

Project Administration Manual

Project Number: 53326-001
Loan Number: XXXX
October 2020

India: Bengaluru Metro Rail Project

ABBREVIATIONS

ADB	–	Asian Development Bank
BMRCCL	–	Bangalore Metro Rail Corporation Limited
CAAA	–	controller of aid accounts and audit
CAG	–	Comptroller and Auditor General
COVID-2019	–	coronavirus disease 2019
DMF	–	design and monitoring framework
DPR	–	detailed project report
EIA	–	environment impact assessment
EMP	–	environment management plan
EMOP	–	environment monitoring plan
EWCD	–	elderly, women, children, differently abled
FMA	–	financial management assessment
GOI	–	Government of India
GOK	–	Government of Karnataka
INR	–	Indian rupee
m ²	–	square meter
MOHUA	–	Ministry of Housing and Urban Affairs
MMI	–	multimodal integration
PIU	–	project implementation unit
SHE	–	safety, health and environment
SPS	–	Safeguard Policy Statement (2009)
TOD	–	transit oriented development
TOR	–	terms of reference

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ministry of Housing and Urban Affairs (MOHUA) and Bengaluru Metro Rail Corporation Limited (BMRCL) are wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the Government of India and ADB. ADB staff is responsible for supporting implementation including compliance by MOHUA and BMRCL of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB had agreed the PAM and ensured consistency with the loan agreement.* Such agreement is reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

* The name of the operational financing document may vary on a project-to-project basis; this reference shall be deemed to encompass such variations, e.g., a Framework Financing Agreement, as applicable.

I. PROJECT DESCRIPTION

1. The project will support the Government of India in expanding the metro railway network in the city of Bengaluru (formerly Bangalore) by financing two new metro corridors totaling 56 kilometers in length. The project will develop a transit-oriented development framework alongside the metro corridors as well as a multimodal integration plan. The project will also improve the institutional capacity of line agencies for planning and implementation of sustainable urban transport, transit-oriented development, and multimodal integration in a coordinated manner. In addition, the project will improve livability and the urban environment of Bengaluru by combining elements of urban planning and urban mobility through an efficient and safe transport system that caters to the needs of the elderly, women, children, and differently abled persons.

2. The project is aligned with the following impacts: urban mobility in Bengaluru improved.¹ The project will have the following outcome: efficiency, safety, gender and social inclusiveness of urban rail transport in Bengaluru increased.²

3. The project has three outputs:

- (i) **Output 1:** New metro lines completed
- (ii) **Output 2:** Urban development plans and implementation frameworks based on transit-oriented development principles and multimodal integration plan developed for Bengaluru
- (iii) **Output 3:** Capacity of Bangalore Metro Rail Corporation Limited and relevant state line agencies improved in transit-oriented development and multimodal integration

¹ Government of India. 2006. *National Urban Transport Policy*. Delhi.

² The design and monitoring framework is in Appendix B.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 1: Project Readiness Activities

Month	Loan Processing		Implementation	
	ADB	Government/EA	ADB	Government/EA
February 2019		DPR approval		
November 2019		Revised DPR approval		
December 2019	Project concept clearance			
	Consultation mission		Bid document review	Advertisement of CW for Phase 2A
January 2020	Consultation mission			
March 2020	Pre fact-finding mission			Advertisement of CW for Phase 2B
May 2020	Fact-finding mission			
June 2020				
July 2020	Management review meeting			
October 2020	Loan negotiation	Loan negotiation		
December 2020	Board consideration			Contract award for Phase 2A
December 2020	Loan signing	Loan signing		
March 2021	Loan effectiveness	Loan effectiveness		Retroactive financing starts
				Advertisement of CW for depot

ADB = Asian Development Bank, CW = civil works, DPR = detailed project report, EA = executing agency.

Source: Asian Development Bank.

[illegible]

BMRCL = Bengaluru Metro Rail Corporation Limited, DMF = design and monitoring framework, Gov = government, MMI = multimodal integration, pkg = package, TA = technical assistance, TOD = transit-oriented development.
Note: Advance contracting for civil works started in December 2019. The project implementation unit was established in 2019.
Source: Asian Development Bank.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

Table 3: Roles and Responsibilities of Concerned Organizations

Project Implementation Organizations	Management Roles and Responsibilities
Executing agency	Ministry of Housing and Urban Affairs acting through Bangalore Metro Rail Corporation Limited <ol style="list-style-type: none"> 1. Facilitating loan disbursement 2. Ensuring timely release of counterpart funding 3. Ensuring overall compliance with national and/or state-level environmental policies and the Asian Development Bank (ADB) Safeguard Policy Statement, including an executing agency-level grievance redress mechanism 4. Overall coordination of project implementation 5. Interagency coordination as needed 6. Compliance with all loan covenants 7. Establishing a strong financial management system and conducting timely financial audits based on the agreed timeframe, and taking recommended actions 8. Recruiting consultants for contract supervision, working with nongovernment organizations, monitoring and evaluation, community and occupational safety, gender equality and social inclusion, environmental sustainability, and institutional development support 9. Procuring contractors 10. Overseeing the performance of the project implementing units 11. Ensuring project sustainability during post-implementation period and reporting to ADB on the assessed development impacts 12. Ensuring funds for operational sustainability during operation based upon the government sanctions and the MOU among the central government, the state government and BMRCL 13. Timely submission of withdrawal applications to ADB 14. Preparing regular periodic progress reports, and project completion reports and their timely submission to ADB
Implementing agency	Project implementation unit in Bangalore Metro Rail Corporation Limited <ol style="list-style-type: none"> 1. Conducting preconstruction activities 2. Monitoring and evaluation of project activities and outputs, including periodic review, preparation of review reports reflecting issues and time-bound actions taken (or to be taken) 3. Involving beneficiaries and/or representatives in all stages of project development and implementation 4. Public disclosure of project outputs 5. Quality assurance of works and services of consultants and counterpart staff 6. Monitoring the completion of resettlement plan implementation and ensuring all provisions and entitlements are duly implemented 7. Validating compliance with requirements as regards the turnover of acquired land to civil works contractors
Asian Development Bank (ADB)	<ol style="list-style-type: none"> 1. Providing timely support at each stage of the investment project for smooth implementation according to agreed implementation arrangements 2. Reviewing all documents that require ADB approval during implementation 3. Conducting periodic loan review missions, a midterm review, and a completion mission 4. Monitoring compliance with all loan covenants through review missions

Sources: Asian Development Bank and Bengaluru Metro Rail Corporation Limited.

B. Key Persons Involved in Implementation

Executing Agency

Bangalore Metro Rail Corporation
Limited

Officer's Name: S. S. Hegaraddi
Position: Executive Director (Civil-1)
Telephone: (O) 080 22969214
(M) +91 944828 7975
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Office address: 3rd Floor, BMTC Complex
K. H. Road, Shantinagar
Bangalore-560027, India

Officer's name: S. Vasudevan
Position: Chief Finance Officer
Telephone: (O) 080 22969325
(M) +9 944987 4445
Email address: vasudevan@bmrc.co.in
Office address: 3rd Floor, BMTC Complex
K. H. Road, Shantinagar
Bangalore-560027, India

Asian Development Bank

Transport and Communications
Division, South Asia Department

Staff name: Ravi Peri
Position: Director
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Email address: rperi@adb.org

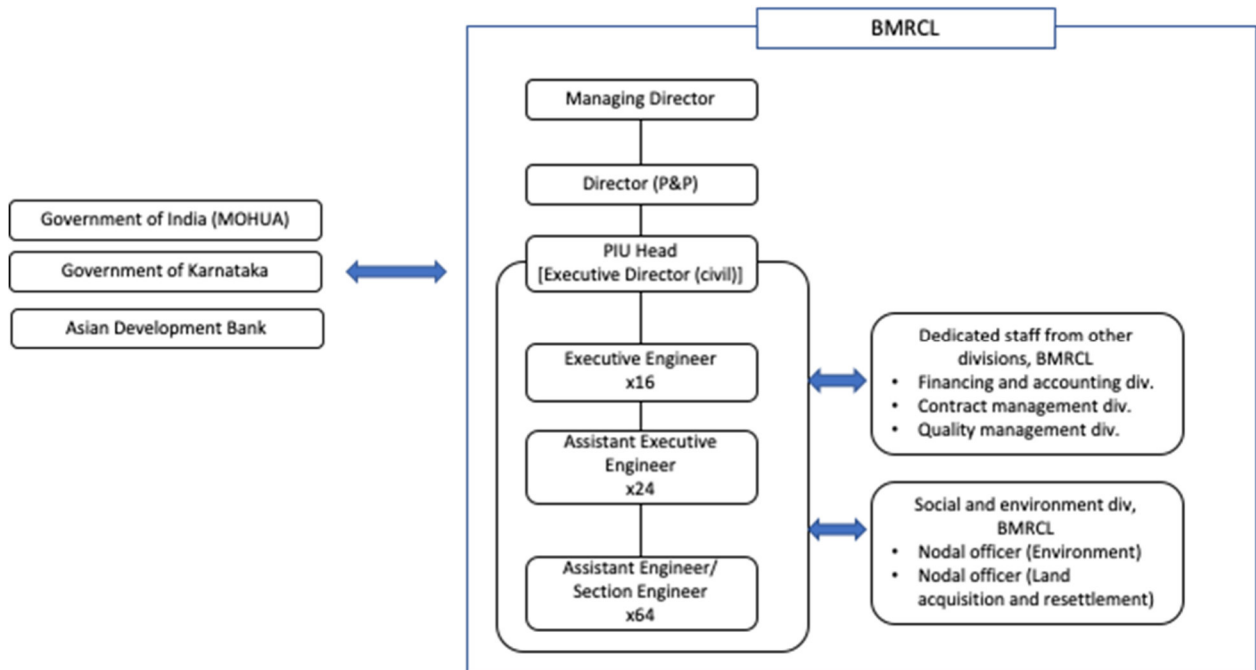
Mission Leader

Staff name: Kaoru Kasahara
Position: Senior Transport Specialist
Telephone: +63 2 632-5834
Email address: kkasahara@adb.org

C. Project Organization Structure

4. The organization chart in Figure 1 shows the reporting lines and essential internal structures of key staff involved in project implementation.

Figure 1: Project Organization Structure



BMRL = Bengaluru Metro Rail Corporation Limited, MOHUA = Ministry of Housing and Urban Affairs, PIU = project implementation unit, P&P = projects and planning.

Source: Asian Development Bank.

IV. COSTS AND FINANCING

5. Civil works components of the project will cost \$488.5 million, out of which the Asian Development Bank (ADB) will finance \$469.1 million. Consulting services, land acquisition cost, taxes and duties, and interest payments will not be financed by the ADB loan. Rolling stocks, signaling and telecommunications system, and other equipment for power and traction will not be part of the ADB project.

A. Cost Estimates Preparation and Revisions

6. The cost estimates were prepared by BMRCL with the support from a design consultant, who carried out the detailed design for the project and prepared the cost estimate based on the bill of quantities prepared based on the detailed design. The project cost will be updated during construction based on contract prices, changing quantities, and application of the price escalation clause according to contract provisions.

B. Key Assumptions

7. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: INR75.4 = \$1.00 (as of 30 March 2020)
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 4: Escalation Rates for Price Contingency Calculation

Item	2020	2021	2022	2023	2024–	Average
Foreign rate of price inflation	1.5%	1.6%	1.6%	1.6%	1.6%	1.6%
Domestic rate of price inflation	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%

Source: Asian Development Bank estimates.

C. Detailed Cost Estimates by Expenditure Category

8. The project is estimated to cost \$1,055.8 million excluding \$789.2 million for components of rolling stock and telecommunication and signaling components, under non ADB-administered parallel cofinancing (Table 5).

9. Detailed cost estimates by expenditure category and by financier are included in the project administration manual. The proposed loan will finance civil works for new metro lines. BMRCL will finance minor civil works, land acquisition cost, recurrent cost, and taxes and duties.

Table 5: Summary Cost Estimates
(\$ million)

Item	Amount ^a
A. Base Cost^b	
Metro rail construction ^c	963.8
Subtotal (A)	963.8
B. Contingencies^d	82.0
C. Financial Charges During Implementation^e	10.0
Total (A+B+C)	1055.8

^a Includes taxes and duties of \$76.5 million. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of \$76.5 million by cash contribution.

^b In mid-2020 prices as of March 2020.

^c Including land acquisition costs.

^d Physical and price contingencies are included.

^e Includes interest, commitment, and other charges on ADB financing.

Source: Asian Development Bank estimates.

10. The government has requested a regular loan of \$500 million from ADB's ordinary capital resources to help finance the project. The loan will have a 25-year term, including a grace period of 5 years; an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year; and such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 15.25 years, and the maturity premium payable to ADB is 0.10% per year.³

11. The summary financing plan is in Table 6. ADB will finance the expenditures in relation to civil works for the proposed new metro lines.

Table 6: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	500.0	47.4
Government	555.8	52.6
Total	1055.8	100.0

Source: Asian Development Bank estimates.

D. Allocation and Withdrawal of Loan Proceeds

Table 7: OCR Loan – Allocation and Withdrawal of Loan Proceeds

Category	Amounts Allocated (\$ million)	Percentage and Basis of Withdrawal from the Loan Account
1. Civil works	469.1	100% of total expenditure claimed*
2. Contingency	30.9	
Total	500.0	

OCR = ordinary capital resources.

* Procurement package PH-2A-P1 comprises (i) construction of elevated structure, and (ii) construction of loops and ramps for the road flyover at Silk Board JCT. Only component (i) will be financed by the Asian Development Bank (ADB). The project implementation unit will prepare withdrawal applications containing only the ADB-funded component. Tax and duties are not funded by ADB.

Source: Asian Development Bank estimates.

³ The terms are subject to confirmation by the government.

E. Detailed Cost Estimates by Financier

Table 8: Detailed Cost Estimates by Financier

Item	ADB		Government		Total Cost	
	Amount {A}	% of Cost Category {A/D}	Amount {B}	% of Cost Category {B/D}	Amount {D}	Taxes and Duties {E}
A. Investment Costs						
1. Land Acquisition	0.00	0%	373.6	100.0%	373.6	0
2. Civil Works	469.1	96.0%	19.4	4.0%	488.5	76.5
Subtotal (A)	469.1	54.4%	393.0	45.6%	862.1	76.5
B. Recurrent Costs						
1. Recurrent Cost	0	0%	25.3	100.0%	25.3	0
Subtotal (B)	0	0%	25.3	100.0%	25.3	0
Total Base Cost	469.1	52.9%	418.2	47.1%	887.3	0
C. Contingencies	30.9	37.7%	51.1	62.3%	82.0	0
D. Financial Charges During Implementation	0	0%	10.0	100.0%	10.0	0
Total Project Cost (A+B+C+D)	500.0	51.1%	479.3	49.0%	979.3	76.5
% Total Project Cost		51.1		49.0%	100%	

ADB = Asian Development Bank.

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

F. Detailed Cost Estimates by Year

Table 9: Detailed Cost Estimate by Year

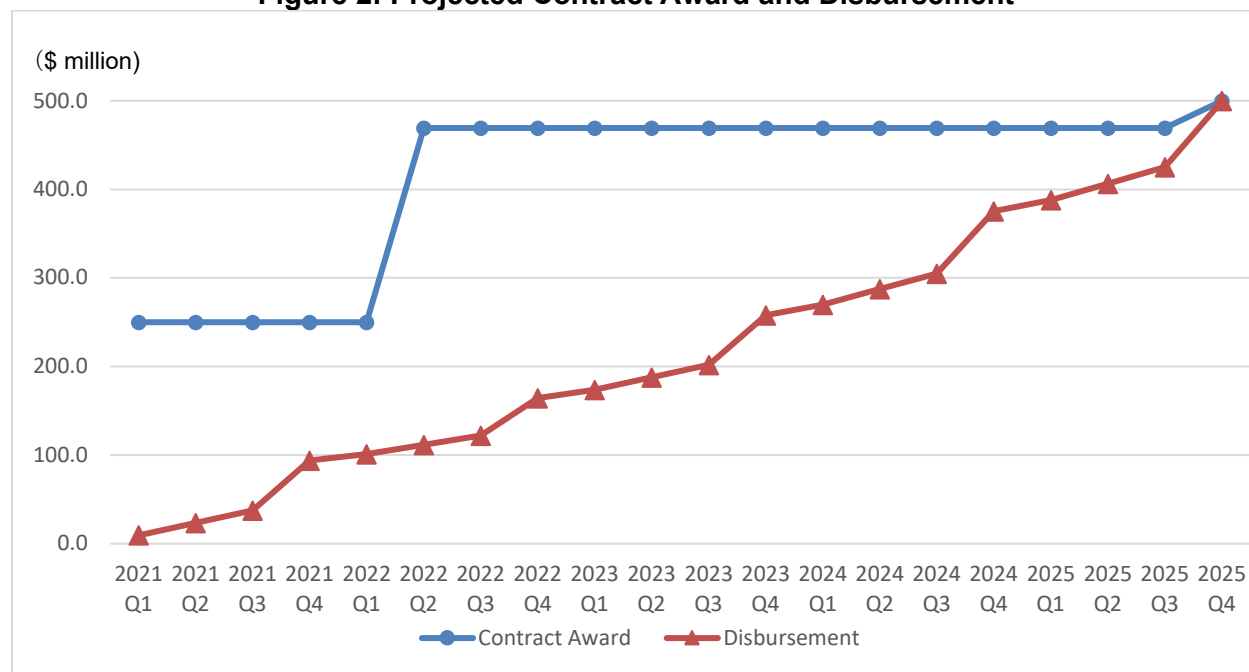
		(\$ million)						
Item	Total Cost	2019	2020	2021	2022	2023	2024	2025
A. Investment Costs								
1. Land Acquisition	373.6	37.4	149.4	149.4	37.4	0.0	0.0	0.0
2. Civil Works	488.5	0.0	24.4	73.3	73.3	97.7	122.1	97.7
Subtotal (A)	862.1	37.4	173.9	222.7	110.6	97.7	122.1	97.7
B. Recurrent Costs								
1. Recurrent Cost	25.3	0.0	1.3	2.5	5.1	6.3	6.3	3.8
Subtotal (B)	25.3	0.0	1.3	2.5	5.1	6.3	6.3	3.8
Total Base Cost	887.3	37.4	175.1	225.2	115.7	104.0	128.4	101.5
C. Contingencies	82.0	0.0	0.0	0.0	0.0	0.0	0.0	82.0
D. Financial Charges During Implementation	10	0.0	0.0	1.2	1.5	1.9	2.4	3.1
Total Project Cost (A+B+C+D)	979.3	37.4	175.1	226.5	117.2	105.9	130.8	186.6
% Total Project Cost	100%	3.8%	17.9%	23.1%	12.0%	10.8%	13.4%	19.1%

Note: The cost estimate includes counterpart portion of the project. The Asian Development Bank's loan disbursement is assumed to commence from 2021, using retroactive financing. Amounts are tax exclusive.
Source: Asian Development Bank estimates.

G. Contract and Disbursement S-Curve

12. The following figure and table show expected contract awards and disbursements for the allocated amounts for ADB financing over the life of the project.

Figure 2: Projected Contract Award and Disbursement



Q = quarter.

Note: Contract award in 2020 is counted in 2021 when loan effectiveness is expected. These amounts are subject to actual contract amounts.

Source: Asian Development Bank estimates.

Table 10: Quarterly Projection of Contract Award and Disbursement

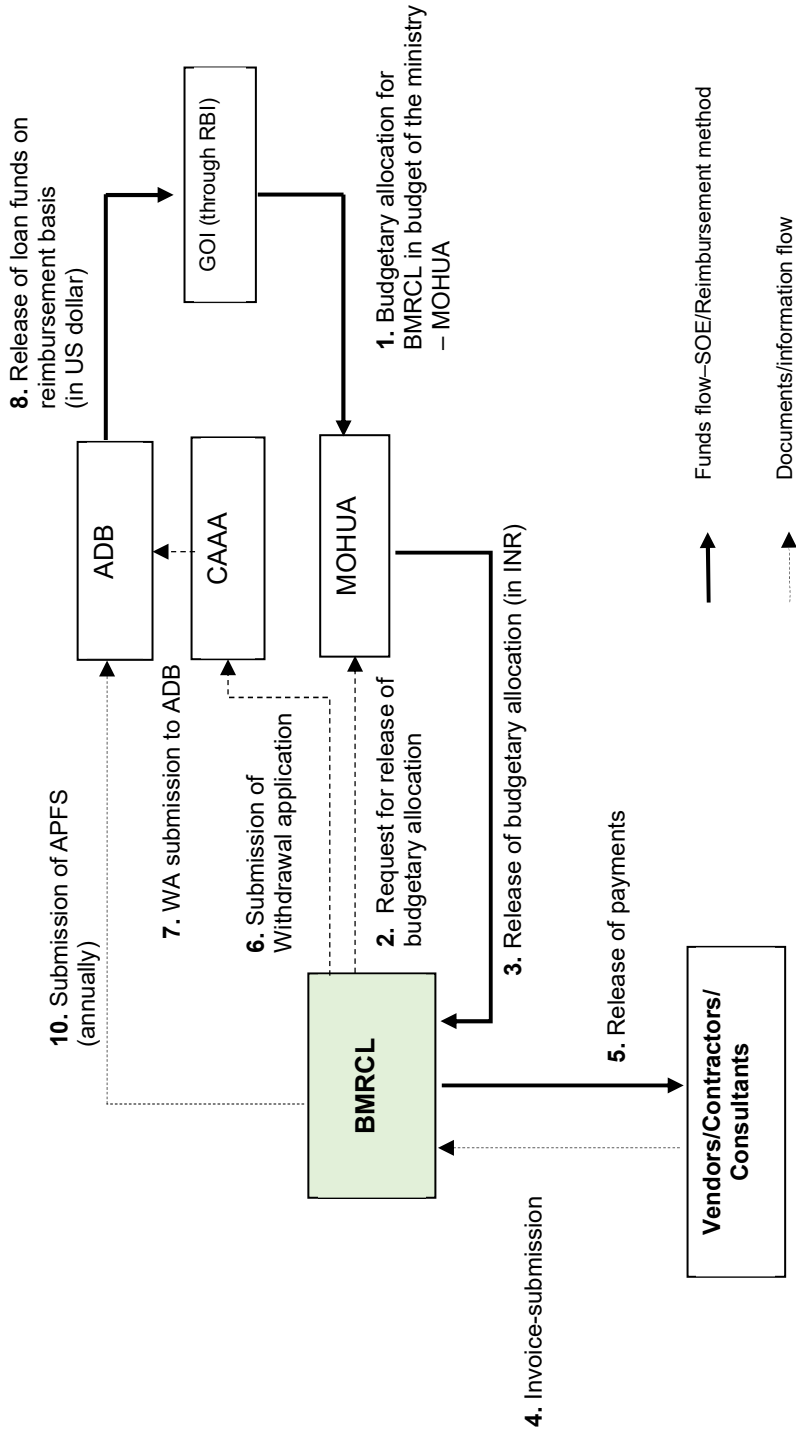
Contract Award					
Year	Annual Total	Q1	Q2	Q3	Q4
2021	250.0	250.0	0	0	0
2022	219.1	0	219.1	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	30.9	0	0	0	30.9
Disbursement					
	Annual Total	Q1	Q2	Q3	Q4
2021	93.8	9.4	14.1	14.1	56.3
2022	70.4	7.0	10.6	10.6	42.2
2023	93.8	9.4	14.1	14.1	56.3
2024	117.3	11.7	17.6	17.6	70.4
2025	124.7	12.5	18.7	18.7	74.8

Source: Asian Development Bank estimates.

H. Fund Flow Diagram

12. The fund flow diagram is shown below.

Figure 3: Fund Flow Diagram of ADB Loan Funds



ADB = Asian Development Bank, APFS = audited project financial statements, BMRCL = Bangalore Metro Rail Corporation Limited, CAAA = controller of aid accounts and audit, EA = executing agency, GOI = Government of India, INR = Indian rupee, MOHUA = Ministry of Housing and Urban Affairs, RBI = Reserve Bank of India, SOE = statement of expenditures, WA = withdrawal application.
Note: Numbers represent the order of the sequence of events.
Source: Asian Development Bank.

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

13. The financial management assessment (FMA) was completed in June 2020 in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects and the Financial Due Diligence: A Methodology Note. The FMA considered the capacity of the BMRCL, including fund-flow arrangements, budgeting, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements. Based on the assessment, it was concluded that BMRCL has the appropriate capacity for effective financial management, accounting, and reporting. The key financial management risks identified are no experience in ADB-funded project, exposure to foreign exchange risk, no verification on physical assets, potential delay in counterpart fund releases, staffing, and need for an accounting manual. It is concluded that the overall pre-mitigation financial management risk of the executing agency and implementing agencies is *moderate*. The borrower and the executing agency and implementing agencies have agreed to implement an action plan as key measures to address the deficiencies. Details of risks and key mitigating measures are in Table 11.

Table 11: Financial Management and Internal Control Risk Assessment

Risk Description	Risk Assessment	Risk Mitigation Measures
Inherent Risk		
1. Country Specific Risks		
1. Country Specific Public Financial Management Strong public financial management is one of the key elements of the Government of India's strategy for strengthening governance, optimizing outputs from public resources, and ensuring inclusive and broad-based development. The 2010 Public Financial Management Performance Assessment Report for India identified that the public financial management system is well structured but unevenly implemented. The Country Partnership Strategy for India, 2018–2022 of the Asian Development Bank (ADB) notes that public financial management at the state level needs to be improved to facilitate the strategic pillar of providing inclusive network infrastructure and services.	Moderate	There is no significant weakness in the budgetary process or in the public sector accounting and reporting system that are expected to directly impact the Bengaluru Metro Rail Corporation Limited (BMRCL), to the extent that entity and project financial management are at risk. Public and private sector auditing standards and capacity are generally adequate. BMRCL is registered as a company and contributions from the Government of India and participating states are guaranteed through a presidential sanction order, memorandum of understanding (MOU), and appropriate budgetary allocations. The Ministry of Housing and Urban Affairs (MOHUA), which has the administrative control of BMRCL through the chairperson of BMRCL, has notified a national Metro Policy in 2017. The policy aims to promote systematic planning and implementation of metro projects in various cities of India. The policy mandates that a Comprehensive Mobility Plan (CMP) will be a mandatory prerequisite for planning the metro rail in any city. Also, the policy stipulates that all the metro projects and their tariff fixation will be governed by Central Metro Acts, reducing the regulatory and revenue risk for all metro projects including BMRCL. The policy also calls for regular monitoring of metro projects against established key

Risk Description	Risk Assessment	Risk Mitigation Measures
		<p>performance indicators. The policy also warrants that the metro rail implementing agencies will establish an appropriate monitoring mechanism.</p> <p>Considering all of the above, no specific mitigation measures are being proposed. However, it is expected that BMRCL will abide by all the applicable laws, regulations, rules, and guidelines. The applicability of all these statutes will be further reinforced through suitable provisions in the memorandum of understanding (MOU) signed between the Government of India (GOI), the State Government of Karnataka (GOK), and BMRCL.</p>
2. Entity-specific risks		
<p>BMRCL does not have any experience in implementing ADB-funded projects.</p>	<p>Moderate</p>	<p>The company has extensive experience in implementing externally financed projects. It has worked with Japan International Cooperation Agency (JICA) and Agence Française de Développement (AFD) in the past. The Asian Infrastructure Investment Bank (AIIB) has sanctioned a loan of \$318 million and the European Investment Bank (EIB) a loan of €500 million for BMRCL metro projects. Hence, the risk is partially mitigated. Additionally, training programs on ADB policies and procedures will be conducted for the staff of BMRCL to strengthen the experience of BMRCL in handling financial management of the project.</p>
Overall Inherent Risk	<p>Moderate</p>	
Project Risk		
<p>1. Exposure to foreign exchange risk</p> <p>BMRCL is exposed to foreign exchange rate variation (FERV) risk on its foreign currency-denominated borrowings received as a pass-through assistance from the Government of India under the MOU between the GOI, GOK, and BMRCL. It is also exposed to FERV on its payments to various vendors in foreign currencies (euro, Japanese yen, and US dollar) for its imports.</p>	<p>Moderate</p>	<p>BMRCL has a Board-approved foreign exchange risk management policy. However, the BMRCL has not obtained any hedging cover so far, mainly due to the reason that for phase 1 of the project, there is lack of clarity on BMRCL's exposure to FERV on pass-through assistance. BMRCL had earlier sought clarification from the Controller of Aid Accounts and Audit (CAAA) on this issue. The CAAA clarified in March 2015 that only in the case of government (guaranteed) loans, the borrower does bear the exchange and other risks. Therefore, BMRCL is not required to bear the amount of exchange variation. BMRCL has referred this opinion to the central government and it is now under examination. BMRCL is actively following up the matter with the government and the matter is likely to be settled in due course, clearly identifying the nature and extent of BMRCL's liability in this regard. However, for phases 1 and 2 (related to the project), the MOU</p>

Risk Description	Risk Assessment	Risk Mitigation Measures
		<p>between GOI, GOK, and BMRCL clearly mentions that the FERV risk will be transferred to BMRCL. Implementation of Board-approved policy on FERV is required for phases 2A and 2B.</p> <p>With regards to foreign exchange risk on its imports, BMRCL is already exploring options to hedge the risk. It has approached various commercial banks and sought their expert advice on hedging strategies available to mitigate this risk. It is currently evaluating various options for their cost-benefit and ease of adoption for BMRCL's operations.</p> <p>As per the MOU between GOI, GOK, and BMRCL, any cash losses of BMRCL will be borne by GOK. While BMRCL is expected to execute appropriate risk management policies for FERV risk and minimize losses, BMRCL is covered as per the MOU for any residual losses.</p>
<p>2. Fixed assets</p> <p>Physical verification of fixed assets has never been carried out by BMRCL. Even though it has a phased asset verification program, for the last 3 years, auditors have pointed out in their report that no physical verification of fixed assets has been carried out for the year. This exposes BMRCL to asset misappropriation or misuse risk. However, considering the nature of BMRCL's asset, any significant misappropriation is highly unlikely.</p>	Moderate	<p>BMRCL is committed to conduct physical verification of entire fixed assets during fiscal year 2021, with the help of its staff and internal auditors. BMRCL has also committed that it will carry out physical verification of fixed assets on regular basis in future and all blocks of assets will be physically verified every 2 years.</p>
<p>3. Manual invoice-processing</p> <p>Though BMRCL has implemented an enterprise resource planning system, the invoices of the contractors for capital expenditures and other operating expenditures are processed, approved, and paid outside the IT system. This exposes the project to inaccuracies in financial statements and delays in the preparation of project financial statements.</p>	Moderate	<p>BMRCL's information technology (IT) department is working on the backward integration of the contract management module and it has committed full automation in the next 2 years. The risk will be substantially mitigated post integration of these modules.</p> <p>In the immediate time period, BMRCL will mitigate the risk by periodic and timely reconciliations of the details in the invoices with the data available in its IT system.</p>
<p>4. Funds Flow</p> <p>The funds will flow to BMRCL in</p>	Moderate	<p>Being a joint venture of both the central and state governments, with a project-level MOU to resolve the financing issues, the project has a better</p>

Risk Description	Risk Assessment	Risk Mitigation Measures
<p>advance through budgetary allocations of the state government and central government. It is imperative that both governments include sufficient allocations in their budgets in advance. Furthermore, the funds should be released to BMRCL in timely manner so that there are no delays in the project.</p>		<p>access to both governments. Furthermore, BMRCL is prompt in submitting its budget to both governments in advance, which helps it in getting timely and sufficient budget allocations. BMRCL has reported that so far, it has not faced any inadequacies or delays in receipts of funds from the state or central government.</p> <p>ADB disbursement will follow reimbursement procedure. Fund flows will be through the annual budgetary process, through contributions by MOHUA.</p>
<p>5. Staffing</p> <p>Lack of experience of financial management staff to implement ADB projects</p> <p>Key positions of Director (Finance) and General Manager (F&A) are vacant. Position of Chief Finance Officer (CFO) is filled with staff hired on contract basis.</p>	Substantial	<p>The existing finance and accounts (F&A) staff of BMRCL possess extensive experience in implementing externally financed projects. As mentioned, BMRCL has worked with AFD and JICA in the past. AIIB and EIB have also sanctioned loans of \$318 million and €500 million respectively for its metro projects. Training in ADB's accounting and reporting requirements would be provided to BMRCL accounting staff to further mitigate this risk.</p> <p>BMRCL has already included a position for Director (Finance) at the top, in the proposed finance and accounts department structure (effective during the implementation period).</p> <p>BMRCL will employ staff dedicated for project accounting.</p> <p>As per the organogram of BMRCL, the General Manager (F&A) will be responsible for financial management of the project and will be assisted by appropriate staff.</p>
<p>6. Accounting Policies and Procedures</p> <p>The accounting policies and procedures manual is outdated and no longer in use.</p> <p>BMRCL uses descriptive accounting codes that are neither exhaustive nor effective in ensuring systematic accounting.</p>	Moderate	<p>BMRCL has exhibited fairly robust and accurate accounting practices, which are validated by its unqualified financial statements. BMRCL follows accrual basis double-entry accounting system at the corporate level. Since BMRCL is a government company formed under the Companies Act 1956, it is following all the guidelines issued by the Institute of Chartered Accountants of India (ICAI). BMRCL is also subject to GOI's circulars and directives related to financial management.</p> <p>BMRCL will appoint consultants for preparation of new accounting and finance manuals in accordance with Companies Act 2013 and Indian Accounting Standards.</p> <p>BMRCL has already engaged consultants for the</p>

Risk Description	Risk Assessment	Risk Mitigation Measures
		development of a robust numeric-based chart of accounts. The task is in the final phase of generating and implementing numerical and alpha-numerical accounting codes and is set to implement the same during this financial year.
7. Internal Audit Arrangements for internal audit function need strengthening.	Moderate	<p>BMRCL has an elaborate scope for internal audit (including pre-audit of all the payments above ₹2.5 million and risk-based internal audit on post transaction basis). The function is outsourced to two chartered accountant firms, one each for pre-audit and risk-based internal audit. Firms empaneled with the Comptroller and Auditor General (CAG) of India are invited to submit bids for recruitment of internal audit firms. The evaluation process is managed by the officers in the Finance and Accounts Department and the selection is approved by the MD, compromising the independence of the auditor. Internal audit reports are presented to the audit committee, after receiving comments from the MD.</p> <p>BMRCL will take actions to enhance the independence of the auditors by ensuring that the evaluation of the bids and the appointment of the IA will be approved by the Audit Committee.</p>
8. External Audit Timely submission of audited project financial statement Timely resolution of audit findings	Moderate	<p>The financial statements of BMRCL are prepared based on Indian Accounting Standards, which are in line with International Financial Reporting Standards. The statutory audit is carried out by the chartered accountant firm appointed by the CAG of India. Audited accounts are placed before the board of the BMRCL. The statutory auditors will also be engaged for performing audits of the separate project-level financial statements for the ADB-funded project. BMRCL will follow accrual basis of accounting for preparation of project financial statements, in compliance with Indian Accounting Standards. Audit will be conducted in accordance with the standard terms of reference for the audit of ADB-assisted projects, agreed between CAG, Department of Economic Affairs, and ADB.</p> <p>ADB will monitor the timeliness of BMRCL's submissions and take early actions in case of delays.</p>
9. Reporting and Monitoring Frequency, timeliness, and format of periodic financial reporting require strengthening.	Moderate	<p>Quarterly progress reports, including physical and financial progress and operational data, are prepared and presented to the Board in the board meetings (generally 3–4 times in a year).</p> <p>Project financial reports will be generated on a quarterly basis and project budget figures will be</p>

Risk Description	Risk Assessment	Risk Mitigation Measures
		compared with actual figures in each quarterly report. Since BMRCL is implementing an ADB-funded project for the first time, specific requirements of ADB for continuous monitoring and reporting need to be clarified. Quarterly and annual progress reports will be required from BMRCL for the proposed project, containing physical and financial reports with variance analysis, and disbursement reports. Amounts in quarterly reporting and annual project financial statements need to be reconciled with the ADB disbursement amount, which can be found in ADB's Loan Financial Information System (LFIS).
10. Information Systems BMRCL has already implemented a customized enterprise resource planning package and a real-time revenue accounting software across the organization. However, manual intervention is still present in some processes.	Moderate	BMRCL's IT team is constantly working on full automation of processes in all areas. It is committed to deploy new and enhanced IT solutions and to integrate the existing software modules to the extent possible or practical.
Overall Project Risk	Moderate	
Overall (Combined) Risk	Moderate	

Source: Asian Development Bank.

14. The borrower and executing agency and implementing agencies have agreed to implement an action plan as key measures to address the deficiencies. The financial management action plan is provided in Table 12.

Table 12: Financial Management Action Plan

S.No.	Action	Responsibility	Resources	Timing
1.	An accounting policies and procedures manual will be developed, including a separate chapter on ADB financial management and reporting requirements and chart of accounts for ADB project accounting. BMRCL financial management staff will be provided detailed training for effective implementation of the manual. TORs of internal auditors will include monitoring compliance with requirements of the manual. The financial management manual will include, but not be limited to, policies and procedures for the following: <ul style="list-style-type: none"> • Internal control structure • Budget preparation and monitoring • Development of chart of accounts and its regular updates • Key accounting policies and principles • Roles and responsibilities of accounting and 	BMRCL	BMRCL	Abridged manual for ADB project including chart of accounts by March 2021 Complete manual by September 2021

S.No.	Action	Responsibility	Resources	Timing
	finance staff <ul style="list-style-type: none"> • Bookkeeping and specific ledgers and other records to be maintained • Fixed assets and inventory management • Guidance on implementation of FERV risk management policy • Separate accounting of costs and revenues of each phase, to the extent possible, and allocation of common costs (including overheads) and revenues • ADB financial management requirements and project financial statements templates • Financial reporting and auditing 			
2.	Timely budgetary release and provision of ADB portion and counterpart funds will be ensured. As per the MOU signed between GOI, GOK, and BMRCL, equity contributions and subordinated debts are to be contributed by the central and state governments. Appropriate budget allocations in the respective governments' budgets and timely release of funds need to be ensured. Reimbursement method will be followed for disbursement of funds from ADB. Appropriate budget allocations to ensure sufficient and timely funds available to BMRCL shall be made in the budgets of MOHUA and GOK.	MOHUA, GOK, BMRCL	Central and State Government Budgets	Throughout the project period
3.	Staffing issues to be resolved are as follows: (i) Appointment of Director (Finance)/CFO (ii) Appointment of General Manager (F&A) (iii) Hiring of 1 DGM, 2 Managers, and 1 Assistant Manager for project financial management	BMRCL	BMRCL	By March 2021
4.	Development and implementation of revised chart of accounts that is capable of addressing BMRCL-level and project-level financial statements Preparation of financial statements on the basis of revised chart of accounts	BMRCL	BMRCL	March 2021 FY2021
5.	Carry out verification of all fixed assets and inventory of BMRCL.	BMRCL	BMRCL	Within FY2021
6.	Full automation of processes in all areas in the ERP Integration of existing software modules	BMRCL	BMRCL	June 2021
7.	Provide training to BMRCL project finance and accounting staff in ADB disbursement and accounting policies and procedures.	ADB	ADB	Within 6 months of loan effectiveness
8.	Selection of internal auditors will be carried out directly by the audit committee. Internal audit of the project by chartered accountant firm on quarterly basis and submission of reports to audit committee	BMRCL	BMRCL	June 2020 Quarterly basis throughout the project period
9.	Timely submission of APFS and resolution of	BMRCL	BMRCL	Within 6 months

S.No.	Action	Responsibility	Resources	Timing
	audit findings will be ensured. Timely submission of AEFS will be ensured.			after fiscal year end Within 1 month from approval by the Board, but not later than 1 year from end of fiscal year
10.	Submission of quarterly progress reports with physical and financial progress with variance analysis and disbursement reports to ADB (template of quarterly progress report will be finalized at an inception mission)	BMRCL	BMRCL	Throughout the entire duration of the project, within 45 days after the end of each quarter

ADB = Asian Development Bank, AEFS = audited entity financial statements, APFS = audited project financial statement, BMRCL = Bengaluru Metro Rail Corporation Limited, CFO = chief financial officer, DGM = deputy general manager, ERP = enterprise resource planning, F&A = finance and accounts, FERV = foreign exchange rate variation, FY = fiscal year, GOK = Government of Karnataka, MOHUA = Ministry of Housing and Urban Affairs, TOR = terms of reference.

Source: Asian Development Bank.

B. Disbursement

1. Disbursement Arrangements for ADB

15. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),⁴ and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available.⁵ Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

16. ADB will finance \$500 million to support the civil works of the proposed new metro lines including contingency. Rolling stock and signaling and telecommunication, with an estimated cost of \$318 million, will be financed by another financing partner. ADB will not finance taxes and duties related to the project. BMRCL will make disbursement to contractors from the government's budget allocated to BMRCL annually. ADB's reimbursement procedure will be adopted in the disbursement of loan proceeds. BMRCL is responsible for collecting and retaining supporting documents, and preparing and sending withdrawal applications to ADB. After the withdrawal application is submitted by the government to ADB, loan proceeds will be disbursed to the Government of India to reimburse actual expenditure by BMRCL.

17. **Advance fund procedure.** Advance fund procedure will not be used for the project.

18. **Statement of expenditure (SOE) procedure.**⁶ The SOE procedure may be used for reimbursement of eligible expenditures. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents

⁴ The handbook is available electronically from the ADB website (<http://www.adb.org/documents/loan-disbursement-handbook>).

⁵ Disbursement eLearning. http://wpqr4.adb.org/disbursement_elearning

⁶ SOE forms are available in Appendix 7B and 7D of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

on a sampling basis, and for independent audit.

19. Before the submission of the first withdrawal application, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is stipulated in the *Loan Disbursement Handbook* (2017, as amended from time to time). Individual payments below such amount should be paid by the executing agency and subsequently claimed to ADB through reimbursement, unless otherwise accepted by ADB. The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements system is mandatory for submission of withdrawal applications to ADB.⁷

2. Disbursement Arrangements for Counterpart Fund

20. All disbursements under government financing will be carried out in accordance with the regulations of the Government of India and the Government of Karnataka and accounting principles acceptable to ADB.

C. Accounting

21. The BMRCL will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following accrual-based accounting that follows the equivalent national accounting standards, i.e., the Indian Accounting Standards and guidelines issued by the Institute of Chartered Accountants of India (ICAI) from time to time. The BMRCL will prepare project financial statements in accordance with the government's accounting laws and regulations, which are consistent with international accounting principles and practices, and acceptable to ADB. Standard terms of reference for the audit of ADB-assisted projects, agreed between the CAG, the Department of Economic Affairs, and ADB, shall be referred to as a guide.

D. Auditing and Public Disclosure

22. The BMRCL will cause the detailed project financial statements, for all sources of financing, to be audited in accordance with the government's audit regulations by an independent auditor appointed on behalf of the CAG and acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the BMRCL. The annual project financial statements should include withdrawal application wise reconciliation between amounts reported in the project financial statements and disbursements amount appearing in the Loan Financial Information System (LFIS) of ADB. The LFIS can be accessed online and ADB will provide LFIS access to project staff on request.

23. The audited entity financial statements, together with the auditor's report and management letter, will be submitted in the English language to ADB within 1 month after their approval by the relevant authority.

24. The audit report for the project financial statements will include a management letter (or a

⁷ The Client Portal for Disbursements facilitates online submission of withdrawal applications to ADB, resulting in faster disbursement. The forms to be completed by the borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

written confirmation by the auditor that no management letter was issued) and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; and (ii) whether the proceeds of the loan were used only for the purpose(s) of the project. BMRCL shall prepare the computations demonstrating compliance with the financial ratios as defined in the legal agreements (where applicable) every year, as part of its entity financial reporting. The auditors will provide an additional opinion on achievement of the financial ratios (where applicable) under relevant auditing standards as applicable in India.

25. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

26. The government, MOHUA, and BMRCL have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.⁸ ADB reserves the right to require additional auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

27. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy 2018.⁹ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.¹⁰

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

28. All advance contracting and retroactive financing will be undertaken in conformity with ADB's Procurement Policy (2017, as amended from time to time) and ADB's Procurement Regulation (2017, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The borrower, MOHUA, and BMRCL have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

⁸ ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

⁹ Access to Information Policy. <https://www.adb.org/documents/access-information-policy>.

¹⁰ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraphs 97 (iv) and/or 97(v).

29. **Advance contracting.** All contract packages for civil works will apply advance contracting. Advance contracting under the project includes the entire procurement process, including advertisement, bid submission, bid evaluation, and contract award. Once ADB's clearance on the bidding document is obtained, advertisement will commence.

30. **Retroactive financing.** Withdrawals from the loan account may be made for reimbursement of eligible expenses incurred under the project before effectivity date, but not earlier than 12 months before the date of the loan agreement, subject to a maximum amount equivalent to 20% of the loan amount.

B. Procurement of Goods, Works, and Consulting Services

31. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Policy (2017, as amended from time to time) and ADB's Procurement Regulations (2017, as amended from time to time).

32. International open competitive bidding will be used for six civil works contracts estimated to cost \$488.5 million. Shopping will not be used for contracts for procurement of works.

C. Procurement Plan

33. An original 18-month procurement plan indicating threshold and review procedures for works contract packages is shown in Appendix A. Updated procurement plan will be posted on ADB project website.

34. **Value for money.** Optimization for value for money has been sought through strategic procurement planning and risk-managed approach as follows:

- (i) The procurement plan has been developed considering the project's needs and objectives.
- (ii) Procurements are being done through open competitive bidding, with international advertisement.
- (iii) Considering the project readiness and similarity in works' nature, five out of six packages are being procured using multiple-contracts bidding: Packages 1 and 2 under lot 1 (Phase 2A) and Packages 1, 2, 3 under lot 2 (Phase 2B).
- (iv) Packaging of works contracts are based on robust market analysis. Five out of six packages have been sized between \$78.82 million to \$96.99 million, which are expected to attract eligible bidders from the international market. This is expected to result in highly competitive bidding. Appropriateness of the package sizing has been validated by strong market responses under lot 1—with six and eight bids received for Package 1 and Package 2, respectively.
- (v) Requirements of technical specifications are aligned with the project objectives. The metro alignment is designed to mostly make use of the centerline of existing major roads.
- (vi) Evaluation criteria being applied consider essential conditions to ensure bidders' capability and resources to successfully perform the contracts.
- (vii) Following standard industrial practice in India, procurement is being done through single-stage two-envelope procedure.
- (viii) FIDIC MDB 2010 for contracts are being applied for procurement of works, considering that design works are done by the employer.

- (ix) All the contracts are being procured following prior review procedure to avoid any risks of noncompliance in the procurement process.
- (x) During the contract implementation, to ensure healthy project cash flow, contractual mechanisms have been put in place to make prompt interim progress payments to contractors, with 80% of progress payments to be made within 4 days of preliminary scrutiny and provisional certification by the Engineer.
- (xi) To enhance smooth cash flow under each contract, in addition to the regular advance payment provision, special advance payment provision of up to 10% has been introduced.
- (xii) For some packages, incentive (bonus) for early completion is being applied, which is expected to help achieve the project well within the completion period.

VII. SAFEGUARDS

A. Environmental Safeguards

35. The project is categorized A in accordance with ADB's Safeguard Policy Statement (2009) primarily due to (i) the large scale of construction works that will be mostly elevated, and (ii) the associated risks to community and occupational health and safety, particularly as Phase 2A passes through congested parts of the city with high pedestrian and vehicular traffic.

36. Based on the Detailed Project Report, BMRCL has prepared environmental impact assessments (EIA) and package-specific environment management plans (EMP) with accompanying environmental monitoring plans (EMOP) in accordance with ADB's Safeguard Policy Statement for the two project lines. The EMPs/EMOPs, which include measures for communicable disease prevention with particular attention to the new coronavirus disease 2019 (COVID-19), were included in the bidding documents along with the Safety, Health and Environment (SHE) guidelines for metro projects in India. COVID-19 provisions may be revised according to national guidelines and international best practices as the situation evolves.

37. The Executing Agency will ensure that all environmental safeguard requirements under the project will be implemented as required by the EIA, EMP, and safety health and environment (SHE) guidelines. The EMP with detailed budget estimates is given in the EIA report. The EMP is a plan for mitigating all anticipated environment impacts during project construction and operation. Specific mitigation measures with details on location, time, and responsible agency for implementation is given in the EMP. Mitigation measures for implementation during the construction stage is implemented by the contractor and during operation stage by the BMRCL. The EMP also includes an EMOP on testing the quality of air, water, noise, and vibration through laboratory tests and physical monitoring of problems of soil erosion, tree plantations, and occupational health and safety issues. Quality testing of air, water, noise, and vibration may be outsourced by the contractor to recognized and approved laboratories, while physical monitoring activities will be carried out by the GC and external monitor.

38. The SHE manual includes a set of requirements and guidelines on occupational health and safety including human resource requirements on site safety protocols, awareness, and training requirements. BMRCL, with the support of the Designated Engineer, will ensure that both the EMP and SHE guidelines are included in the bidding documents for each contract package before starting the bidding process and also included in the final contract agreement with the contractor.

B. Social Safeguards

39. **Resettlement plans (category A).** The land acquisition and resettlement for the proposed lines 2A and 2B will affect private assets, mainly land and structures which are being acquired for the project. Line 2A will entail impacts on 111 households comprising 46 titled owners and 65 tenants. The total land acquisition for the section is 48,215.5 square meters (m²), of which 26,379.3 m² is private land and the remainder is government land. Line 2B will entail impact on at least 380 households comprising 187 titled owners, 189 tenants, and 4 non-title holders. The total land acquisition for the section is 319,244.5 m², of which 101,217.38 m² is private land and the remainder is government land. The total affected households for the two lines are 491, covering an estimated 816 affected persons. The land acquisition commenced in September 2018 and is expected to be completed by March 2021. Resettlement plans, including due diligence for land that were already been acquired, were prepared. The resettlement plans provide adequate entitlements and summarize public consultations and information disclosure, grievance redress mechanism, and adequate institutional arrangements to ensure the plans are implemented accordingly. A due diligence on land already acquired indicate consistency with ADB's safeguard policy requirements, particularly the replacement cost principle. BMRCL is found to have the capacity and the commitment to ensure land acquisition and resettlement will be carried out adequately given the national and ADB requirements. An external monitor shall be engaged to validate the implementation of resettlement plans.

40. In the course of project implementation, additional land acquisition may be necessary to cover project needs. Where there are involuntary resettlement impacts, the provisions of the resettlement plan, including the entitlement for compensation based on replacement cost principle, shall be applied. Where income and livelihood restoration is required, it shall be made consistent with the national and ADB's safeguard policy requirements. Likewise, impacts arising from unanticipated activities shall be covered under the provisions of the resettlement plan if it would result to involuntary acquisition. Other impacts will be covered by the environmental management plan.

41. **Monitoring and reporting.** Internal monitoring shall be undertaken by the Land Office. Internal monitoring ensures all land acquisition and resettlement activities are implemented according to the approved plan in line with the resettlement plan. As the project requires engaging an external monitor, BMRCL shall recruit and engage an individual consultant to validate the implementation of the resettlement plan. The time of recruitment shall be agreed between ADB and BMRCL once the project becomes effective.

42. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009).

C. Implementation Arrangements

43. **Social and Environment Unit (SEMU).** The SEMU manages social and environmental issues for all projects under BMRCL. It is headed by a Deputy Chief Engineer who is supported by two Assistant Environmental Engineers and two Social Officers. The SEMU will provide technical support to the PIU on environment and social matters. They will work in close collaboration with the Environmental Specialist of the Designated Engineer (DE) and Environmental Officer of the contractor during the construction phase. The SEMU will provide technical support to the PIU to review the environmental monitoring reports prepared and submitted by the Designated Engineer.

44. **Project implementation unit.** The PIU is headed by the Chief Engineer within BMRCL for the implementation of the project. The Chief Engineer is assisted by Deputy Chief Engineers to manage technical concerns and the Assistant Executive Engineer or Assistant Engineer for Environment to oversee environmental and social concerns of the project. The PIU will have six field units for the six contract packages under lines 2A and 2B. Each field unit will have one Environmental Engineer, one Safety Engineer, and one Executive Engineer. The PIU with the support of the SEMU and field units shall be responsible for ensuring compliances with environmental and social safeguard policies of the government including securing forestry clearances, tree cutting permits, and other similar clearances and permits required for the project. The PIU shall conduct regular site visits during implementation and ensure that the reports submitted by the contractors are consistent with conditions on site. The PIU field units will carry out day-to-day on-site monitoring of environmental and social safeguards implementation. The PIU will review and approve the monthly and semi-annual environmental monitoring reports submitted by the Designated Engineer with technical support from SEMU. They will forward the semi-annual environmental monitoring reports to ADB for review and disclosure on the ADB website. On need basis, a specific social safeguards consultant will be engaged to address emerging issues. BMRCL and ADB will identify qualified experts to handle the issues.

45. **Designated Engineer.** The Designated Engineer (DE) will be engaged to assist BMRCL during project implementation. The DE Environmental Specialist assigned to each contract packages shall supervise and ensure the successful implementation of the EMP, EMOP, and the SHE manual. Prior to start of works, the Environmental Specialist will review the site-specific EMPs based on the EMP prepared as part of the bidding documents and provide guidance for improvement in compliance with the environmental provisions of the contract as necessary. The Environmental Specialist will ensure that the contractor complies with various EMP and EMOP requirements through regular (weekly/biweekly) site inspections and constant communication with the contractor and communities and residents near the construction sites. Sub-plans such as afforestation plan and traffic management plan and others will also be monitored by the Environmental Specialist. The Designated Engineer shall regularly update the PIU on the progress of the EMP and EMOP implementation and promptly alert the agency of any emerging issues and/or unanticipated impacts. The Designated Engineer shall prepare monthly and semi-annual environmental monitoring reports based on site visits and environmental reports from the contractor and submit the report to the PIU, highlighting systemic issues and good practices across contract packages. The Designated Engineer shall also organize training programs to increase EMP implementation capacity among relevant contractors and PIU staff.

46. **Contractor.** The contractor shall establish a Safety, Health, and Environment (SHE) Unit headed by an Environment Officer assisted by the Safety and Health Officer to manage EMP, EMOP, and SHE implementation. The SHE Unit staff shall be hired within 30 days of contract signing and will be maintained throughout project implementation. These personnel will be responsible for preparing the site-specific EMP based on the EMP prepared as part of the bidding documents and for securing relevant clearances and permits for the project. The unit shall be present in day-to-day operations to ensure close monitoring of EMP and SHE manual implementation. They will ensure that all contractor staff adhere to the provisions of the EMP and SHE manual at all times and mete out sanctions for non-compliances as necessary. The SHE Unit shall be primarily responsible for coordinating with the Designated Engineer and PIU on the progress of EMP, EMOP, and SHE manual implementation, and provide inputs on this in the monthly progress report submitted to the PIU. Particular attention shall be given to sensitive structures along the alignment. A pre-construction survey of structures will be done to document the existing condition of these, and noise and vibration monitoring will also be done to ensure that

limits are not exceeded during works.

47. **External monitor.** To help ensure compliance with ADB's Safeguard Policy Statement (2009) and other pertinent rules and regulations, an External Monitor will be hired prior to commencement of works to conduct third-party compliance monitoring of environmental and social safeguards for the project. The External Monitor shall not be involved in the day-to-day project activities. The External Monitor shall review progress and monitoring reports prepared by the contractor and Designated Engineer, which shall be verified through site visits at least quarterly. Through site observations and review of progress reports and other pertinent documents, the External Monitor shall provide technical guidance to the PIU on environment, land acquisition and resettlement, and health and safety issues during construction up to the initial years of operation. The External Monitor shall prepare semi-annual independent monitoring reports and submit it to the PIU for further submission to ADB.

48. **Grievance redress mechanism.** A grievance redress mechanism (GRM) is established for the project to ensure that grievances and other feedbacks from stakeholders and affected persons are acknowledged, evaluated, and responded to in a timely manner. The project-specific GRM will handle all issues related to the project including environmental, community health and safety, resettlement and rehabilitation, and EMP implementation concerns. Contact information is available at the BMRCL website, and drop boxes for lodging complaints will be provided at construction sites, the Land Acquisition Office, and BMRCL headquarters prior to commencement of works. Information on the GRM has been discussed during consultations and will be disseminated through leaflets, television and radio ads, and social media platforms as appropriate.

49. The Grievance Redressal Committee is at the level of the BMRCL and headed by the Director (Projects and Planning) and supported by the GM of the Land Acquisition Department as convenor. Minor and local grievances will be dealt and resolved by the contractor with the site engineer in-charge or Tahsildar, as necessary, which is considered as the site-level grievance redress mechanism. Grievance redressal shall be carried out following the procedure outlined in the resettlement plan and the environmental impact assessments. Contractors and the PIU will maintain logbooks/database of grievances and will report on formal and informal complaints and feedback received as part of regular safeguards reporting.

50. The project-specific GRM is not intended to bypass the government's own redress process but to address project-affected people's concerns and complaints promptly, making the GRM readily accessible to all segments of affected persons and scaled to the risks and impacts of the project. Complaints requiring judiciary clearance will be referred and resolved through the BMRCL Legal Cell. Complainants may access the formal legal system at any time.

VIII. GENDER AND SOCIAL DIMENSIONS

51. **Gender equality and social inclusion action plan.** The action plan addresses the gender-specific safety and public health concerns, with a focus on the needs of the elderly, women, children, differently abled, and transgender (EWCDT), and specifically responds to improving the overall experience of commuting in the metro where accessibility, safety, convenience, and mobility are enhanced. In response to the current global health crisis, the metro infrastructure will be utilized as a multimedia platform for information dissemination on communicable diseases, including COVID-19 prevention. The initiative on transit oriented-based urban development and multimodal integration seeks to formulate a comprehensive policy and plan that will ensure universal access, social inclusiveness, and amenities that are EWCDT-

friendly. Lastly, the institutional capacity improvement of BMRCL will make a gender sensitive and inclusive agency by designating a key post and a committee on gender, upgrading of policy, and increasing the recruitment of women in the agency.

52. To support the implementation of the action plan, BMRCL and ADB shall discuss the availability of a gender consultant through technical assistance particularly in the implementation of information dissemination and capacity development activities, among others. Gender consultants shall likewise be mobilized for the transit oriented-based urban development and multimodal integration initiatives. The timing of mobilization shall be discussed and agreed by BMRCL and ADB. The achievement of action plan indicators shall be carried out as indicated in the gender equality and social inclusion action plan.

Table 13: Gender Equality and Social Inclusion Action Plan¹

Table 10: Gender Equality and Social Inclusion Action Plan			TIMELINE (Year)
ACTIVITY	INDICATOR/TARGETS	RESPONSIBILITY	
OUTPUT 1: New metro lines completed			
1. Integrate gender-specific safety and public health concerns, with a focus on the needs of the elderly, women, children, differently abled, and transgender, in the construction design of the Bengaluru Metro Phase 2A and Phase 2B corridors. Aligned with DMF Output 1b. 30 stations for the new lines constructed with multimodal facility and EWCDT-responsive features (2019 baseline: 0) (OP1.3, OP2.4.1)	1. (i) 1 coach reserved for women; (ii) 8 seats (4 in front and 4 in rear) of each coach reserved for women, elderly, differently abled, and caregivers, publicized through signage, consistent with COVID-19 prevention national/state requirements; (iii) 1 dedicated space for a wheelchair in first and last coach of every train	BMRCL through Gender Focal Point and GESI Expert	1–5
	2. (i) Well-lit, dedicated waiting area for women on the platform adjacent to the reserved coach for women with adequate signage, (ii) female security personnel, (iii) one-way voice intercom for communication with the station manager with adequate signage, in all stations		
	3. (i) Step-free, universally accessible route for those on wheelchair; (ii) universally accessible route with tactile pavers for all other users; (iii) clear and legible signage provided; (iv) at least 1 escalator each to access and egress the platform, concourse at multimodal and terminal stations, in all stations		
	4. Separate, free, clean public toilets for men, women, and universally accessible unisex toilets ² with clear, legible signage at all stations		
	5. Nursing rooms ³ to be provided on identification of requirement-based survey		
	6. Sex-segregated resting rooms and toilets for train operators at all terminal stations		
	7. 1 crèche for BMRCL personnel at 2 depots		
	8. Commercial space displaying products by SHGs ⁴ at Santhe located at SV road station premise		
	9. CCTV cameras installed to monitor coaches, publicly accessible areas of all stations, including parking spaces		
	10. (i) Integrated EWCDT-friendly signage system: bilingual visual, print, and multimedia in all coaches and all stations promote public education messages on public health/safety, prevention of communicable diseases, including those relevant to COVID-19 prevention, ⁵ zero-tolerance approach to sexual harassment, helpline number awareness; (ii) BMRCL website to include maps for all users that include most efficient access in and out of stations		
	11. Well-lit pick-up and drop-off areas around all metro rail stations with universally accessible footpaths as per IRC:103-2012		
	12. 20% of new operations-related skilled ⁶ workers for phases 2A and 2B are women (aligned with DMF Outcome d)		
OUTPUT 2: Urban development plans and implementation frameworks based on transit-oriented development principles and multimodal integration plan developed for Bengaluru			

ACTIVITY	INDICATOR/TARGETS	RESPONSIBILITY	TIMELINE (Year)
2. Include sufficient considerations for EWCDT, as well as lower-income groups, in the TOR of the consultants that are tasked to conduct the study on TOD and to prepare the TOD framework, policy, guidelines, and plans.	13. Study on TOD completed, with gender equality and social inclusion measures incorporated (aligned with DMF Output 2a)	BMRCL through technical assistance by ADB	1–5
	14. Design guidelines for integration for various components of public transport including metro station, bus stop, bus terminal, multimodal hub, road network and its hierarchy and non-motorized transport infrastructure developed, with gender equality and social inclusion measures (aligned with Output 2b)		
	15. Prepare other guidelines and plans that are EWCDT responsive: (i) Inclusive TOD plans developed (ii) Conduct guidelines for staff and contractors, and standard operating procedures on how to prevent and address instances of sexual harassment are developed by BMRCL (iii) Service standard guidelines for public metro transport in the city prepared (iv) Multimodal integration plan for 7 stations developed by BMRCL (v) Plan for 6 TOD priority zones developed		
	Plan for well-lit, universally accessible footpaths as per IRC:103-2012 along major roads within 2 km of all metro rail stations prepared		
Output 3: Capacity of Bangalore Metro Rail Corporation Limited and relevant state line agencies improved in transit-oriented development and multimodal integration			
3. Incorporate GESI measures in BMRCL's functioning.	16. Senior Advisor/staff nominated as gender focal point in the BMRCL, with required support staff	Director, BMRCL PIU	1–5
	17. A GESI Committee within BMRCL established in first year and quarterly meetings	BMRCL GFP and GESI Expert	
	18. Gender Friendly Workplace Policy approved by BMRCL management within first year, with annual training for at least 10% of all staff		
4. Develop and implement GESI training modules.	19. (i) Designate station master/controller as Accessibility Officer in each station; (ii) annual training conducted for frontline staff security personnel at all the stations on EWCDT-friendly conduct and how to prevent and address sexual harassment	BMRCL through TA (19 b)	1–5
	20. 200 staff, at least 20% of whom are women, of BMRCL, DULT, BMTC, BDA and other related agencies reported increased knowledge and capacity to implement the TOD framework and GESI aspect (aligned with DMF Output 3a)	BMRCL through TA	
	21. At least 2,000 locals along the corridors, with a minimum of 33% females, reported increased awareness of TOD and MMI (aligned with DMF Output 3b)	BMRCL through TA	

BMRCL = Bengaluru Metro Rail Corporation Limited, CCTV = closed-circuit television, COVID-19 = coronavirus disease 2019, BDA = Bangalore Development Authority, BMTC = Bangalore Metropolitan Transport Corporation, DMF = design and monitoring framework, DULT = Directorate of Urban Land Transport, EWCDT = elderly, women, children, differently abled, and transgender, GESI = gender equality and social inclusion, GFP = gender focal point, IRC = Indian Roads Congress, km = kilometer, MMI = multimodal integration, OP = operational priority, PIU = project implementation unit, SHG = self-help group, TA = technical assistance, TOD = transit-oriented development.

¹ Activities related to the preparation of materials for the multimedia public education and capacity development training on GESI can be supported partly by the ADB TA-9761 IND: Strengthening Capacity to Design and Implement Transport Infrastructure Projects and other available TA resources.

- ² Toilet facilities will be provided in paid area. The key aspects include a manual flush, handleless dust bins, diaper changing stations, ad exclusive sanitary pad disposal bins.
- ³ The nursing rooms will include a comfortable chair with supportive arms, a small table, electrical outlet/s, diaper changing station, and a lock for privacy. Nursing rooms will be provided to stations based on need survey.
- ⁴ At present, BMRCL has developed a marketplace (Santhe) for self-help groups (SHG) at SV Road metro station where 64 stalls have been created. Out of these, for lack of demand, only 27 are currently being used. Eight out of 27 stalls are being used by women-led/operated SHGs.
- ⁵ Consistent with national and state requirements.
- ⁶ A job item that requires a specific qualification in the operation of the metro infrastructure; within the direct payroll of BMRCL. The operation-related skilled staff in BMRCL include train operators, junior and section engineers, maintainers, assistant managers, station superintendents, etc.

Source: Asian Development Bank.

53. **Public health and safety.** BMRCL shall aim to promote public education through the use of the metro facility as a platform for promoting an integrated EWCD-friendly signage system utilizing bilingual audio-visual, print, and multimedia materials in all coaches and all stations to bring messages on public health/safety, prevention of communicable diseases, including COVID-19 prevention, and zero-tolerance approach to sexual harassment.

54. **Continuing public consultation and information disclosure.** BMRCL shall continually engage all its stakeholders particularly those targeted in the gender equality and social inclusion action plan. Where land acquisition and resettlement are additionally required, BMRC shall ensure that identified affected persons will be meaningfully consulted and related project information provided to them.

55. **Labor standards.** BMRCL, its contractors, and consultants shall ensure that the works contracts under the project follow all applicable labor laws of the Government of India and the state of Karnataka and that these further include provisions to the effect that contractors will (i) follow and implement all statutory provisions on labor (including not employing or using children as labor, equal pay for equal work, respectful workplace), health, safety, welfare, sanitation, working conditions, and compliance with national requirements for COVID-19 prevention. Strict compliance by contractors will be monitored. Such contracts will also include clauses for termination in case of any breach of the stated provisions by the contractors. Contractors will be encouraged to employ female workforce in skilled and semi-skilled jobs and to maintain data on the same. There will be routine orientation for all contractors, including laborers, on national core labor standards with special focus on gender equality in wages, health, safety, and hygiene issues on the work site.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

56. The design and monitoring framework is in Appendix B.

B. Monitoring

57. **Project performance monitoring.** The achievement of the project performance targets will be assessed following the design and monitoring framework. The PIU, with the assistance of the BMRCL, within 3 months of the loan signing, will develop a systematic project performance monitoring system, in form and substance that is acceptable to ADB for use throughout the life of the project.

58. **Compliance monitoring.** Compliance with covenants will be monitored through ADB's (i) project administration missions—including the project inception mission—to discuss and confirm the timetable for compliance with the loan covenants; (ii) project review missions to review the borrower's compliance with particular loan covenants, and, where there is any noncompliance or delay, to discuss proposed remedial measures with the government; and (iii) midterm review mission, if necessary, to review covenants to assess whether they are still relevant or need to be changed or waived due to changing circumstances.

59. **Environmental safeguards monitoring.** The contractor shall prepare monthly reports on the implementation of the mitigation measures. These will be reviewed by the Environmental Specialist of the Designated Engineer and validated through spot checks. Based on the reports from the contractor and site inspections, the Designated Engineer will prepare monthly and semi-

annual environmental monitoring reports for submission to the PIU and SEMU for review and approval. The semi-annual environmental monitoring reports will further be submitted to ADB for disclosure within 3 calendar months from the end of the respective reporting period. These reports will be submitted throughout the construction phase of the project. The EMP, SHE manual, and subplans must be updated should changes in design, emerging issues, or unanticipated impacts arising during implementation necessitate it. Any update of the EIAs should be confirmed through a discussion with ADB. The External Monitor will prepare semi-annual external monitoring reports for submission to the PIU and SEMU and for further submission to ADB throughout the construction period and the first 2 years of operation.

60. **Social safeguards monitoring.** BMRCL will be responsible for overall internal monitoring and evaluation of the project progress for social safeguards, particularly the resettlement plan and any corrective action plan that may be prepared. BMRCL will prepare semiannual monitoring report covering social safeguards and furnished to ADB. Social safeguards will also be monitored by a social development specialist from ADB's South Asia Department.

61. **Internal monitoring.** The internal monitoring system of BMRCL will be utilized, and a set of process, outcome, and baseline indicators will be fully documented. These indicators will verify that resettlement goals have been achieved, livelihood and living standards have been restored (where applicable), and provide recommendations for improvement as appropriate. The BMRCL monitoring system will manage land acquisition and resettlement data (records of valuation, compensation, and disbursements) as well as maintain records of consultations, grievances, and redress.

62. **External monitoring.** BMRCL will mobilize an external monitoring expert to (i) verify internal resettlement plan implementation information and gender equality and social inclusion action plan (GESI/AP) monitoring reports, and (ii) monitor compliance of the civil works with core labor standards.

63. **Gender and social dimensions monitoring.** The GESI/AP will be routinely monitored. BMRCL will be responsible for oversight to ensure timely implementation and the GESI committee will regularly review the progress of the GESI/AP. Regular capacity building activities and trainings will be provided as indicated in the action plan, and these trainings will need to integrate gender indicators and report sex-disaggregated data for relevant indicators documentation. BMRCL will, when necessary, update the implementation schedule for GESI/AP with timeline, responsibility, and deliverables. Submission of GESI/AP monitoring to ADB will be part of the semi-annual progress reports. Reports shall be prepared and furnished to ADB and BMRCL according to Table 14.

Table 14: Social Monitoring Requirements

Type of Report	Frequency	Responsibility
1. Semi-annual social monitoring report for RP and GESI/AP	Semi-annual	BMRCL to submit to ADB
2. External monitoring report	Semi-annual	External monitor to submit to BMRCL and ADB
3. Resettlement completion report	Once RPs are fully implemented	BMRCL to ADB

ADB = Asian Development Bank, BMRCL = Bengaluru Metro Rail Corporation Limited, GESI/AP = gender equality and social inclusion action plan, RP = resettlement plan.

Source: Asian Development Bank.

C. Evaluation

64. The project inception mission will be fielded before or soon after the legal agreements for the project are declared effective; thereafter, regular reviews will follow at least annually. As necessary, special loan administration missions and a midterm review mission will be fielded, under which any changes in scope or implementation arrangement may be required to ensure achievement of project objectives. The PIU will monitor project implementation in accordance with the schedule and time-bound milestones and keep ADB informed of any significant deviations that may result in the milestones not being met. A project completion report will be submitted by the PIU within 6 months of physical completion of the project, providing detailed evaluation of the progress of implementation, costs, consultant's performance, social and economic impact, and other details as requested by ADB.¹¹

D. Reporting

65. The PIU in the BMRCL will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system, no later than 45 days after the end of each quarter. The quarterly progress reports should include financial and disbursement report, variance analysis of physical and financial progress, details of utilization of funds and reconciliation with ADB's loan financial information system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; and (iii) a project completion report within 6 months of physical completion of the project. To ensure that projects will continue to be both viable and sustainable, project accounts and the executing agency audited financial statement together with the associated auditor's report, should be adequately reviewed. Audit reports are in para 24. Safeguards related reports are mentioned under the environment and social monitoring sections.

E. Stakeholder Communication Strategy

66. The project will follow ADB's standard consultation and disclosure requirements and provide relevant information, including information from the above documents, in a timely manner, in an accessible place, and in a form and languages understandable to all affected people and other stakeholders. If the affected people are illiterate, other appropriate communication methods must be used, such as direct verbal communications through one-on-one or other meetings, and grievance redress meetings. In addition, the PIU will distribute leaflets outlining key project impacts and entitlements to affected persons, post the contact information about the grievance redress committee, conduct information sessions at the outset of project implementation, and follow up with consultation meetings to update road residents of civil work progress throughout the life of the project. The BMRCL has an official website in English and local language where the project will be outlined for the public (<mailto:https://english.bmrc.co.in/>). Salient information regarding the project, including scope, general progress status, beneficiaries, invitation for bid, and consultant recruitment notices, will be provided to the public. The information will be made available and updated through the official website of the PIU. The safeguard documents, including environmental impact assessment reports, due diligence reports, and corrective action plan, if any, will be posted on the ADB website

¹¹ Project completion report format is available at <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>.

X. ANTICORRUPTION POLICY

67. The Government of India, MOHUA, and BMRCL are advised of ADB's Anticorruption Policy (1998, as amended to date). Consistent with its commitment to good governance, accountability and transparency, implementation of the project shall adhere to ADB's Anticorruption Policy. ADB reserves the right to review and examine, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the project. In this regard, investigation of government officials, if any, would be requested by ADB to be undertaken by the government.¹² All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.¹³

68. To support these efforts, relevant provisions of the ADB's Anti-Corruption Policy are included in the loan agreement/regulations and the bidding documents for the project. In particular, all contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the MOHUA, BMRCL, the implementing agencies and all contractors, suppliers, consultants, and other service providers as they relate to the project. Individuals and entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contract under the project.¹⁴ Further detail on how the borrower and ADB discussed and addressed anticorruption policy issues may be provided here including a description of key anticorruption risks and the specific mitigation measures the project will implement. These mitigation measures are identified in a governance risk assessment conducted as part of the program preparation per the Second Governance and Anticorruption Action Plan.¹⁵

XI. ACCOUNTABILITY MECHANISM

69. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.¹⁶

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

70. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement s-curves.

¹² Anticorruption Policy. <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>.

¹³ ADB's Integrity Office website. <http://www.adb.org/integrity/unit.asp>.

¹⁴ ADB. 2008. *Guidelines for Implementing ADB's Second Governance and Anticorruption Plan (GACAP II)*. Manila; and ADB. 2008. *Sourcebook Diagnostics to Assist Preparation of Governance Risk Assessments*. Manila.

¹⁵ Governance and Anticorruption Action Plan II Guidelines. <http://www.adb.org/Documents/Guidelines/GACAP-II-Guidelines.pdf>. See also Sourcebook: Diagnostics to Assist Preparation of Governance Risk Assessments. <http://www.adb.org/documents/books/Diagnostics-to-Assist-Preparation-of-GRAs/default.asp>.

¹⁶ Accountability Mechanism. <http://www.adb.org/Accountability-Mechanism/default.asp>.

PROCUREMENT PLAN

Basic Data

Project Name: Bengaluru Metro Rail Project		
Project Number: 53326-001	Approval Number:	
Country: India	Executing Agency: Ministry of Housing and Urban Affairs	
Project Procurement Classification: Category B	Implementing Agency: Bangalore Metro Rail Corporation Ltd.	
Project Procurement Risk: High	Project Closing Date: November 2025	
Project Financing Amount: \$1,055.8 million ADB Financing: \$500 million Cofinancing (ADB Administered): Non-ADB Financing: \$555.8 million		
Date of First Procurement Plan: 01 July 2019	Date of this Procurement Plan: 11 June 2020	
Procurement Plan Duration (in months): 18	Advance Contracting: Yes	e-GP: No

A. Methods, Review, and Procurement Plan

1. Except as the Asian Development Bank (ADB) may otherwise agree, the following methods shall apply to procurement of goods, works, and consulting services.

Procurement of Goods and Works	
Method	Comments
Open Competitive Bidding (OCB) for Goods	
Open Competitive Bidding (OCB) for Works	Item rate contracts

B. Lists of Active Procurement Packages (Contracts)

2. The following table lists goods, works, and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan duration.

Goods and Works							
Package Number	General Description	Estimated Value (\$ million)*	Procurement Method	Review	Bidding Procedure	Advertise-ment Date (quarter/year)	Comments
PH-2A-P1	Construction of elevated structures (viaduct and stations) of length 9.859 km from Chainage 0.000 to 9859.000 and 6 Nos. of elevated metro station viz. Central Silk Board Junction, HSR layout, Agara lake, Ibbalur, Bellandur, Kadubeesanahalli including road widening, utility diversion and allied works of Bengaluru Metro Rail Project, Phase 2A Construction of loops and ramps for road flyover at Central Silk Board junction of approximate length of 2.84 km including road widening and	96.99**	OCB	Prior	1S2E	Q4/2019	Advertising: International No. of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document: Large Works e-GP: No

Goods and Works							
Package Number	General Description	Estimated Value (\$ million)*	Procurement Method	Review	Bidding Procedure	Advertise -ment Date (quarter/ year)	Comments
	allied works in Reach-5 line (R5/P4) of Bengaluru Metro Rail Project, Phase 2						Comments: FIDIC MDB 2010
PH-2A-P2	Construction of elevated structures (viaduct and stations) of length 9.774 km from Chainage 9859.000 to 18236.000 and 7 Nos. of elevated metro station viz. Kodibeesanahalli, Marathahalli, ISRO, Doddanekundi, DRDO sports complex, Sarswathi Nagar and K.R. Puram including 1.097 km length link line to Baiyappanahalli Depot, 0.30 km length pocket track, road widening, utility diversion and allied works of Bengaluru Metro Rail Project, Phase 2A	78.82	OCB (International advertisement)	PRIOR	1S2E	Q4 /2019	Advertising: International No. of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document: Large Works e-GP: No Comments: FIDIC MDB 2010
PH-2B-P1	Construction of elevated structure (viaduct and stations) for a length of 11.003 km (including 281 mtr of viaduct beyond Phase 2A) from Chainage 0.000 to Chainage 10072.000 and 8 No. of elevated stations viz. Kasturi Nagar, Horamavu, HRBR Layout, Kalyan Nagar, HBR Layout, Nagawara, Veeranna Palya and Kempapura including 650 m length of link line connectivity to Baiyappanahalli, road widening, utility diversion and other allied works of Bengaluru Metro Rail Project, Phase 2B	84.89	OCB (International advertisement)	PRIOR	1S2E	Q2/2020	Advertising: International No. of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document: Large Works e-GP: No Comments: FIDIC MDB 2010
PH-2B-P2	Construction of elevated structure (viaduct and stations) for a length of 11.678 km from Chainage 10072.000 to Chainage 21500.000 and 5 No. of elevated stations viz. Hebbal, Kodigehalli, Jakkur Cross, Yelahanka and Bagalur Cross including 250 m length of pocket track at Yelahanka, road widening, utility diversion and other allied works of Bengaluru Metro Rail Project, Phase 2B	85.60	OCB (International advertisement)	PRIOR	1S2E	Q2/2020	Advertising: International No. of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document:

Goods and Works							
Package Number	General Description	Estimated Value (\$ million)*	Procurement Method	Review	Bidding Procedure	Advertise-ment Date (quarter/year)	Comments
							Large Works e-GP: No Comments: FIDIC MDB 2010
PH-2B-P3	Construction of elevated structure (viaduct and stations) for a length of 15.011 km from Chainage 21500.000 to Chainage 36511.000 and 2 No. of elevated stations viz. Bettahalasuru and Doddajala including approx. 718.18 m length of cut-and-cover portion below ground in front of Yelahanka Airforce station, road widening, utility diversion and other allied works of Bengaluru Metro Rail project, Phase 2B	82.36	OCB (International advertisement)	PRIOR	1S2E	Q2/2020	Advertising: International No. of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document: Large Works e-GP: No Comments: FIDIC MDB 2010
PH-2B-P4	Construction of Metro Rail Depot Structures, site development works, internal roads and drainage works in Depot at Baiyappanahalli and near Kempegowda International Airport of Bengaluru Metro Rail Project, Phase 2B	27.85	OCB (International advertisement)	PRIOR	1S2E	Q2/2021	Advertising: International No. of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document: Large Works e-GP: No Comments: FIDIC MDB 2010
	Price Variation (PV)	32.79					
	Total	489.30					

Notes:

* \$1 = INR75.39 (as of March 2020).

** Cost of \$19.40 million will be funded by Bangalore Development Authority (Government of Karnataka agency). Hence, the total cost of this tender package to be submitted to ADB is \$96.99 million (77.59+19.40=96.99).

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date (quarter/year)	Comments
None							

C. List of Indicative Packages (Contracts) Required Under the Project

3. The following table lists goods, works, and consulting services contracts for which procurement activity is expected to commence beyond the procurement plan duration and over the life of the project (i.e., those expected beyond the current procurement plan duration).

Goods and Works						
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Comments

Consulting Services						
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Comments
None						

D. List of Awarded and Completed Contracts

4. The following table lists the awarded contracts and completed contracts for goods, works, and consulting services.

Goods and Works					
Package Number	General Description	Contract Value	Date of ADB Approval of Contract Award	Date of Completion	Comments

Consulting Services					
Package Number	General Description	Contract Value	Date of ADB Approval of Contract Award	Date of Completion	Comments

E. Non-ADB Financing

5. The following table lists goods, works, and consulting services contracts over the life of the project, financed by Non-ADB sources.

Goods and Works				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Comments

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Selection Method	Comments
Independent engineer for all civil work packages	\$4.99 million	1	QCBS	Proposal: Full Technical Proposal Advertisement: Q3 2020

DRAFT DESIGN AND MONITORING FRAMEWORK

[illegible]

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
plans and implementation frameworks based on transit-oriented development principles and multimodal integration plan developed for Bengaluru.	<p>2a. By 2023, study on TOD completed, with GESI measures incorporated^e (2019 baseline: Not applicable) (OP 1.3.3, OP 2.3.2, OP 4.2)</p> <p>2b. By 2023, design guidelines for integration for various components of public transport including metro station, bus stop, bus terminal, multimodal hub; road network and its hierarchy and non-motorized transport infrastructure developed, with GESI measures (2019 baseline: Not applicable) (OP 1.3.3, OP 2.3.2, OP 4.2)</p>	<p>2a. Government gazette notification</p> <p>2b. Government notification</p>	
3. Capacity of Bangalore Metro Rail Corporation Limited and relevant state line agencies improved in transit-oriented development and multimodal integration ^f	<p>Under transaction TA:</p> <p>3a. By 2023, at least 200 staff, at least 20% of whom are female, of BMRCL, DULT, BMTC, BDA, and other related agencies reported increased knowledge and capacity to implement the TOD projects and MMI (2019 baseline: Not applicable) (OP 4.2, OP 6.1, OP 6.1.1)</p> <p>3b. By 2023, at least 2,000 locals along the corridors, with a minimum of 33% females, reported increased awareness on TOD and MMI (2019 baseline: 0)</p> <p>3c. By 2023, measures to support project implementation such as manual, SOP, and toolkit completed (2019 baseline: not completed)</p>	3a.-d. TA consultant's report and project progress report	
Key activities with milestones <p>1. New metro lines completed</p> <p>1.1 Commence advance contracting for civil works in Q4 2019.</p> <p>1.2 Award civil works contracts for Phase 2A in Q4 2020.</p> <p>2. Urban development plans and implementation frameworks based on transit-oriented development principles and multimodal integration plan developed for Bengaluru.</p> <p>2.1 Commence advance contracting for consulting services in Q3 2020.</p> <p>2.2 Mobilize consultant in Q1 2021.</p>			

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<p>2.3 Complete assignment in Q1 2023.</p> <p>3. Capacity of Bangalore Metro Rail Corporation Limited and relevant state line agencies improved in transit-oriented development and multimodal integration.</p> <p>3.1 Commence advance contracting for consulting services in Q3 2020.</p> <p>3.2 Mobilize consultant in Q1 2021.</p> <p>3.3 Complete assignment in Q1 2023.</p> <p>Project Management Activities</p> <p>Establish project implementation unit by Q4 2019.</p>			
<p>Inputs</p> <p>ADB: \$500,000,000 (loan)</p> <p>\$2,000,000 (TA grant)</p> <p>Government: \$555,800,000</p>			
<p>Assumptions for Partner Financing</p> <p>JICA project loan: \$318 million (outputs not administered by ADB that are necessary to reach the outcome include procurement of rolling stock and signaling and telecommunication system)</p> <p>ADB = Asian Development Bank, BDA = Bangalore Development Authority, BMRCL= Bangalore Metro Rail Corporation Limited, BMTC = Bangalore Metropolitan Transport Corporation, DULT = Directorate of Urban Land Transport, EWCDT = elderly, women, children, differently abled, and trans-persons, GESI = gender equality and social inclusion, JICA = Japan International Cooperation Agency, km = kilometer, MMI = multimodal integration, OP = operational priority, Q = quarter, TA = technical assistance, TOD = transit-oriented development.</p> <p>Note: Contribution of the project to the new ADB Results Framework to be determined.</p> <p>^a Government of India, Ministry of Urban Development. 2006. National Urban Transport Policy. New Delhi; and Government of India, Ministry of Urban Development. 2017. Metro Rail Policy. New Delhi.</p> <p>^b Morning peak time is defined as 7 a.m. to 10 a.m.</p> <p>^c Operation-related skilled staff in BMRCL include train operators, junior and section engineers, maintainers, assistant managers, and station superintendents.</p> <p>^d EWCDT-responsive features as described in the project's Gender Equality and Social Inclusion Action Plan (accessible from the list of linked documents in Appendix 2).</p> <p>^e GESI measures as described in the project's Gender Equity and Social Inclusion Action Plan (accessible from the list of linked documents in Appendix 2).</p> <p>^f In addition to BMRCL, state line agencies responsible for planning, designing, and implementing transit-oriented development projects and multimodal integration include DULT, BMTC, and BDA.</p> <p>Source: Asian Development Bank.</p>			