

India: Madhya Pradesh Rural Connectivity

1. Project Information

Project ID:	P000020	Instrument ID:	L0020A
Member:	India	Region:	Southern Asia
Sector:	Transport	Sub-sector:	Roads
Instrument type:	<input checked="" type="checkbox"/> Loan:140.00 US Dollar million <input type="checkbox"/> Guarantee	Co-financier(s):	World Bank
ES category:	B	Borrowing Entity:	Ministry of Finance, India
Implementing Entity:	Madhya Pradesh Rural Road Development Authority (MPRRDA)		
Project Team Leader:	Anne Ong Lopez		
Responsible DG:	Rajat Misra		
Responsible Department:	INF1		
Project Team Members:	Jyosyula Siva Rama Krishna Sastry, OSD - Environment & Social Development Specialist; Liu Yang, Project Counsel; Rui Xiang, OSD - Financial Management Specialist; Bernadette Ndeda, OSD - Procurement Specialist; Chang Tian, Project admin;		
Completed Site Visits by AIIB:	Aug, 2018 Feb, 2019 Mar, 2021 Virtual mission with WB (lead financier): March 15-19, 2021 May, 2022 Virtual mission with WB (lead financier): May 4-29, 2022		
Planned Site Visits by AIIB:			
Current Red Flags Assigned:	0		
Current Monitoring Regime:	Regular Monitoring		
Previous Red Flags Assigned:	0		
Previous Red Flags Assigned Date:	2021/09		

2. Project Summary and Objectives

The objectives of the project are "to improve durability and enhance resilience to climate changes of the gravel surfaced rural roads in Madhya Pradesh while building the capacity of the state to manage its rural road network and road safety". These objectives are expected to be achieved by upgrading the gravel surfaced roads to a sealed surface standard; providing additional road linkages to villages with potential for economic growth; enhancing the rural road asset management system; developing a road accident data management system and road safety improvement program; and supporting road design, construction/implementation, and road asset management. The objectives are aligned with the Bank's priorities of enhancing economic growth and sustainability through infrastructure investment.

3. Key Dates

Approval:	Apr. 11, 2018	Signing:	Jun. 24, 2018
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Effective:	Jul. 17, 2018	Restructured (if any):	
Orig. Closing:	Mar. 15, 2023	Rev. Closing (if any):	

4. Disbursement Summary (USD million)

Contract Awarded:	309.92	Cancellation (if any):	0.00
Disbursed:	102.18	Most recent disbursement (amount/date):	0.63/May. 27, 2022
Undisbursed:	37.82	Disbursement Ratio (%) ¹ :	72.99

5. Project Implementation Update

Overall, the project progress is consistent with around 73% of the loan disbursed within 49 months of implementation and the likelihood of achievement of the PDO remains satisfactory. The progress of civil works remains satisfactory with respect to the provision of physical connectivity i.e., 80% of works completed under A1 and 69% of works completed under A2 in Component A. The progress on institutional strengthening activities and road safety particularly related to the pilot community participatory road safety program needs to be stepped up by the implementing agency to complete procurement and finish all ongoing activities (i.e., engineering works on Safe Corridor Demonstration Programme, urban corridors, and blackspot improvement, road safety awareness campaigns, and post-crash care management) within the remaining 10 months in the project's implementation period.

Components	Physical Progress	Environmental & Social Compliance	Procurement
Component A: Component A.1: Road Upgrading, Construction and Maintenance (USD123.00 m)	As of April 15, 2022, 80% of the sanctioned length (8,881 out of 11,133 kilometers) has been completed. This progress includes 1,965 km (23%) which have been upgraded using waste plastic (about 6178.92 tons) technology. It is expected that all remaining works will be completed by February 2023.	Respirable Dust Monitoring: End-line assessment done on 96 roads. After BT, the dust concentration for the selected roads is below 100 µg/m ³ for PM ₁₀ which is the limit prescribed by India Central Pollution Control Board (CPCB). Enhancements: Through consultation and involvement with the local communities during the execution of works, several small and local mitigation and environmental enhancement works have been implemented. They include (i) provision of ramps/extended approaches to utility centers; (ii) improvement of cattle troughs, wells, hand pumps, and other water sources; and (iii) safety provisions within settlements and near sensitive receptors, amongst other provisions.	Total Packages: 738 (11,133 kilometers) Awarded Packages: 609 (10,331 kilometers) Completed Packages: 436 (8,881 kilometers) Procurement of the remaining 129 packages is in the advanced stage and all works will be awarded by Q3 2022.

¹ Disbursement Ratio is defined as the volume (e.g. the dollar amount) of total disbursed amount as a percentage of the net committed volume.

			<p>Labor generated by construction: In the period between January 2018 and April 2022, the project has provided work to 38,551 laborers comprising 23,467 men and 15,084 women. No fatalities have been reported arising from construction works.</p> <p>Indigenous people: 326 roads with a total length of 716 km have been taken up across 61 tribal blocks, benefiting a total population of 122,135 people as per Census 2011 figures. Free Prior and Informed Consent (FPIC) was conducted in these tribal villages and broad community consent was obtained. In 266 roads in tribal villages, enhancements in form of approach roads (7.8 km) connecting key infrastructures such as schools (toilet, kitchen, etc.); religious places, Anganwadi, primary health center, and Panchayat, have been provided.</p> <p>Women Self-Help Group in off-carriageway maintenance: Five roads totaling 16 km in three districts piloted. Five SHGs involving 54 women in three tribal districts are engaged and the experience has been very positive. Based on this success, MPRRDA is replicating this practice in two more packages in Dhar and also mainstreaming this in post-five and post-ten-year routine maintenance funded under state programs.</p>	
Component Provision of Alternate Connectivity (USD12.00 m)	A.2: of	<p>As of April 15, 2022, 69% of the sanctioned length (367 out of 530 kilometers) has been completed. This includes 42 km using cement concrete and 19 km using waste plastic technology.</p> <p>It is expected that all remaining works will be completed by February 2023.</p>	As above	<p>Total Packages: 78 packages (530 kilometers) Awarded: 78 packages Completed Packages: 45 (367 kilometers)</p>

<p>B. Institutional Development</p> <p>B1: Rural Roads Asset Management System (RRAMS)</p>	<p>7 Rural Road Network Management Units (RRNMUs) have been set up in Bhopal, Ujjain, Indore, Rewa, Jabalpur, Gwalior, and Sagar under MPRRDA for regional asset management planning and monitoring.</p> <p>The RRAMS consultancy is progressing well with the system being customized to cater to the needs of the rural road networks.</p>	<p>Improvements suggested to include environmental and social attributes in the RRAMS. Information/module on environmental aspects, including roads constructed using new technologies and alternative construction materials, proximity from environmentally protected areas like national parks and wildlife sanctuaries, avenue plantations, road furniture, etc. will be incorporated in RRAMS.</p>	<p>A RRAMS consultant was engaged to study the gap between RRNMU and the existing rural roads asset management system; suggest a suitable and customized RRAMS that provides a systematic process for maintaining, upgrading, and operating assets; and assist MPRRDA in implementation. A letter of award (LOA) has been issued and the consultant was mobilized in November 2021.</p>
<p>B2: Strengthening Design, Research and Quality Assurance Capacity</p>	<p>Strengthening design: A Design cell has been established.</p> <p>Professional expert consultancy for bridge and design software for bridge and pavement are being procured.</p> <p>Research Capacity: There is a dedicated staff led by a chief engineer, and a full-fledged modern laboratory has been established.</p> <p>Training and Capacity Building: 92 experienced training faculty are enlisted. 15 training modules have been developed. Trainings have been imparted to 2,860 participants in 94 batches. Training needs analysis has been conducted on 1,379 staff members in 13 key functional areas. An E-learning management system (e-LMS) has been initiated by MAP IT (state agency) and a few modules have been uploaded to the</p>	<p>Training courses through reputable institutions are recommended in climate resilience, green technologies.</p>	<p>The procurement of design software and professional expert consultancy for the bridge is being initiated to strengthen the design unit.</p> <p>The laboratory equipment list is being finalized and procurement will be completed in Q3 2022 to strengthen the laboratory.</p> <p>All procurement activities under this component will be completed by August 2022.</p>

	website. Tie-ups with institutions such as IIM-Indore, IIT-Indore, and IIT-Roorkee are being finalized as part of the training plan.		
C. Road Safety Management Capacity Development C1: Development of Road Accident Database Management System (RADMS)	Ministry of road Transport and Highways (MoRTH) launched the IRAD (integrated road accident database) in January 2020 for all states (including Madhya Pradesh) and reports are being generated by the police department through that system. The community mobile application is yet to be rolled out.	Consultations with relevant stakeholder agencies are advised to identify the additional roll-out requirements for the community mobile application.	MPPRDA opted to use MoRTH's IRAD with customization for Madhya Pradesh. MPPRDA has engaged a road safety consultant for all road safety activities including but not limited to customization of IRAD software for the state.
C2: Pilot Comprehensive Road Safety Program (PCRSP) C2.1: Road Safety Engineering (Technical Assistance, Road Safety Engineering Interventions) C2.2: Enforcement (Technical Assistance, Equipment for Road safety Engineering) C2.3: Post-Crash Emergency Management (Technical Assistance, Equipment and Trauma Care Facilities) C2.4: Road Safety Education and Awareness	Dhar, Indore and Datia are identified as the pilot districts under the PCRSP. The implementation of different activities under the program are progressing. Work on Safe Corridor Demonstration Programme (SCDP), urban corridors and blackspot improvements will be prioritized; district-wise comprehensive Road Safety Action Plans will be submitted; work enforcement training plan and installation, training and O&M plan for enforcement equipment will be finalized; a campaign plan on road safety will be rolled out, and upgrading of trauma care/ strengthening of emergency units in the three districts will be revisited.	Preparation of DPRs and Bid Documents is under progress for (i) black spot improvement, (ii) model urban streets design for 3 cities/towns, and (iii) one road under SCDP. The following actions are suggested: (i) conduct and document consultations with key stakeholders (from stakeholder identification, mapping, approach and methodologies used, details of such sessions to record-keeping), (ii) conduct an environmental analysis/assessment for said works (scope varies for the three categories) and, (iii) preparation of Environmental Management Plan and inclusion in the Bid Documents, as appropriate to the specific context and scope of work involved. Social Impact Assessment needs to be conducted on SCDP and Urban Streets, including analyses of options to avoid/minimize impacts and consultations with all stakeholders particularly affected people and the broader community. All efforts need to be made to avoid/minimize impacts on assets – land, structures, and other property.	The PCRSP Consultancy firm was appointed in March 2021. Procurement of engineering works – SCDP, urban corridors, and blackspot improvement, will be completed by Q3 2022. All other procurement packages related to enforcement, awareness campaigns, and post-crash care are to be completed by end-August 2022.
D. Design, Implementation	Project Management Consultant (PMC) is in	PMC support for MPPRDA relates to the following:	PMC is on board since June 2017 and their services have

<p>and Project Management Support</p>	<p>place since June 2017, and their services have been extended to support MPRRDA in project implementation. Project Implementation Consultant (PIC) was deployed in February 2018 to assist PIU and PMC for effective monitoring and enhanced coordination.</p> <p>As a project management tool, e-Marg is being used as a monitoring and payment gateway for the roads under different stages of maintenance. GEOREACH (geomatics-based rural roads enterprise application for connection habitations) is also used as an online monitoring system adopted by MPRRDA for monitoring the physical and financial progress of the project.</p>	<p>Radio program: Jahan Pade Qadam Saavdhani Har Dum, an awareness program on Road Safety and COVID 19 – Health and Safety Measures for enhancing Self Protective Behavior for the staff and workers engaged in rural road construction sites.</p> <p>Behavior change communications: Communications around behavioral changes towards - better road maintenance, improved road safety, reduced road damages, avoided road congestions are being conducted in 5 roads of Dhar district.</p> <p>Education: Raising awareness to laborers and the communities on HIV/AIDS. Thus far, 35,283 persons including 21,350 males and 13,933 females have been sensitized. 2,280 Marg Mitras support the designated PIU officer to help keep the roads clean.</p> <p>Labor participation: Contractors were sensitized on gender issues and it was suggested they employ women in road construction work.</p> <p>Students: Preliminary statistics show positively that MPRCP roads have provided confidence and opportunity for girls to bike to high school, in a broader spectrum it has scaled up the attendance level and also inspire more girls to continue with schooling. Data has been collected and consolidated for 3,805 roads. 83% girls are shifting from walking to biking.</p> <p>Enhancements: Developed a format to consolidate data and record the incurred cost in extending the facility of convenient mobility to the village.</p> <p>Training on Environmental, Health and Safety (ESHS) Management: 165 officials (Assistant Managers/ Designated Safeguard Officers/ consultants) have been trained on environmental management. ESHS</p>	<p>been extended.</p>
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		<p>training will be taken up with training material reviewed by WB.</p> <p>Environmental and Social Screening: PMC shall update the environment and social screening report by including new/additional proposed works on priority.</p>	
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Financial Management:

During the mid-term review, no significant control deficiencies were noted.

MPPRDA continues to provide timely and accurate financial information. Unaudited Interim Financial Reports are submitted in a timely manner to facilitate frequent drawdown of funds.

The audit report for the financial year ended March 31, 2021, was submitted on time. The report was deemed to be acceptable to WB and AIIB, as the auditors issued an unmodified (clean) opinion on the (i) project financial statements, (ii) eligibility of expenditures, and (iii) compliance with the financing agreement and project documents. The project has awarded a contract to a firm for conducting the audit and the audited financial statements for FY 2021-2022 will be submitted before the due date to the bank.

Project closing: Approximately ten months remain in the project and progress is being monitored.

Considering the slightly delayed progress of the activities in the Road Safety component, specifically the pilot community participatory road safety program, MPPRDA was informed about the project closing procedures, the submission due date of the withdrawal application and the incurrence of the Project-related eligible expenditures. MPPRDA agreed to abide by the deadlines.

6. Status of the Grievance Redress Mechanism (GRM)

Grievances Redressal (GRM) cells are functional at PIUs' level. All project villages have GRCs established. Thus far, the project has redressed all 226 grievances – of which 157 and 69 grievances have been resolved at PIU and village level committees respectively. Nature and type of grievances received include clogged drain, water logging, culvert, issues relating to the contractor's work, theft of caution board, community clashes, etc. In the registers placed at each village, suggestions have been received such as cross drainage structure, maintenance for shoulders, approach for handpump, pruning of trees, etc. The average time taken to resolve such grievances has been six days though it has varied depending on the nature of the grievance. Further, there are challenges such as the non-availability of GRC members to conduct meetings, the village GRC dissolves itself after the construction of roads, etc. Hence in such cases, for any road-related grievance, the community, or an individual needs to communicate directly with the PIU through the available contact number. To enhance the GRM, the project team recommends that the PIU segregate grievances by mode through which grievances were received to assess the most used mode.

7. Results Monitoring

The information was provided by the client on April 15, 2022 and presented during the mission in May 2022.

Project Objective Indicators #1

Annual maintenance cost (\$) per km

Year	Target	Actual	Comments, if any
Jul. 17, 2018	-	1000 (Baseline)	
Mar. 15, 2019	0	N/A	

Mar. 15, 2020	0	N/A	750 km or road length identified collection of data is started in Dec. 2020
Mar. 15, 2021	750	N/A	The baseline maintenance cost of the gravel road is assessed by the department based on the analysis. The sample road identified are transferred from the Panchayat department and the concerned authority has been requested to provide actual data of maintenance of these roads.
Mar. 15, 2022	750	N/A	The baseline value is derived from maintenance expenditure of sample gravel roads candidate for upgrading under the project. Actual maintenance expenditure is collected from completed project road after the first year of maintenance is completed on sample (about 10 percent) project roads. Gravel road maintenance INR 3.46 lac per km for 5 yrs. (i.e., 922 USD/yr); BT road maintenance INR 2.39 lac per km for 5 yrs (i.e., 637 USD/yr).
Mar. 15, 2023	750	N/A	

Project Objective Indicators #2

Roughness index (m/km)

Year	Target	Actual	Comments, if any
Jul. 17, 2018	-	7	
Mar. 15, 2019	3.5	3.2-3.7	Roughness value for bituminous roads is IRI (International Roughness Index) 2.67 to 3.78.
Mar. 15, 2020	3.5	2.67-3.78	Roughness IRI values measured on 120 gravel roads in 31 districts where minimum 4.43 and maximum 14.68. Bituminous road IRI measures on the completed 58 roads were minimum 2.67 and maximum 3.78.
Sep. 01, 2021	3.5	2.67-3.78	Roughness conducted in 162 gravel roads of 34 districts where minimum 4.43 and maximum 14.68 IRI was recorded. After B.T. roughness conducted on 98 roads where minimum IRI 2.67 and maximum 3.78 was recorded.
Mar. 15, 2022	3.5	2.67-3.78	Roughness conducted in 300 gravel roads of 51 districts where minimum 4.43 and maximum 14.68 IRI was recorded. After B.T. roughness conducted on 100 roads where minimum IRI 2.67 and maximum 3.78 was recorded.
Mar. 15, 2023	3.5	N/A	

Project Objective Indicators #3

Rural road asset management system developed and in use

Year	Target	Actual	Comments, if any
Jul. 17, 2018	-	No fully GIS (Geographic Information System)-based network	

		inventory data, no scientific-based maintenance prioritization, and an investment plan.	
Mar. 15, 2023	Prioritized maintenance network investment plan – approved by competent authorities	N/A	

Project Objective Indicators #4

Share of the state highway network (about 11,000 km SH-State Highway and 20,000 km MDR-Major District Roads) covered under RADMS-Road Accident Data Management System

Year	Target	Actual	Comments, if any
Mar. 15, 2019	10	N/A	Nodal officer appointed (PWD-Public Works Department) - Basic training on the software completed, field training expected in early 2021.
Mar. 15, 2020	50	N/A	Finalization of the iRAD application in Dec-2020. Field Training is expected in early 2021. Procurement of Tablets for recording accident data to be done.
Mar. 15, 2021	80	N/A	iRAD App is developed at the National level and Madhya Pradesh was selected in Pilot State. Basic Training completed.
Mar. 15, 2022	100	N/A	iRAD has been developed at the national level and Madhya Pradesh is selected in pilot state. NIC has provided training to different stakeholders and data is being populated by stakeholders.

Intermediate Result Indicators #1

Rural Roads Constructed: Roads upgraded to bituminous surface (km)

Year	Target	Actual	Comments, if any
Oct. 23, 2018	2000	4888	
Mar. 15, 2019	3500	2239	
Mar. 15, 2020	4150	921	Delayed due to COVID-19.
Mar. 15, 2021	750	350	Delayed due to COVID-19.
Mar. 15, 2022	110	483	
Mar. 15, 2023	10510	N/A	

Intermediate Result Indicators #2

Rural Roads Constructed: New road construction (multiple connectivity) (km)

Year	Target	Actual	Comments, if any
Mar. 15, 2020	150	N/A	Works contracts awarded for 137 roads involving a length of 489 kms.

Mar. 15, 2021	250	170	170 km constructed and remaining in progress
Mar. 15, 2022	110	367	A cumulative 367 km have been constructed.
Mar. 15, 2023	510	N/A	

Intermediate Result Indicators #3

Rural Roads Constructed: Length of roads on which alternative surfacing technology piloted (km)

Year	Target	Actual	Comments, if any
Oct. 23, 2018	0	691	
Mar. 15, 2019	500	785	
Mar. 15, 2020	1000	1108	
Mar. 15, 2021	600	1889	cumulative, out of the target of 2100
Apr. 15, 2022	N/A	1984	cumulative
Mar. 15, 2023	2100	N/A	

Intermediate Result Indicators #4

Rural population connected by all-weather paved roads

Year	Target	Actual	Comments, if any
Jul. 17, 2018	-	35 Million (Baseline)	
Mar. 15, 2019	150,000	682,000	
Mar. 15, 2020	600,000	370,000	
Mar. 15, 2021	600,000	1,347,033	Total population benefited 36,347,033
Mar. 15, 2022	150,000	724,740	Total population benefited 37,071,773 (as per Census 2011).
Mar. 15, 2023	36.5 Million	N/A	

Intermediate Result Indicators #5

Percentage of high school girls shifting from walking to biking to schools

Year	Target	Actual	Comments, if any
Jul. 17, 2018	-	10% (Baseline)	
Apr. 15, 2022	N/A	83%	Data has been collected and consolidated for 3805 roads.
Mar. 15, 2023	80%	N/A	

Intermediate Result Indicators #6

Number of Women's SHGs (Self-help Group) engaged in post construction maintenance contracts

Year	Target	Actual	Comments, if any
Oct. 23, 2019	2	A tri-partite agreement is signed between PIU, SRLM	

		(State Rural Livelihood Mission), and SHG.	
Mar. 15, 2020	5	SHGs were formed and training was completed.	
Mar. 15, 2021	5	5	MOU Finalized; A tri-partite agreement is signed between PIU, SRLM, and SHG; 5 packages awarded; Work to start once construction works are complete.
Mar. 15, 2022	5	5	A tripartite agreement is signed between PIU, SRLM and SHG. Work has been awarded on the completion of 5 roads and 5 SHGs are working. 2 more packages in Dhar are selected for off-carriageway maintenance by WSHGs.

Intermediate Result Indicators #7

Number of women participating in road maintenance within SHGs

Year	Target	Actual	Comments, if any
Oct. 23, 2019	20	0	
Mar. 15, 2020	50	N/A	50 SHGs are formed and training has been completed.
Mar. 15, 2021	50	N/A	Will be monitored during the maintenance phase.
Mar. 15, 2022	50	54	54 women are working in WSHGs.

Intermediate Result Indicators #8

Rural roads asset management system (RRAMS) developed

Year	Target	Actual	Comments, if any
Mar. 15, 2017	-	No comprehensive network-based asset management system	
Mar. 15, 2018	Procurement of system definer (SD) consultant for RAMS advanced	N/A	
Mar. 15, 2019	(i) SD consultant in place and define the RAMS system requirements; (ii) Procurement of System Provider (SP) consultant is advanced	Consultant for the gap analysis of RAMS is on board.	
Mar. 15, 2020	(i) RAMS developed and data for 10,000 km of rural roads entered and RAMS tested; (ii) Procurement of data collection consultant done, and consultant	N/A	

	mobilised		
Mar. 15, 2021	GIS-based network data and information collected for about 116,000 km of rural roads	Consultant for gap analysis hired but could not be mobilized due to the challenges of Covid-19. TOR for System Development Consultant under preparation and procurement to begin shortly.	
Apr. 15, 2022	N/A	Agreement signed in November 2021. Submitted Gap report and Design Report that is being reviewed. Inception report submitted.	
Mar. 15, 2023	Comprehensive network-based asset management system developed	N/A	

Intermediate Result Indicators #9

Number of Gram Panchayats reporting on road traffic crashed

Year	Target	Actual	Comments, if any
Mar. 15, 2021	100	N/A	Data will be provided by Home department accident database management system.
Mar. 15, 2022	400	N/A	Citizen App has not yet been developed.

Intermediate Result Indicators #10

Number of crash locations/ Blackspots/ junctions/ pedestrian facilities improved

Year	Target	Actual	Comments, if any
Mar. 15, 2021	25	0	Consultant has been appointed. Activity yet to start.
Mar. 15, 2022	25	N/A	In the pilot phase, total 3 districts have been taken Indore, Dhar, and Datia. 16 black spots have been identified by PTRI in these districts. One SCDP in Dhar and 3 urban street in each district.

Intermediate Result Indicators #11

Number of MPRRDA's staff trained

Year	Target	Actual	Comments, if any
Mar. 15, 2019	110	50	
Mar. 15, 2020	125	107	
Mar. 15, 2021	40	232	Two-hundreds thirty-two staff trained on

			engineering and quality aspects of rural roads. Training of 150 MPRRDA staff to be conducted in during 2020-21.
Mar. 15, 2022	15	262	43 trainings on engineering and quality aspects of rural roads have been conducted.
Mar. 15, 2023	300	N/A	

Intermediate Result Indicators #12

Number of MPRRDA's staff trained: Training on WB procurement policies, contract management and quality assurance

Year	Target	Actual	Comments, if any
Mar. 15, 2019	50	30	
Mar. 15, 2020	25	30	Due to COVID-19, No training was conducted.
Mar. 15, 2021	25	60	Sixty staff have been trained up to Q3 2021, 50 more staff are expected to be trained by the end of 2021.
Apr. 15, 2022	N/A	60 Staff Trained and 50 more will be trained in present calendar year.	
Mar. 15, 2023	100	N/A	

Intermediate Result Indicators #13

Number of MPRRDA's staff trained: Staff trained on environmental and social safeguards

Year	Target	Actual	Comments, if any
Mar. 15, 2019	50	10	
Mar. 15, 2020	50	50	Up to Q3 2021, one hundred thirty-five staff trained on Environment and Social Safeguard and more will be trained.
Apr. 15, 2022	N/A	Up to Q1 2022, one hundred sixty-five staff trained on Environment and Social Safeguards and more will be trained.	
Mar. 15, 2023	100	N/A	

Intermediate Result Indicators #14

Number of MPRRDA's staff trained: Staff in the new design unit trained on alternative design and construction technologies

Year	Target	Actual	Comments, if any
Mar. 15, 2019	15	27	
Mar. 15, 2019	10	10	
Apr. 15, 2022	N/A	37 Staff trained in Hyderabad and more will be trained.	
Mar. 15, 2023	25	N/A	

Intermediate Result Indicators #15

Number of MPRRDA's staff trained: Staff trained on design software

Year	Target	Actual	Comments, if any
Mar. 15, 2020	25	0	Training to take place after procurement of design software.
Mar. 15, 2023	25	N/A	

Intermediate Result Indicators #16

Citizen satisfaction index

Year	Target	Actual	Comments, if any
Jul. 17, 2018	-	0	
Mar. 15, 2019	1.5	N/A	
Mar. 15, 2021	3.5	2.33	The baseline Satisfaction survey index is 2.33 based on coverage of 100 roads covering 39 districts. Pilot Mid Term Satisfaction survey is proposed on 100 roads. A survey is completed on 65 roads. The survey will be further taken up on balance road after completion of BT works.
Apr. 15, 2022	3.5	N/A	Baseline Satisfaction survey index is 2.33 based on coverage of 100 roads covering 39 districts. Pilot Mid Term Satisfaction Survey has been conducted in 2 roads of Sehore district. Mid Term Satisfaction Survey completed and Data Analysis work in progress.
Mar. 15, 2023	3.5	N/A	

Intermediate Result Indicators #17

Females satisfaction index

Year	Target	Actual	Comments, if any
Mar. 15, 2019	-	1.5	
Mar. 15, 2023	3.5	N/A	

Intermediate Result Indicators #18

Males satisfaction index

Year	Target	Actual	Comments, if any
Mar. 15, 2019	-	1.5	
Mar. 15, 2023	3.5	N/A	

Intermediate Result Indicators #19

Design and research unit established in MPRRDA

Year	Target	Actual	Comments, if any
Mar. 15, 2020	Organizational structure, staffing plan and functional manual prepared	RCTRC (MPRRA) and design cell have been established in Walmi, Bhopal.	
Mar. 15, 2021	Design unit set up and becomes operational	RCTRC (MPRRA) and Design cell has been already established - Walmi, Bhopal. List of activities for further strengthening of the design & research cell to be prepared and partner institutions to be identified.	
Apr. 15, 2022	N/A	RCTRC (MPRRA) and Design cell has been already established at Walmi, Bhopal. Ongoing process for software procurement, laboratory equipments, and e-LMS.	
Mar. 15, 2023	A functional design and research unit is in place	N/A	

Intermediate Result Indicators #20

Dust concentration in the ambient air along the Project roads

Year	Target	Actual	Comments, if any
Mar. 15, 2019	0	Baseline survey completed	
Mar. 15, 2020	0	PM10 measurement on bituminous road has been done. The end target to be fixed.	
Mar. 15, 2021	0	The baseline assessment is completed, and reports submitted. Maximum value was achieved in Neemuch 91.98, and Minimum was Khandwa 49.92. The mean value of PM10 is 66.77. PM10 measurement on BT road is being done.	

Apr. 15, 2022	N/A	End line assessment done on 96 roads. Maximum Value was achieved in Neemuch 91.98 and Minimum was Khandwa 49.92 and mean value of PM10 is 66.77 before BT. Maximum Value was achieved in Katni 76.61 and Minimum was Chhindwara 40.98 and mean value of PM10 is 76.61 after BT.	
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Remarks:
