iii) minutes of ADB's September 2017 reconnaissance mission.

11. This Consultant package will complete the technical and environmental preparation of the project, and assist the government in procurement and initial project management.

12. ADB will separately prepare the following: (i) project economic and financial analysis, (ii) financial management assessment and risk management plan, and (iii) institutional and policy roadmap. ADB will provide to the Consultant a list of equipment and implementation approach for component 2. Finally, ADB will prepare the project's social and poverty strategy, and draft the resettlement plan; in this area, the Consultant's role will be to procure and manage surveys specified by ADB (under provisional sum) and organize consultations. The Consultant will integrate ADB guidance and inputs into the final project preparation report.

b. Consulting Service Requirements

13. The objective of the Consultant is to prepare a Railway Modernization Project suitable for ADB and government approval, and ready for implementation. The scope of works is as follows.

Output 1: Project Preparation Report

14. The objective of this output is to produce the documentation required for ADB and the government to reach an agreement about the project scope, costs, implementation arrangements, as well as environmental and social management, and obtain respective approvals. The Consultant is expected generally to carry out a due diligence and complement the preliminary project report into a feasibility study.

15. The Consultant's tasks include:

- (i) **Track Engineering.** The Consultant will carry out a due diligence of the preliminary engineering report, improve and/or complement it as needed in areas of: (a) track renewal approach and scope of works, (b) standards, (c) works requirements and particularly the proper definition of areas requiring formation strengthening, widening and/or reconstruction, as well as miscellaneous works at specific points (e.g. crossings, stations), (d) implementation approach, (e) works sequencing, (f) quantities, and (g) geographical locations of works. The Consultant will recommend any complementary surveys and/or investigations, particularly at the new bridge site, required to prepare bidding documents.

- (ii) **Bridge Engineering.** The Consultant will carry out due diligence and complement as needed through site inspections and design calculations (a) MR's bridge condition assessments and data, (b) preliminary study calculations of the structural capacity of all structures and required upgrades to meet the target 17 tons axle load, (c) MR's bridge detailed design for the new bridge, and the preliminary study's concept design for truss bridge improvement works, and (d) preliminary study's proposal regarding slab installation and abutment repair program. Inspections should focus in priority on those structures identified as structurally deficient or too weak. The purpose of this task is to define the work required to increase the axle load to 17 tons, replace small bridges by slabs, and other minor works.
- (iii) **Signaling and Communications.** The Consultant will develop concept design and assess the feasibility of two alternative solutions: (a) centralized train control, and (b) train working order supported by geographic positioning system, either with motorized or mechanical points. The Consultant will compare both options, considering implementation and maintenance costs, risks, and staff training requirements. The Consultant will also recommend an approach for upgrading the VHF radio communication system of the line.
- (iv) **Track Maintenance Equipment.** The consultant will do a due diligence of the proposed list of equipment and implementation approach and propose adjustments as needed.
- (v) **Management Information Systems.** The Consultant will prepare detailed scope and outline specifications and terms of reference for an MIS development program financed under the project (Component 3), based on the approach and priorities of the preliminary study and pre-feasibility of MIS hardware development in MR. The Consultant will review with MR those components that should be financed under the project, those that MR will independently procure and install, and training requirements. The Consultant is expected to outline a longer-term MIS development roadmap, giving a framework to the investment.
- (vi) **Implementation Plan.** The Consultant will recommend the project implementation structure including outline scope of works and staffing requirements for (a) project management unit in MR and any sub-units, and (b) project implementation consultant.
- (vii) **Scheduling.** The Consultant will prepare a master project schedule, with two separate detailed sub-schedules for (a) civil works contractor, and (b) MR counterparts.
- (viii) **Costing.** The Consultant will prepare detailed cost estimates for all project components, including physical and price contingencies. A unit cost analysis will be prepared to support the costing.
- (ix) **Financing Plan.** The Consultant will prepare a financing plan in accordance with ADB's standard templates.

- (x) **Procurement.** The Consultant will prepare a procurement plan for all project components. The Consultant will also carry out a procurement assessment of MR, following ADB's guidelines.
- (xi) **Environment:** The Consultant will prepare the project's Initial Environmental Evaluation (IEE) including an Environmental Management Plan (EMP), compliant with ADB's Safeguard Policy Statement (2009) and Myanmar governments' Environmental Impact Assessment (EIA) Guidelines. Tasks will also cover (a) assistance to MOTC for obtaining ADB's approval, and (b) assistance to MR to complete the Myanmar EIA procedure, including: preparation of project proposal for categorization purposes, adjustment to the ADB IEE to suit Myanmar Environmental Conservation Department (ECD) requirements, and support to MR for obtaining approval from ECD. The Consultant will review with ADB the required baseline surveys requirements, which will be subcontracted under provisional sum.
- (xii) **Social Management.** The Consultant will carry out under provisional sums social surveys to be specified by ADB, and organize consultations with stakeholders and affected people.

16. The Consultant's Project Preparation Report will be the basis for the ADB Loan fact-finding mission. The Consultant's Project Preparation Report will integrate inputs separately provided by ADB. The Consultant's report is expected to comprise (i) a summary report presenting the entire project scope, and covering all elements normally included in ADB's report and recommendations of the president, and project administration manual except as otherwise clarified in these terms of reference, and (ii) appendices compiling the results of all tasks described above.

Output 2: Bidding Documents for Components 1 and 2

17. The objective of this output is to produce Bidding Documents for Component 1 and 2 approved by the government and ADB. The Consultant will prepare bidding documents for all works, goods and/or plant contracts under components 1 and 2.

18. For all works, the Consultant will prepare complete sets of bidding documents in English language following ADB's prequalification documents (if it applies) and standard bidding documents and associated user's guides. The consultant will recommend qualification and selection criteria, bidding and contract datasheets, and invitation to bids among others.

19. For the track and bridge upgrading Bidding Documents, the Consultants' tasks will include but not be limited to:

- (i) Schedule of track works, bridge detailed design drawings, bridge detailed schedule of repair works, and any other drawings required;
- (ii) Technical specifications, EMP and any other Employer's requirements; and
- (iii) Bills of Quantities.

20. For the signaling and communications Bidding Documents, if this component is confirmed to be part of the project, the Consultants' tasks will include but not be limited to the development of detailed functional specifications.

21. For the track maintenance equipment, the Consultants' tasks will include but not be limited to the development of detailed technical specifications.

22. The output will comprise (i) final bidding documents approved by ADB and MR, (ii) Engineer's estimates, to be presented as a separate confidential report; and (iii) supporting technical report including any additional calculations and studies carried out to prepare the design drawings and specifications.

23. The consultant will not prepare TOR or request for proposals for the project management consultant.

Output 3: Procurement Assistance

24. The output's objective is to ensure that contracts under Component 1 and 2 developed under Output 2 are procured and that all government actions required to commence works are completed in conformity with the general project schedule.

25. The Consultant shall provide necessary support to MR in all aspects of the procurement process for works, goods and/or plant contracts under Component 1 and 2. The support shall include:

- (i) Support for pre-qualification (if it applies) including invitation, evaluation of applications, preparation of pre-qualification evaluation report, and finalization of report after submission to MR, and later ADB;
- (ii) Support for the invitation for bids, pre-bid conference, pre-bid site visits (if it applies), preparation of response for clarifications, and addendums to bidding documents;
- (iii) Advice regarding setting up of bid evaluation committee and training of its members;
- (iv) Support for organizing bid opening, evaluation of bids, and preparation of bid evaluation reports, and finalization of reports after submission to MR, and later ADB;
- (v) Assisting MR in contract award, contract negotiation and finalization of contracts; and
- (vi) Preparation of all submissions forms to ADB for purpose of receiving ADB's no-objection.

26. The consultant's expected deliverables are the approved bid evaluation reports and submission forms to ADB.

Output 4: Approval and Pre-Implementation Assistance

27. The Consultant will facilitate government approval of the project. This is expected to include (i) preparation and/or delivery of project presentations in English and Myanmar language; (ii) replying to inquiries, and (iii) monitoring completion of milestones and proposing ways to resolve issues. The Consultant will monitor and advise MR on the completion of counterpart requirements for the production and delivery to site of required materials until a project management consultant is appointed, or until the end of the contract as applicable.

28. The consultant's expected deliverables are monthly progress reports with updated schedule.

c. Implementation Arrangements

29. The consulting services under the proposed contract will be implemented over a maximum

period of 15 months, which is expected to be from March 2018 to June 2019. Table 1 lists the milestones reports.

Table 1: Summary of Milestone Reports and Payments

Milestone Event / Payment	Expected Delivery Date
Mobilization	Commencement of Services (CS)
Inception Report	CS + 1 month
Project Preparation Report	CS + 4 months
Bidding Documents	CS + 6 months
Bid Evaluation Reports	CS + 12 months
Monthly Progress Reports	Monthly, until CS + 15 months, except Month 1 and 3

30. The assignment will be based in Naypyitaw. The consultant will ensure continuous presence in the field of an international Acting Team Leader from Month 1 to Month 6, and during ADB missions, and continuous presence of a national or international Acting Team Leader until Month 15.

31. ADB will carry out missions indicatively as follows: (i) inception mission during Month 1, (ii) mid-term review mission during Month 3, (iii) project fact-finding mission during Month 5, and (iv) review missions every quarter between Month 6 and 15.

32. MR will provide a furnished office to the consultant in Naypyitaw, as well as utilities and local communications. MR will arrange and provide rail vehicles for site visits on the project line. MR will not provide transport within Naypyitaw and from Naypyitaw to the project rail line.

33. **Consultant Team Requirements.** The assignment is expected to require 20 person-months of international consultant input and 32 person-months of national consultant input.

International consultant positions	Person-months	National consultant positions	Person-months
Rail engineer / Team leader	9.0	Rail engineer / Deputy team leader	12.0
Bridge engineer	2.5	Bridge engineers (2)	8.0
Environmental specialist	1.5	Costing engineer	2.0
Procurement specialist	4.5	Social / gender specialist	4.0
Rail MIS specialist	2.0	Environmental specialist	2.0
Rail signaling specialist	1.5	CAD engineer	4.0

34. **Consulting firm qualifications.** The consulting firm (lead or its associate joint venture) should demonstrate experience in (i) project preparation and procurement support for multilateral development banks, and preferably with ADB; (ii) track renewal projects; and (iii) design and implementation of train-based signaling system.

INITIAL POVERTY AND SOCIAL ANALYSIS

Country:	Myanmar	Project Title:	Railway Modernization Project
Lending/Financing Modality:	Project	Department/ Division:	Southeast Asia Department/Transport and Communications Division

I. POVERTY IMPACT AND SOCIAL DIMENSIONS
A. Links to the National Poverty Reduction Strategy and Country Partnership Strategy
<p>The project is to help develop an efficient, modern, safe, and environmentally-friendly transportation system in a coordinated and sustainable manner, which the Myanmar National Transport Master Plan specifies. The project will also facilitate efficient use of railway asset and thereby improve railway sector competitiveness and sustainability, which are indicated as strategic directions of Myanmar Railways (MR) in the sector policy note. The project is in line with 2017–2021 Myanmar Country Partnership Strategy, where the transport is considered as a priority sector. The strategy specifies that ADB aims to support the government in achieving sustainable economic growth and job creation for poverty reduction.</p>
B. Poverty Targeting
<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> General Intervention <input type="checkbox"/> Geographic (TI-G) </div> <div> <input type="checkbox"/> Individual or Household (TI-H) <input type="checkbox"/> Non-Income MDGs (TI-M1, M2, etc.) </div> </div> <p>The project has no direct impact on poverty reduction. Through the provision of timely, affordable and safe railway transport, the project will reduce transport costs and increase access of the local population along the line to the city area with healthcare, education and employment. The poor and local population of project area will benefit through lower cost of transportation and increased access to the healthcare and educational establishments and social services. It is also expected that new employment will be created during the implementation and operation stage.</p>
C. Poverty and Social Analysis
<p>1. Key issues and potential beneficiaries.</p> <p>The lack of access to safe and affordable transport significantly hinders the social and economic development of rural households, as well as industrial and agricultural sectors. The project will contribute to reducing transport cost and travel time, ensure safety, and increase access to jobs, markets, healthcare and education facilities for the local population. The primary beneficiaries will be passengers, freight transporters, and agro-industrial producers. As the project will be upgrading the existing railway facilities, there is no foreseen direct and indirect negative impacts on the local population and socio-economic development of the region.</p> <p>2. Impact channels and expected systemic changes.</p> <p>First, the railway modernization project will result in reduced travel costs for users as compared to current railway service. This will enhance accessibility of the residents along the railway. Second, women and children, especially, will have access to safe transport, with gender-inclusive facilities in trains and at modernized stations. Currently, women and children face uncomfortable and less clean railway facilities. Third, employment opportunities of the local population will be enhanced by increased access to the country's capital. This will also contribute to the creation of new jobs in the tourism sector, which is traditionally occupied by women.</p> <p>3. Focus of (and resources allocated in) the PPTA or due diligence.</p> <p>A social development specialist will be recruited and public consultations with local people, local nongovernment organization and authorities will be conducted.</p> <p>4. Specific analysis for policy-based lending.</p>
II. GENDER AND DEVELOPMENT
<p>1. What are the key gender issues in the sector/subsector that are likely to be relevant to this project or program?</p> <p>The development of Yangon-Pyay line will benefit not only for long-haul passengers but also users of regional railway service along the line. Women in rural areas of Myanmar are less likely to own and drive private cars and mostly travel by public transportation. Women are often tasked with transport of children to schools, and elders to healthcare establishments. Women are also heavily involved in retail activities near train stations. These activities provide them with opportunities to contribute to family income and empower them to participate equally to decision-making at household level. Access to safe,</p>

timely, affordable transportation is one of the main issues for women in the project area. The project is expected to bring benefits to females in terms of more frequent, less crowded train journeys and competitive tariffs. Further, the railway development will facilitate SMEs through enhancing accessibility to nearby markets. This will provide more opportunities for woman to participate in the SMEs. Other key issues and possible entry points to facilitate gender benefits will be examined during the TRTA.

2. Does the proposed project or program have the potential to make a contribution to the promotion of gender equity and/or empowerment of women by providing women's access to and use of opportunities, services, resources, assets, and participation in decision making?

☒ Yes ☐ No

A gender assessment will be conducted under the TRTA, and a social and gender action plan will be developed to address issues identified and ensure the maximization of benefits to women.

3. Could the proposed project have an adverse impact on women and/or girls or widen gender inequality?

☐ Yes ☒ No

4. Indicate the intended gender mainstreaming category:

☐ GEN (gender equity) ☐ EGM (effective gender mainstreaming)
☒ SGE (some gender elements) ☐ NGE (no gender elements)

III. PARTICIPATION AND EMPOWERMENT

1. Who are the main stakeholders of the project, including beneficiaries and negatively affected people? Identify how they will participate in the project design.

Apart from the beneficiaries of the project listed in section I-C, MR will be the main stakeholder as implementing agency. The Ministry of Transport and Communications will be the executing agency, which will design and execute the project. The Ministry of Planning and Finance will be the borrower and support the project.

2. How can the project contribute (in a systemic way) to engaging and empowering stakeholders and beneficiaries, particularly, the poor, vulnerable and excluded groups? What issues in the project design require participation of the poor and excluded?

Meetings with local governments, NGOs and community based organizations, focus group consultations and affected people will be conducted. Consultations with local communities will include but not be limited to (i) resettlement compensation if any, (ii) protection of communities from disturbances during construction (iii) railway safety during and after construction, (iv) safety hazards to workers and the public during construction, (v) temporary and permanent employment opportunities that may benefit communities along and off the project railway.

3. What are the key, active, and relevant civil society organizations in the project area? What is the level of civil society organization participation in the project design?

☒ Information generation and sharing ☒ Consultation ☐ Collaboration ☐ Partnership

4. Are there issues during project design for which participation of the poor and excluded is important? What are they and how shall they be addressed? ☒ Yes ☐ No

The proposed activities will mainly involve modernizing the existing rail line. For railway safety, it is recommended to carry out public awareness campaigns to familiarize people living along the rail section those and using road transport to cross the rail track. Fences along the track and flyovers for pedestrians will be installed where needed.

IV. SOCIAL SAFEGUARDS

A. Involuntary Resettlement Category ☐ A ☒ B ☐ C ☐ FI

1. Does the project have the potential to involve involuntary land acquisition resulting in physical and economic displacement? ☐ Yes ☒ No

There will be no major land acquisition and resettlement issues as the project will modernize an existing railway line within current right of way.

2. What action plan is required to address involuntary resettlement as part of the PPTA or due diligence process?

<input checked="" type="checkbox"/> Resettlement plan <input type="checkbox"/> Environmental and social management system arrangement	<input type="checkbox"/> Resettlement framework <input type="checkbox"/> None	<input type="checkbox"/> Social impact matrix <input type="checkbox"/> None
B. Indigenous Peoples Category <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> FI		
1. Does the proposed project have the potential to directly or indirectly affect the dignity, human rights, livelihood systems, or culture of indigenous peoples? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
2. Does it affect the territories or natural and cultural resources indigenous peoples own, use, occupy, or claim, as their ancestral domain? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
3. Will the project require broad community support of affected indigenous communities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No No indigenous people living in the project area.		
4. What action plan is required to address risks to indigenous peoples as part of the PPTA or due diligence process? <input type="checkbox"/> Indigenous peoples plan <input type="checkbox"/> Indigenous peoples planning framework <input type="checkbox"/> Social Impact matrix <input type="checkbox"/> Environmental and social management system arrangement <input checked="" type="checkbox"/> None		
V. OTHER SOCIAL ISSUES AND RISKS		
1. What other social issues and risks should be considered in the project design? <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input checked="" type="checkbox"/> Creating decent jobs and employment <input type="checkbox"/> Labor retrenchment <input type="checkbox"/> Increase in human trafficking <input type="checkbox"/> Affordability <input type="checkbox"/> Increase in vulnerability to natural disasters <input type="checkbox"/> Creating internal social conflicts </div> <div style="width: 48%;"> <input checked="" type="checkbox"/> Adhering to core labor standards <input checked="" type="checkbox"/> Spread of communicable diseases, including HIV/AIDS <input type="checkbox"/> Increase in unplanned migration <input type="checkbox"/> Creating political instability <input type="checkbox"/> Others, please specify _____ </div> </div>		
2. How are these additional social issues and risks going to be addressed in the project design? The social and gender action plan to be developed during the design stage will consider employment opportunities for local citizens which may be created through construction, operation and maintenance. Due diligence will be conducted during project preparation for adherence to core labor standards. The project design will include measures to raise public awareness of the risk of HIV/AIDS and other sexually transmitted infections and drugs.		
VI. PPTA OR DUE DILIGENCE RESOURCE REQUIREMENT		
1. Do the terms of reference for the PPTA (or other due diligence) contain key information needed to be gathered during PPTA or due diligence process to better analyze (i) poverty and social impact; (ii) gender impact, (iii) participation dimensions; (iv) social safeguards; and (v) other social risks. Are the relevant specialists identified? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
2. What resources (e.g., consultants, survey budget, and workshop) are allocated for conducting poverty, social and/or gender analysis, and participation plan during the PPTA or due diligence? A social development specialist will be recruited and public consultations with local people, local NGOs and authorities will be conducted. A social and gender action plan will be developed accordingly.		

