



INDIA GENDER EQUALITY RESULTS CASE STUDY

# RURAL CONNECTIVITY INVESTMENT PROGRAM

Connecting People, Transforming Lives

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MARCH 2019



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About the cover: **Wings to Fly**. Rural roads enabling girls’ access to education by promoting independent mobility (photo by ADB).

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# Abbreviations

ADB	Asian Development Bank
FGD	focus group discussion
FHH	female-headed household
GAP	gender action plan
GRC	grievance redressal committee
IDI	in-depth interview
MORD	Ministry of Rural Development
NRIDA	National Rural Infrastructure Development Agency
PIC	project implementation consultant
PIU	project implementation unit
PMGSY	Pradhan Mantri Gram Sadak Yojana
PRI	Panchayati Raj Institution
RCIP	Rural Connectivity Investment Program
RCTRC	rural connectivity training and research center
VGRC	village grievance redressal committee

# Summary

## Development Aims and Impacts

According to the facility administration manual of the Asian Development Bank (ADB), reduced poverty and deprivation and inclusive economic growth are the long-term intended impacts of the Rural Connectivity Investment Program (RCIP), while improved and sustainable connectivity of rural communities are its short-term impacts. Specific outputs working toward achieving the outcome include (i) constructing or upgrading selected priority rural roads to all-weather standard; (ii) refining quality of design of investment program roads; (iii) improving and making sustainable the maintenance of investment program roads; (iv) incorporating road safety measures into the life cycle of investment program roads; (v) boosting and maintaining the qualifications and skills of Pradhan Mantri Gram Sadak Yojana (PMGSY) team (engineers, technicians, site supervisors), concerned staff of Panchayati Raj Institutions (PRIs), design consultants, and contractors in RCIP states; and (vi) providing effective project management.

The project interventions have resulted in improved rural road network and institutional capacities. Improved connectivity has impacted people's quality of life in the five RCIP states and contributed toward a range of socioeconomic benefits for the rural communities served and the advancement of development goals intrinsic to sustainable and inclusive growth. It has also resulted in higher agricultural production due to lower inputs and transportation costs, improved cropping patterns, and increased output prices. Improved road infrastructure has provided women with access to safe mobility and socioeconomic opportunities. It has enabled improved implementation of rural development programs. Women's representation in planning and decision-making has considerably enhanced their self-esteem and leadership capacities. The gender action plan (GAP) activities have boosted women's economic opportunities and their participation in planning and decision-making and have contributed to increased capacities and awareness related to project benefits and other development programs.

## Process and Management Tools

A GAP was prepared during the design phase. It employs a multipronged approach and includes a range of activities-aligned indicators and quantifiable targets. The community participation activities took measures to ensure women's involvement and inclusion of their perspective through the design, construction, and maintenance phase. A GAP monitoring matrix was used to track progress and report achievements every quarter.



# Introduction

Rural road connectivity is integral to rural development, sustainable poverty reduction, and inclusive growth. Improved connectivity promotes access to economic opportunities and social services, impacting agricultural and nonagricultural productivity. It leads to expansion of rural growth opportunities and real income, thereby pushing the rural population out of poverty and deprivation. The Government of India recognizes the importance of rural connectivity and has drawn a comprehensive plan to achieve it. A long-term road development plan was designed based on which policies were framed, targets set, and funds allocated under various five-year plans. The Ministry of Rural Development (MORD) designed the Rural Road Development Plan: Vision 2025 with the aim to guide state governments in planning and developing quality road infrastructure. Subsequently, the National Rural Road Development Committee was constituted as a think tank to estimate total road length, detailed specifications for construction, fund requirement, and implementation mechanism to achieve complete all-weather road connectivity. A special rural road development program, Pradhan Mantri Gram Sadak Yojana (PMGSY), was designed and launched as a national flagship program on 25 December 2000.<sup>1</sup> The National Rural Infrastructure Development Agency (NRIDA) coordinated PMGSY under the aegis of MORD, government at the apex, and State Rural Road Development Authority or agencies at state level.<sup>2</sup> The objective of the program is to provide all-weather road connectivity to the eligible unconnected habitations in the rural areas with a population of 500 persons and above in plain areas and 250 persons and above in hill states, desert areas, and tribal areas.<sup>3</sup> To maximize the impact of the program, MORD established a criterion by which priority is given to habitations with a larger population, and gradually program benefits are extended to cover smaller habitations over time.

## Rural Connectivity Investment Program

The Rural Connectivity Investment Program (RCIP) of the Asian Development Bank (ADB) assists PMGSY through a multi-project financing facility to support constructing and upgrading to the all-weather standard of 3,998 rural roads equivalent to 13,884 kilometers benefiting 5,238 habitations in the RCIP states of Assam, Chhattisgarh, Madhya Pradesh, Odisha, and West Bengal. PMGSY has identified 79,487 unconnected habitations in the

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<sup>1</sup> Pradhan Mantri Gram Sadak Yojana is the Prime Minister's Rural Roads Scheme.

<sup>2</sup> The former National Rural Roads Development Agency Office has been renamed NRIDA since 4 May 2018.

<sup>3</sup> The unit for this program is a habitation and not a revenue village or a *panchayat*. An unconnected habitation is one with a population of designated size (500 and above population in plain areas and 250 and above in hill or desert area) at a distance of at least 500 meters or more (1.5 kilometers of path distance in case of hills) from an all-weather road or a connected habitation. PMGSY. PMGSY Scheme and Guidelines. <http://www.pmgcy.nic.in/pmg31.asp>

RCIP states that are in urgent need of new road connectivity investments. RCIP includes two independent yet mutually reinforcing components of road infrastructure development and institutional strengthening. The component of institutional strengthening includes improved institutional arrangements, business processes, and associated capacity building, especially in relation to design, operation, safeguard, financial, road safety, and asset management matters to ensure effective and sustainable investments in physical infrastructure in the RCIP-supported states.<sup>4</sup>

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<sup>4</sup> ADB. 2012. *India: Rural Connectivity Investment Program*. Facility Administration Manual. Manila.

# Project Scope and Development Impacts

The investment aims to achieve inclusive socioeconomic growth and to reduce rural poverty and deprivation in the five RCIP states through improved and sustainable connectivity of rural communities to social infrastructure, services, and centers of economic growth. The investment program includes six objectives: (i) constructing selected priority rural roads to all-weather standard; (ii) refining the design quality of investment program roads; (iii) improving and sustaining maintenance of the investment program roads; (iv) incorporating road safety measures into the life cycle of the investment program roads; (v) boosting and maintaining the qualifications and skills of PMGSY team (engineers, technicians, site supervisors), Panchayati Raj Institutions (PRIs) staff,<sup>5</sup> concerned design consultants, and contractors in the investment program states; and (vi) providing effective project management. See Table 1 for basic project information.

**Table 1: Basic Project Information**

<b>Project Name</b>	Rural Connectivity Investment Program—Tranche 1, 2, and 3		
<b>Gender Mainstreaming Category<sup>a</sup></b>	All three tranches are categorized as effective gender mainstreaming.		
<b>Impact</b>	Connectivity of selected rural communities in five Rural Connectivity Investment Program (RCIP) states to markets, district headquarters, and other centers of economic activity is improved and sustainable.		
<b>Execution</b>	The Ministry of Rural Development, Government of India is the national executing agency for the investment program. The state-level executing agencies are Public Works Roads Department of Assam, Chhattisgarh Department of Panchayat and Rural Development, Madhya Pradesh Department of Panchayat and Rural Development, Odisha Department of Rural Development, and West Bengal Department of Panchayat and Rural Development.		
<b>Locations</b>	Assam, Chhattisgarh, Madhya Pradesh, Odisha, and West Bengal		
	<b>Tranche 1</b>	<b>Tranche 2</b>	<b>Tranche 3</b>
<b>Strategic Agendas</b>	Environmentally sustainable growth and inclusive economic growth	Inclusive economic growth	Inclusive economic growth

*continued on next page*

<sup>5</sup> A *panchayat* is an institution of self-government constituted for rural areas under Article 243-B of the Constitution of India. The three levels of *panchayat* comprise *gram panchayat* at village level, intermediate *panchayat* at block level, and *zilla panchayat/parishad* at district level. These *panchayats* are collectively called “Panchayati Raj Institutions” (PRIs).

Table 1 *continued*

	Tranche 1	Tranche 2	Tranche 3
<b>Subsectors</b>	Education/technical and vocational education and training, and transport/road transport (nonurban)—transport policies and institutional development	Transport/road transport (nonurban)	Transport/road transport (nonurban)
<b>Drivers of Change</b>	<ul style="list-style-type: none"> <li>• Gender equity and mainstreaming</li> <li>• Governance and capacity development</li> <li>• Private sector development</li> </ul>	<ul style="list-style-type: none"> <li>• Gender equity and mainstreaming</li> <li>• Private sector development</li> </ul>	<ul style="list-style-type: none"> <li>• Gender equity and mainstreaming</li> <li>• Governance and capacity development</li> <li>• Private sector development</li> </ul>
<b>Project Number</b>	40423-023	40423-033	40423-053
<b>Project Cost</b>	\$252 million	\$275 million	\$273 million
<b>Project Approval</b>	22 August 2012	25 November 2013	22 October 2015
<b>Signing</b>	2 April 2013	11 February 2014	6 November 2015
<b>Effective</b>	5 June 2013	31 March 2014	29 December 2015
<b>Closing (Original)</b>	31 December 2015	31 December 2017	30 June 2018
<b>Closing (Revised)</b>	30 June 2018	30 September 2018	31 December 2019

<sup>a</sup> The Guidelines for Gender Mainstreaming Categories of ADB Projects issues in July 2012 identifies four categories. The following descriptions of the categories were taken from ADB Gender Tip Sheet No. 1 Understanding and Applying Gender Mainstreaming Categories: (i) Gender Equity Theme (GEN)—The project outcome directly addresses gender equality and women’s empowerment by narrowing gender disparities and the project outputs should be designed to clearly feed into delivering the project’s gender equality outcomes; (ii) Effective Gender Mainstreaming (EGM)—The project outcome does not specifically address gender equality and women’s empowerment, but the project outputs are designed to deliver tangible benefits to women; (iii) Some Gender Elements (SGE)—The project is by nature likely to directly improve women’s access to services opportunities, and improved voice, but does not meet EGM design criteria, or the project is unlikely to directly improve women’s access to services, opportunities, and voice, but significant efforts were made to include some gender features to enhance benefits for women; and (iv) No Gender Elements (NGE).

Source: ADB. India: Rural Connectivity Investment Program data sheets.

## Poverty, Social, and Gender Impacts of the Investment Program

Improved connectivity will result in inclusive and sustainable socioeconomic growth. It will reduce poverty and deprivation and contribute to gender equality and women empowerment.

- **Socioeconomic impacts.** Improved connectivity will be a key factor in reducing poverty as (i) farmers will benefit from increased access to rural markets and agricultural productivity will lead to increased incomes, (ii) rural communities will be able to shift from subsistence farming to more commercially oriented

agricultural production, (iii) mainstreaming of production of high-value perishable products will become possible, (iv) poor households will be able to access better-paying jobs outside their villages, (v) investments in nonagricultural enterprises will grow at a faster pace, and (vi) the investment program itself will create labor opportunities for the rural poor including rural women.

- **Gender-specific impacts.** Improved connectivity will result in several socioeconomic benefits for rural women and girls in the RCIP states. It will specifically increase safe institutional deliveries, reduce maternal and prenatal deaths and the mortality of children, and increase enrollment of girls in schools and universities. It will also enhance economic opportunities and safe mobility for women and girls.

# Gender Equality Issues in Rural Roads

Improved rural roads will result in rural poverty reduction and better quality of life. In the project social assessment, almost 90% of interviewed households perceived several socioeconomic benefits accrued from improved rural connectivity, such as increased income, access to employment opportunities and social services, improved transportation, and industrial development. Poor households including other disadvantaged groups mostly engaged in casual wage labor would experience expansion in economic opportunities and better-paying options. The social assessment included a thorough gender analysis of the sector. As part of the gender analysis, data were collated on various socioeconomic indicators, and several focus group discussions (FGDs) and consultations were organized. The assessment brings to the fore the following issues and trends:<sup>6</sup>

- **Low female workforce participation.** Women workers are mostly engaged in agricultural work, either in their fields or as agricultural laborers. In Chhattisgarh and Odisha, women are also involved in unskilled construction activities. Women in construction are mostly engaged in unskilled manual tasks.
- **Limited access to social infrastructure.** The FGDs on issues specific to women and girls relate to time poverty and access difficulties specific to health and education infrastructure facilities. These issues are exacerbated during rainy seasons.
- **Gender difference in travel mode and patterns.** In rural areas, most women travel on foot. Inaccessible roads make travel on foot difficult, time-consuming, unsafe, and uncomfortable. Improved roads will make travel safe, fast, and convenient. Women and girls will not be restrictive regarding the trip purpose and selective of the trip timing if road and transportation facilities are improved.
- **Limited access to development schemes and benefits.** Deficiencies in rural connectivity adversely impact access to development schemes such as public distribution system and *anganwadis*.<sup>7</sup> Girl students cannot optimally benefit from incentive-driven initiatives such as free bicycles for girl students enrolling in higher education considering that they cannot ride these to school if road infrastructure is inadequate.

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6 ADB. 2012. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility, Technical Assistance, and Administration of Technical Assistance to India for the Rural Connectivity Investment Program*. Summary Poverty Reduction and Social Strategy. Manila.

7 *Anganwadi* ("courtyard shelter") is a rural mother and child care center in India. The Government of India started *anganwadis* in 1985 as part of a national flagship program, the Integrated Child Development Services, to combat child hunger and malnutrition and improve reproductive and child health outcomes.

- **Other constraining factors with disproportionate gender impacts.** Rural connectivity affects water and sanitation infrastructure development including access to financial credit and institutions. The deficiencies in water sanitation-related facilities adversely impact gender equality results.
- **Male-dominated employment and enterprises opportunities.** Most avenues and opportunities specific to the sector are male dominated.

# Gender Equality Design Features and Approaches

All three tranches are categorized as effective gender mainstreaming.<sup>8</sup> Stand-alone GAPs were prepared for three tranches applicable to the five RCIP states. The GAP design broadly includes six objectives, aligned activities, indicators, and targets. Specific provisions in the PMGSY program were leveraged and included in the GAP as relevant. The gender equality design follows a multipronged approach to gender mainstreaming. The thematic focus areas can be broadly categorized as measures that provide (i) equal employment opportunities through affirmative actions, (ii) protective measures with special focus, (iii) gender-responsive design features, (iv) equitable representation in decision-making and planning, (v) gender-responsive capacity building and knowledge products, and (vi) gender-responsive monitoring and dedicated human resource. The broad objectives and aligned gender mainstreaming features are presented in Table 2.

**Table 2: Gender Equality Design Features**

Objective or Thematic Focus	Tranche 1	Tranche 2	Tranche 3
<b>Equal Employment Opportunities</b>	<ul style="list-style-type: none"> <li>• Fixed quota for hiring women in skilled and unskilled construction work, road maintenance workers, and maintenance supervisors</li> <li>• Provisions and fixed quota for including female staff in the rural road network management units</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed quota for hiring women in skilled and unskilled construction and maintenance work</li> </ul>	
<b>Protective Measures with Special Focus</b>	<ul style="list-style-type: none"> <li>• Adequate safety nets or affirmative action to cushion effects of dislocation or other issues related to construction activities with special focus on vulnerable female-headed households</li> </ul>		
<b>Gender-Responsive Design Features</b>	<ul style="list-style-type: none"> <li>• Integrating gender-responsive road safety design features<sup>a</sup></li> </ul>		
<b>Decision-Making and Planning</b>	<ul style="list-style-type: none"> <li>• Fixed quota for women’s participation in planning and deciding design features</li> <li>• Female representation in village grievance redressal committees</li> </ul>		

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<sup>8</sup> A project is assigned effective gender mainstreaming if the project outputs are designed to directly improve women’s access to social services, and/or economic and financial resources and opportunities, and/or basic rural and urban infrastructure, and/or enhance their voices and rights, which contribute to gender equality and women’s empowerment.



Table 2 *continued*

Objective or Thematic Focus	Tranche 1	Tranche 2	Tranche 3
<b>Capacity Building and Knowledge Products</b>	<ul style="list-style-type: none"> <li>• Fixed quota to ensure women's participation in orientations and capacity building initiatives across all stakeholders</li> <li>• Engagement and training of women in all aspects of rural road network management</li> <li>• Development of gender-responsive training modules</li> <li>• Training of design consultants on gender-responsive design features</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed quota to ensure women's participation in orientations and capacity building initiatives across all stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Community participation in road safety awareness campaigns with predetermined targets for schools and students covered</li> </ul>
<b>Gender-Responsive Monitoring and Dedicated Human Resources</b>	<ul style="list-style-type: none"> <li>• Integrating gender-specific indicators in project monitoring formats</li> <li>• Ensuring dedicated staff to oversee gender action plan implementation, monitoring, and reporting</li> </ul>		

<sup>a</sup> Vulnerable and gender design features include speed bumps, rumble strips, zebra crossings, cautionary or informative signage, guard stones, shoulders used as safe sidewalks, etc.

Source: Collated from GAP tranche 1, 2, and 3 of the Rural Connectivity Investment Program.

## Factors and Project Features Influencing Gender Action Plan Design and Implementation

Several factors guided the gender action plan (GAP) design and gender equality design features.

- **Project preparatory stage.** At the planning stage, the project preparatory technical assistance undertook social and gender assessments to understand community perspectives from a range of diverse stakeholders. Primary and secondary data were used for the social and gender assessments. The GAP was developed keeping in mind gender issues in the sector and plausible strategies to effective gender mainstreaming given the scope of the project. A range of activities with clear indicators and achievement targets were identified. Several critical design features and processes facilitated effective GAP implementation and reporting. The GAP, as part of the loan covenant, ensured compliance. Gender capacity building was an important design feature and helped enhance individual and institutional gender capacities. Dedicated implementation structure and human resources established systematic planning, implementation, and monitoring of activities. Relevant provisions supported equitable working conditions and compliance with labor laws, including safety and safeguard clauses.
- **Project implementation stage.** The GAP was implemented and monitored across all subprojects in RCIP states. Several strategies that enabled effective and quality implementation include (i) routine orientation of project staff and contractors on GAP activities and targets (this was a regular feature in all subprojects), (ii) appointment of gender focal person at the level of project implementation consultants (PICs) to oversee implementation and keep track of achievements at each project implementation units (PIUs), (iii) standardized formats for contractors to collect field data on construction and maintenance labor force participation, and (iv) designated gender focal points at the PIUs.
- **Focused interventions that led to improved implementation, monitoring, and reporting** were the following:
  - ✓ All RCIP states invested and sustained efforts to encourage female labor force participation in construction and maintenance. Contractor orientations to enhance female workforce, compliance with labor laws, and compilation of sex-disaggregated data on workforce were critical strategies.
  - ✓ The PIUs and PICs took necessary measures to identify and assist project-affected FHHs. Efforts were made to provide livelihood support, employment, and linkages with other rural development schemes. This activity was planned in partnership with the PRIs and line departments. Monitoring was done through a database on FHH maintained by the PICs, enabling the PIUs to identify, assess, and take affirmative actions. This measure also assisted in monitoring and reporting FHH linkage with development programs.
  - ✓ Affirmative actions were taken to foster equitable workforce participation in rural road network management units and PIUs.

- ✓ The GAP provisions ensured that women were part of transect walk and were included in decision-making and consultative processes. Transect walks were carried out for each subproject. The respective PRIs and beneficiaries were informed in advance regarding the objective. The road design took into consideration the specific needs of vulnerable users—elderly, women, children, and differently abled. Beneficiaries including women were consulted during transect walk and village meetings regarding safety measures such as speed breakers and rumble strips and cautionary and informative signage near schools, health centers, etc. Routine site visits were organized to ascertain compliance with road safety requirements during design, construction, and maintenance. The PICs also discussed specific concerns, if any, that relate to women or other community members.
- ✓ Routine assessment was carried out across the subprojects to ensure that at least 33% representation was achieved in the grievance redressal committees (GRCs), though no such predefined targets were included in Tranche 1 and 2.
- ***Dedicated human resources, gender focal points, and gender capacity building.*** Gender consultants were engaged at the PIC level. As there was no specific gender officer designation at the PIU, gender focal points were appointed. Several gender capacity programs were organized for staff and consultants. A customized gender module was developed by ADB and training organized for PIU staff and consultants. The PIC also conducted routine training at the PIU for the staff and contractors. The PIC during field visits ensured that contractors and site supervisors were aware of the GAP activities, time line, and targets. The rural connectivity training and research centers (RCTRCs), once established and functional, will ensure female participation in rural road management programs and develop socially inclusive and gender-responsive training modules as included in the GAP.<sup>9</sup>

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<sup>9</sup> The RCTRCs are not optimally functional yet. They are established in rolling out systematic and large-scale training in RCIP states and targeted rural roads research programs for training of PMGSY team (engineers, technicians, site supervisors), concerned staff of PRIs, design consultants, and contractors.

# Gender Equality Results: Project Achievements

Overall, GAP activities have enabled women's labor force participation and employment, gender-responsive infrastructure design, and female participation and representation in project planning and decision-making, including capacity building and increased awareness related to road safety and project benefits. Quantitative data from the five RCIP states reflect the following achievements (Table 3).<sup>10</sup>

- **Female workforce participation, employment, and compliance with labor laws.** Data show that 427,194 laborers, of which 35% were female, were engaged in construction across all three tranches in the RCIP states. In maintenance work, 40% female workforce was engaged in tranche 1 and tranche 2 across all five RCIP states. In rural road network management units, 19% of staff appointed were women.<sup>11</sup> All RCIP states reported 100% compliance with labor laws. The standard bidding document includes all relevant provisions.
- **Special measures for the most disadvantaged.** There were 398 FHHs identified, of which 77 were already linked with rural development schemes. The project ensured that 100% of those identified and interested to avail the benefits were linked with these schemes.
- **Gender-responsive infrastructure design and consideration of the most vulnerable road users.** All states reported 100% compliance with gender-responsive design features that were integrated into the detailed project planning reports.
- **Women's participation in planning and decision-making.** The cumulative data on community participation in transect walks indicate that of 115,686 participants, 17% were females. Female participation was low across all five states, as transect walks were carried out in the design phase before GAP enforcement timeline. Village grievance redressal committees (VGRCs) were constituted in the subproject and required adequate female representation. There was a lack of awareness in the initial phase, but eventually participation increased due to sustained sensitization related to the mandatory requirement. There were 2,386 VGRCs with 17,026 members, of whom 29.6% were women.
- **Gender-responsive monitoring and reporting.** Six gender indicators were included in the project monitoring information system. The PIUs with support from state PICs developed a strong database for routine data collation and GAP monitoring. GAP progress and achievements were included in the quarterly progress reports.

<sup>10</sup> Data are based on the first quarter, 2018 Quarterly Progress Report.

<sup>11</sup> Data are for Assam, Chhattisgarh, Madhya Pradesh, and West Bengal.

**Table 3: Quantitative Achievements**

	Tranche 1	Tranche 2	Tranche 3 <sup>a</sup>
<b>Female Workers Participation in Construction</b>	45,111 female workers (34% of total engaged)	38,283 female workers (33% of total engaged)	66,759 female workers (37% of total engaged)
<b>Number of FHHs Linked with Rural Development Programs</b>	67 FHHs linked (100% of those identified are linked)	214 FHHs linked (100% of those identified are linked)	29 FHHs linked (ongoing activity)
<b>Affected Community Members Consulted in Design Phase</b>	36,786 community members consulted, of whom 6% were females	37,019 community members consulted, of whom 16% were females	41,881 community members consulted, of whom 36% were females
<b>VGRCs Constituted<sup>b</sup> and Female Representation</b>	727 VGRCs constituted with 4,999 members and 28.4% female representation	622 VGRCs constituted with 5,296 members and 25.5% female representation	1,037 VGRCs constituted with 6,731 members and 33.75% female representation
<b>Female Workers Participation in Maintenance</b>	11,536 female workers (40% of total engaged)	7,431 female workers (40% of total engaged)	
<b>Female Staff in RRNMU<sup>c</sup></b>	36 staff appointed in RRNMU's, of whom 19% were female staff		
<b>Female Participation in Road Safety Orientations<sup>c</sup></b>	36,383 were oriented with 43% female participation	25,732 were oriented with 43% female participation	

FHH = female-headed household, RRNMU = rural road network management unit, VGRC = village grievance redressal committee.

Notes:

<sup>a</sup> Ongoing project and several activities are still to be rolled out.

<sup>b</sup> Data are not provided for West Bengal.

<sup>c</sup> Data are not provided for Odisha.

Source: National Rural Infrastructure Development Agency. 2018. *Rural Connectivity Investment Program: Quarterly Progress Report*. March.

The National Rural Infrastructure Development Agency (NRIDA) conducted regular monitoring of GAP progress to ensure that the mechanisms, strategies, and targets in the GAP and other loan documents were implemented and remained relevant and achievable. Gender capacity building as part of GAP activity has visibly impacted decisions related to the assignment of responsibilities at the PIUs. Several PIUs such as Tikamgarh, Jabalpur, and Vidisha in Madhya Pradesh have made concerted efforts to recruit or deploy female junior engineers in the field. This effort has not only broken traditional gender stereotypes but also created an environment whereby female community participation in awareness programs and transect walks increased manifold due to the presence of female staff in the field. Women in villages felt free to participate in such meetings, which were mostly male-dominated before.

**Qualitative project results through human impact stories.** A field assessment was carried out to capture the qualitative impacts of improved connectivity. Primary and secondary data sources were tapped to collate quantitative and qualitative data. There were 107 focus group discussions (FGDs) and 68 in-depth interviews (IDIs) covering 1,280 beneficiaries, mostly women and girls, in the select habitations.<sup>12</sup> A framework delineating the assessment parameters, aligned methodology, scope, and guiding questions was developed to ensure consistency in approach (Appendixes 1 and 2). Field visits were planned in a phased manner, and a mixed method approach was employed to collect a range of human impact stories from a gender perspective. Care was taken to select only completed roads, preferably 6 months to 1 year post construction, and a diverse section of the community, especially women and girls, scheduled caste, scheduled tribes, religious minority, and differently abled were duly covered.<sup>13</sup> Data and information related to the field visits date to January–May 2017. The sample included 60 roads benefiting a cumulative population size of 128,000 and length of 227.54 kilometers. As envisaged, the investment program has resulted in inclusive socioeconomic growth and the reduction in poverty and deprivation.

**Impact on poverty alleviation, deprivation, and economic opportunities.** Improved rural road connectivity has contributed significantly to increased income for households engaged in farming, trading, transport, and other services. It has enhanced access to markets, district headquarters, and other centers of economic activity and expanded nonfarm employment opportunities. The five case studies in Box 1 focus on life stories of those who have experienced the shift in fortunes and social status. Although other contributing factors have affected the growth in incomes and poverty status, connectivity has been a major catalyst for growth.

### Box 1: Impact on Poverty and Economic Opportunities—State Profiles

#### Case Study: Assam

##### *From Casual Workers to Business Managers*

In Assam, improved connectivity has impacted the lives of rural men and women engaged in traditional agriculture practices and associated subsectors such as sericulture, rubber and tea plantations, etc. Sericulture is a major cottage industry with high participation of female workers. A case in point is regarding the perceptible shift in the participation of female workers as casual workers in sericulture to that as producers and managers. The Department of Sericulture, Government of Assam mostly owns the sericulture farms, and women are engaged as daily wagers mainly in tasks associated with the upkeep of the larvae. Improved connectivity has seen a marked change in the manner sericulture has grown over the years. It has assisted several women self-help groups (SHGs) in multiple ways, including saving time associated with leaf collection for the larvae and enhancing access to improved technologies, skill training, and marketing avenues. The recent trends indicate that marginal farmers are entering the industry, and this has transformed women's engagement in the subsector from that of daily wagers in government-owned farms to that of SHG groups managing and controlling production. Given

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<sup>12</sup> Selection of sample roads was based on PIU recommendations in each state.

<sup>13</sup> The scheduled castes and scheduled tribes are officially designated groups of historically disadvantaged people in India. The terms are recognized in the Constitution of India, and several affirmative measures are in place for their progress and upliftment.

**Box 1** *continued*

improved marketability of finished goods, the SGH members are entering every phase of the value chain from the upkeep of larvae to processing of silk thread, weaving, and marketing. Easy access to skilling opportunities has assisted in improving their creative abilities to produce high-end products, fetching higher returns and giving them a newfound status and confidence.

*“We have to travel to the jungle to collect leaves for the larva. The road helps us reach the jungle easily because now we travel using a bicycle. It has improved safe mobility, and we no longer wait for our menfolk to accompany us. The road has impacted our incomes too. It also helps us minimize the travel time for leaf collection. When there were muddy pathways, it was hard for us, especially during rains. Previously, we traveled on foot and it took us an entire day, affecting our productivity. With RCIP, we can now manage to complete the collection and return home early to utilize the time for other activities.”*

RCIP = Rural Connectivity Investment Program.

Source: Interview with Namita Bharali (Uttar Hati Chuni Village, Jorhat), for this case study.

**Case Study: Chhattisgarh*****Rural Roads: A Fortune Turner***

The quaint hamlet Renga in Kabirdham District in Chhattisgarh is uniquely famous for its *battees*.<sup>a</sup> The village women roll cotton wicks as a household activity. In the past, the cumulative sales were not commensurate with the time and effort invested because of the lack of forward linkage with the market due to the remoteness of the village and inaccessible roads. Intermediaries in the urban centers who were aware of the wick business would approach the village, occasionally. The uncertain sale of products impacted assured profits. The intermediaries would also manipulate the rates, affecting business. Post RCIP, the scenario has seen a remarkable turnaround. The village is now connected to the block headquarter, and the fortune for these women, like many others in the village, has changed for good. Several women, like Dulari, have also set up other businesses. Given the expanding economic opportunities, she set up a shop along the roadside, which is frequented by those who regularly use the road. Her business has flourished, and she owes it all to better connectivity.

<sup>a</sup> *Battees* are cotton wicks for lighting lamps during religious rituals.

Source: Interview with self-help-groups (SHGs) involved in wick rolling; and Dulari (Village Regna), for this case study.

**Case Study: Madhya Pradesh*****The Road to Business and Prosperity***

Preeti owns and manages a handicraft business, a shop in the weekly village market. She updates the cash register and informs her husband and business partner about the inventory and delivery status. She asks him to wind up the shop for the day so that they can have an early dinner at home. Their schedule lately is hectic as business is good due to increased stock and variety of products to sell in the market. The city-based suppliers of raw materials can now easily deliver the required items at their doorstep. Preeti and her husband now have time to improvise on designs and add more variety to their products, making them attractive to the customers. Their products are now in high demand as clients can easily access their little shop in the village. This is possible only after the road was built under RCIP. For Preeti and her family, it is a road to business and prosperity.

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**Box 1** *continued*

Source: Interview with Preeti Patel (Bilkhirwa Village, Jabalpur), for this case study.

**Case Study: Odisha*****Traditional Occupation Transformed Into Profitable Opportunity***

The women members of SHGs in the far-flung village of Tikana have been rearing cattle for generations. The women could not comprehend the value of their traditional role in cattle rearing till their village was connected under RCIP, and since then the village has witnessed a new direction to prosperity and growth. The village women have formed SHGs and are involved in dairy farming in an organized manner. Milk collection and supply has become easy as several auto-rickshaws and vans are used. The group members supply around 200 liters of milk every day to Puri, a popular religious hub in Odisha. As milk is a perishable commodity, it helps to have a timely collection and systematic supply chain. This was made possible due to improved road infrastructure and has provided steady business and income for several women SHGs.

Source: Interview with SHG members in Tikana Village for this case study.

**Case Study: West Bengal*****From Impoverished Existence to New Hopes***

Rehana Begum, 38 years old, lost her husband (the only earning family member) 5 years ago. She was left with the responsibility of four children and a small plot that she and her husband used to grow vegetables for sale. She tended the farm, and he carried the farm produce to the local market. However, in his absence, there was no one to help with the sale. She was left with no other option but to sell the produce in the village, at a much lower rate. RCIP has assisted in her mobility, and now she can easily access the main market. She is also part of an SHG and has benefited through several development schemes. Her daughter has been gifted a bicycle in school, which Rehana also uses to transport the vegetables early in the morning. The road has given her the courage to come out of her restricted life and expand her horizons. She has transformed into a seasoned agricultural worker and a confident businessperson.

Source: Interview with Rehana Begum (Bodai Purba Village), for this case study.

***Impact on access to reproductive health-care services.*** The FGDs and IDIs across all sample roads indicate that there has been a significant impact on access to health facilities including quality of service package provided under several health programs, especially those related to reproductive and child health program. Better connectivity has also impacted community awareness of health-care schemes of the government. The state profiles in Box 2 reflect the pre-RCIP scenario and how life has drastically changed for the better due to improved connectivity.



## Box 2: Improved Health Outcomes—State Profiles

### Case Study: Assam

#### *An Unforgettable Experience*

Majuli in Assam is the largest river island in the world. The accredited social health activist (ASHA) functionary, Bina Sarkar, working in this area narrated several horrifying experiences of women with pregnancy-related complications before the road was constructed, especially while traveling to the health center.<sup>a</sup> The villages on the island in the rainy season are inundated and inaccessible. In 2012, she faced a situation that she could not take off her mind. The rains had flooded the area, and a pregnant woman went into labor. Bina was summoned immediately to take care of the situation. The only way she could access the expectant mother was by a boat. They tried to ferry the expectant mother to the nearest health center, but the boat capsized. Somehow, they mobilized the villagers to arrange for another boat and rushed to the hospital. She reported that there were several such incidents, and once a mother delivered en route to the hospital and the baby was covered in mud. She expressed that post-construction transportation of patients, especially in an emergency, is much easier and more convenient.

<sup>a</sup> ASHAs are local women trained to act as health educators and promoters in their communities. The Ministry of Health and Family Welfare, Government of India describes them as health activists in the community who create awareness on health and its social determinants and mobilize the community toward local health planning and increased utilization and accountability of existing health services. They are responsible for the delivery of reproductive and child health program services to the community.

Source: Interview with Bina Sarkar, ASHA worker (Majuli), for this case study.

### Case Study: Madhya Pradesh

#### *Rural Roads: An End to the Curse*

Kalua stayed aloof and away from his family and neighbors when some marks started to appear all over his body. Everyone considered him cursed and contagious and distanced themselves from him. He had come to believe that he was indeed cursed and condemned by god to live a secluded and painful life. It never occurred to him that his condition could be some form of ailment. The doctors or health workers seldom visited the remote hamlet, and the terrain was rough to get through without roads. Post RCIP, a team of doctors visited the village for the first time, and Kalua got an opportunity for a proper referral. He found out that what he had was not a curse but a skin disease that needed medical attention. It was a just a skin disorder that had developed complications due to negligence and lack of treatment. The medical team gave him some medicines and ointments. In a matter of a few days, he was in a much better state and got rid of his “curse” and, eventually, his self-imposed seclusion. Today, Kalua is a transformed man full of confidence and making up for his lost time in isolation by running an auto-rickshaw service. He meets several people every day and befriends many passengers, all thanks to his newfound confidence.

Source: Interview with Kalua (Nobai Village), for this case study.

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**Box 2** *continued***Case Study: West Bengal*****The Road to Improved Reproductive Health Care Outcomes***

Poonam is an auxiliary nurse midwife—a female health worker in the village—at a primary health center in Teesta Bazar. She states that the status of health facility and access to services improved drastically after the RCIP roads were constructed in her area. If connectivity is good, she said, the entire population benefits. She discusses the various improvements she has seen in her sector. No ASHAs are appointed in the hill area of Darjeeling District of West Bengal, so she is required to make frequent visits to far-flung villages. She has seen the transformation, especially in spatially disadvantaged hill areas that are totally cut off from mainstream development. Without rural roads, the ambulance service *Maitreyan* cannot reach these pockets, and this puts expectant mothers at risk.<sup>b</sup> Improved rural connectivity ensured that the facility could be easily accessed in most villages. Poonam also reported a substantial decrease in pregnancy-related complications due to delays in reaching health centers, and in maternal and infant mortality.

<sup>b</sup> *Maitreyan* means a friend.

Source: Interview with Poonam in (Teesta Bazar), for this case study.

**Impact on access to quality education.** Access to quality education is a critical dimension that helps build the human capital necessary for improved standard of life and sustainable development. Better connectivity and transportation are key factors that directly influence enrollment and retention in higher education, especially for girls. All sample roads visited have a local primary school and an *anganwadi* within 1–2 kilometers. However, in most cases, not all higher education facilities are available at a short distance. FGDs and general discussion with the villagers, especially adolescent girls, clearly emphasized the importance of rural roads in fulfilling higher education aspirations and pursuits. The case studies in Box 3, point toward the link between rural connectivity and opportunities for students aspiring for higher education.

**Box 3: Improved Access to Quality Education—State Profiles****Case Study: Chhattisgarh*****Pathway to Education and Development***

Lamidih Village in Chhattisgarh is a classic example of how a road can become an essential pathway to education, growth, and development. The aspirations of the parents for good education for their children were fulfilled when the new road was constructed under RCIP. Initially, parents were apprehensive of sending their daughters to schools alone as no bus facility would operate in these habitations due to poor quality of roads. When the RCIP road was constructed, some private school bus operators started providing pick and drop facilities for the students, making it convenient and safe and expanding opportunities for girls to aspire for higher education.

Source: Interview with villagers (Lamidih Village), for this case study.

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**Box 3** *continued***Case Study: Madhya Pradesh*****Wings to Fly***

Diksha Pandey and her friends could only dream of higher education. It seemed impossible to continue with studies after completion of elementary school, as the senior high school was far from the village and parents would not permit their daughters to travel that far. She was always wary of the age-old trend in the village for girls to drop out of school. To aspire for higher education was a forgotten dream at best. The RCIP road, connecting the village to the gram *panchayat* where the high school is located, reignited the hope in her and many others. The girls can now use their bicycles to reach school without any difficulty. The improved roads have also instilled a level of confidence in the villagers to allow their daughters to enroll in higher grades. Life has changed for these girls who want to spread their wings and live their dreams, all thanks to the newly constructed roads.

Source: Interview with Diksha Pandey (Simra Village), for this case study.

**Case Study: Odisha*****We Speed Off to College with Friends***

Tikana Village in Odisha comprises of 299 households. Adolescent village girls Mamuni Behera, Rinki Behera, and Namita Behera state, “Our elder sisters left higher studies mid-way when there were no roads. We do not face the situation now. During the rainy season, we often got delayed to college. By the time we reached the main road, the bus would have left without us.” The girls now ride independently to school. The Konark Women’s College is around 11 kilometers away from the village and has several departments. At the time of writing, seven girls drive to the college, the highest number of girls that have ever realized their dream of pursuing higher education. Few students go to school by bus. With better road conditions, several teachers also visit the village for private tutorials for college students.

Source: Interview with adolescent girls in Tikana Village for this case study.

***Impact on improved implementation of development schemes and service delivery.*** The two case studies (Box 4) reinforce the importance of rural connectivity in improved service delivery in select programs of the government—Public Distribution System, Integrated Child Development Services, and Midday Meal Scheme.<sup>14</sup>

Improved access to basic sanitation infrastructure. Women’s productive and reproductive roles thrust upon them the burden of water collection and management. Inadequacy in water and sanitation provisioning or gender-blind infrastructure facilities result in several gender-based disadvantages that directly impact practical and strategic gender needs. The

<sup>14</sup> The Public Distribution System was designed as a food security scheme that makes available major food commodities such as wheat, rice, sugar, and kerosene through a network of fair price shops (also known as ration shops) established across the country. Integrated Child Development Services was launched in 1975 and provides food, nutrition supplements, preschool education, and primary health care to children under 6 years of age, expectant and lactating women, and adolescent girls. The Midday Meal Scheme is a school meal program under Sarva Shiksha Abhiyan and was designed to improve the nutritional status of school-age children.

### Box 4: Improved Access to Development Programs—State Profiles

#### Case Study: Chhattisgarh

##### *Toward Food Security*

The Public Distribution System (PDS) shop (fair price ration shop) in Jangalpur Village, Chhattisgarh would look deserted on most occasions due to lack of adequate supply and stock of essential food items. Despite having a PDS center, the villagers were forced to buy basic food items from the open market at a much higher rate. The constraint toward effective implementation of the program was bad connectivity, and the PDS supply trucks would avoid the mandatory routine trips to the village due to rough terrain. The construction of an all-weather road under RCIP turned things for the better. With improved road infrastructure, the PDS supply network was revived in the area and the frequency of supply increased manifold. The PDS shops rarely run out of supply, and there is enough to cater to the needs of each household. Improved quality of road has also eased the burden on the villagers to carry the load back home. This has a significant impact, especially on senior women, who are mostly tasked with queuing at the center and getting headloads of ration back home.

Source: Interview with villagers at the PDS shop in Village Jangalpur, for this case study.

#### Case Study: Madhya Pradesh

##### *Setting New Standards of Service Delivery*

The new rural roads have helped set new standards of service delivery in Tenipura Village in Madhya Pradesh. Post road construction, the *anganwadis*, which are responsible for the implementation of Integrated Child Development Services (ICDS) and Midday Meal Scheme, have been synergized to run in full gear. The vehicle that runs ICDS and Midday Meal Scheme by delivering the ration for the center can access the village without difficulty due to improved quality of roads. The enhanced delivery of ration and other items ensures enough supplies all year round, without any seasonal variations. The workers in the center provide regular and nutritious meal for the village children. As they are relieved of the drudgery of walking long distances to fetch the ration from far-flung depots, they now focus on the quality of the food they serve. Moreover, the regularity and quality of the service has reinstated the villagers' faith in the program and encouraged them to participate more proactively. One worker says, "Now that roads are constructed we have benefited a lot. Now we don't have to travel to get provisions and rations to run the program. Now everyone reaches us on time and as scheduled."

Source: Interview with Anganwadi workers (Village Tenipura), for this case study.

water and sanitation sector also has a direct bearing on nutrition and good health. The two case studies (Box 5) point toward the impact of rural connectivity on inadequacy in water and sanitation infrastructure and access.

## Box 5: Improved Access to Basic Sanitation—State Profiles

### Case Study: Chhattisgarh

#### *Toward Open Defecation Free Village*

The tribal village Khamhardih in Chhattisgarh did not have any achievement to be proud of until the village was declared an open defecation free (ODF) village by the district administration. The villagers realized the importance of toilets and took a pledge to eliminate the practice of open defecation in the entire village. The resolve was strong, but the progress toward the goal was excruciatingly slow. This turned around after the Rural Connectivity Investment Program (RCIP) road was built and transportation of construction material became much easier, faster, and cheaper. The initiative received a fillip and renewed vigor. The pace of construction increased, and within 3 months Khamhardih Village earned the status of the first ODF village in the area.

Source: Interview in Khamhardih Village for this case study.

### Case Study: Madhya Pradesh

#### *A Respectful Life*

Radha, Laali, Neema, Imarti, Kashi, and Heena are carefree as they have more time for themselves at home. This is all due to the newly constructed toilets in their households. The village-connecting road built under RCIP hastened the process of building these toilets and firmed their resolve to live a respectful life. Without the road, transporting the raw material to build the toilet infrastructure was a nightmare. The construction material was also quoted very high as transportation and porter costs were included in the bills. The road helped several villagers source the material in bulk at a much cheaper rate. The toilets have transformed the lives of female members, especially girls. They are no longer bothered about the “appropriate time” for defecation and can now maintain proper hygiene. The village is declared an ODF village, impacting environmental sanitation, personal hygiene, convenience, and safety for women and girls.

Source: Interview in Nayakhada Village for this case study.

# Lessons Learned and Way Forward: Conclusion and Recommendations

Overall, the benefits accrued from improved rural roads can be categorized as those related to (i) better implementation of health, education, food security, and nutritional programs of the government; (ii) farmers' easy and quick access—without much seasonal variation—to markets; (iii) availability of quality inputs necessary for increased yield and diversification of cropping practices; (iv) increase in the hiring of female workers or self-help groups for agricultural work in light of expanding agriculture productivity, thus providing diversified opportunities for their participation in agriculture work; (v) enhanced and safe mobility for women and girls; and (vi) improved sanitation infrastructure. It is also evident that GAP activities have provided direct benefits in terms of opportunities for female workforce participation, equitable employment, capacity development, gender-responsive infrastructure design, and voice in decision-making. It has also resulted in institutional gender capacity building.

- The inputs from beneficiaries of RCIP across all sample roads corroborate the gains in poverty alleviation, income, livelihood, and employment associated with improved connectivity. The case studies point toward the economic benefits, rise in social status, and other benefits of improved connectivity. RCIP has influenced the expansion and growth of many traditional occupations and provided much-needed leverage to women, who are mostly associated with such occupations, to demand increased value on these products.
- In all villages along the sample roads there is a PDS shop, *anganwadi*, and midday meal center close to people's homes. Improved connectivity has substantially impacted the quality of implementation of these services. It has helped the service providers as well as the beneficiaries in multiple ways, as is evident from the case studies covered under this section.
- Improved connectivity has also resulted in higher agricultural production due to lower inputs and transportation costs, improved cropping patterns, and increased output prices. All households have been able to boost their agricultural productivity. The FGDs have found that several farmer households, both subsistence and large holdings, have gained in terms of improved market access and information flow. Improved connectivity has also enhanced access to agricultural markets that were earlier affected during adverse weather conditions, specially monsoons. From a gender perspective, improved and safe mobility has enabled female farmers to sell their produce directly, rather than depending on an intermediary.
- Improved connectivity has significantly improved people's access to health facilities and services, especially for community members living in spatially disadvantaged areas. The case studies from the river island in Assam and hill

district of West Bengal substantiate the value of improved connectivity for people who are spatially marginalized and disadvantaged. RCIP has also resulted in the efficient implementation of health services due to improved access to health service providers, emergency services, and timely supply of essential medical equipment and medicines in primary health centers.

- The FGDs indicate that improved road access has made travel for teachers easy and convenient. Improved connectivity has also galvanized private investments in schools and associated services such as transport. Most importantly, rural roads improved mobility and transport facilities, resulting in more students enrolling in higher education centers. Connectivity has also addressed the seasonal variations in attendance and absentee teachers, making studies more regular.
- The FGDs and IDIs with elected representatives bring to the fore the fact that improved connectivity has also influenced women’s participation in *gram sabhas* (village meetings) and therefore strengthened their role in local decision-making processes. Improved roads have also improved safe mobility for women and girls and their economic independence.
- Roads bring better awareness of sanitation and hygiene, motivating villagers to construct household toilets. Improved connectivity is critical for efficient and effective implementation of all development schemes as can be discerned from the two case studies on sanitation (Box 6). It also makes the task of development agencies and the implementation of programs much easier. The RCIP roads have enabled several other services such as water connections, electricity, gas cylinder delivery, etc. The villagers, especially those that are geographically isolated from mainstream development, can now access these programs with much ease and confidence.

### Box 6: The Road to Women’s Empowerment—State Profiles

#### Case Study: Madhya Pradesh

##### *The Way to Renewed Ambition*

The local bus came to a screeching halt at the village bus stand and a young woman, dressed in a black coat, stepped out confidently. Rashmi Vishkarma, a junior advocate, commutes to the district court daily by bus. She is very popular among her peers and seniors and is recognized as a budding advocate. The recognition she has achieved in her career was possible only because of improved connectivity to the district headquarters, which is around 35 kilometers from her village. She earned her degree in law with great difficulty and had to stay at a relative’s home, as commuting was not possible then. Soon after, she was forced to stay at home for a year as traveling was not safe and her family did not allow her to stay away from home. Her husband was apprehensive of her traveling on a dusty, risky, and seasonally muddy road. The newly constructed RCIP road was a life changer and revived her ambitions to carve a niche for herself. She resumed work and now travels effortlessly every day, without any restrictions from her family.

Source: Interview with Rashmi Vishkarma (Tenipura Village), for this case study.

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**Box 6** *continued***Case Study: Odisha*****Assured Sale and Profits***

Rural roads have improved the frequency of agricultural markets or *mandis* that functioned seasonally in the absence of proper roads. The average distance to reach these markets was around 2–6 kilometers. With better connectivity, the time taken to reach these markets has shrunk substantially. The self-help groups (SHGs) in Kenduapalli Village, which has around 300 households, have benefited the most; they are now confident of the regular sale of finished products and assured profits. Initially, there was no guarantee of sale, and they suffered losses. The road completed under tranche 2 caters to three villages of Kenduapalli, Godapokhari, and Nuasahi. In Kenduapalli, women SHGs are engaged in making brooms from *kaasi* (local grass). Village women sell the finished product as well as the raw material to local traders. The accessibility to market space ensures a steady flow of customers both for the finished product—the broom—and the raw material, which is sold in bulk. At the time of writing, there are around 60 SHGs that are linked with a federation that promotes economic activities.

Source: Interview with SHG groups in Kenduapalli Village, for this case study.

## Recommendations for Improved Gender Equality Design Features

- ***Initiatives related to awareness raising and action research on trafficking.*** RCIP should integrate measures to increase awareness among beneficiaries of issues related to pollution health hazards and the risk of trafficking. A research component will help understand the issues related to trafficking and their mitigation. Convergence with relevant line departments is important to plan relevant interventions.
- ***Additional design features.*** Though not directly within the purview of Pradhan Mantri Gram Sadak Yojana (PMGSY), attention could be given to street lighting, drainage, sidewalks, roadside benches at stops, and safe crossings in coordination with other department schemes.
- ***Rural housing.*** The scope of the National Rural Roads Development Agency, now National Rural Infrastructure Development Agency (NRIDA), has been recently expanded to include a housing component. The project design can consider including measures to assist the homeless, vulnerable, and female-headed households (FHHs) in subprojects to access this component.
- ***Training of women in road construction and supervision.*** A training component will help build the human capital of women and girls. The government's skill development programs can be leveraged to ensure female participation in road construction-related trades. This will help create a pool of qualified women and open opportunities for sustained employment in road construction work.
- ***Shift from casual daily wage worker to regular skilled worker.*** Data related to construction and maintenance work suggest that female workforce is predominantly engaged in the unskilled daily wage category, without secured



tenure of engagement and other safety nets. This trend needs to be broken by integrating an incentive component for contractors who hire female workers as regular skilled workers. Where female workers lack the necessary skills, the contractors can train them onsite. The possibility of a precondition for the award of contracts with a clause to recruit women as skilled workers can also be explored.

- **Targets related to female workforce participation.** Female workforce participation depends on several factors related to agrarian workforce participation norms and other socioeconomic and cultural factors. Given the variability across states, it is necessary not to fix any predetermined targets for their participation. The project should sensitize contractors to encourage female labor and adhere to gender-sensitive labor provisions in work sites.
- **Capacity building of village grievance redressal committees and sustenance.** Most village grievance redressal committees (VGRCs) are either constituted on paper or defunct, and perform below potential due to lack of capacities. VGRCs are dissolved once the construction phase is over. This is a critical institutional mechanism from a social accountability and oversight perspective. Regular training should be organized for VGRC members to build their capacities regarding role and responsibilities. The VGRCs' scope of work should be expanded to include the maintenance phase. A mentoring and capacity building component should be planned exclusively for women GRC representatives given the 33% mandate for female representation.
- **Capacity building component for women contractors.** Capacity building for women contractors should be explored to help them compete with male contractors and to open opportunities to bid for RCIP and PMGSY contracts.

## Recommendations for Strengthening Institutional Mechanisms That Promote and Sustain Gender Equality

- **Training and research centers and gender capacity building.** Rural connectivity training and research centers (RCTRCs) are important for training and certification of project implementation unit (PIU) staff, Panchayati Raj Institution (PRI) representatives, consultants, and contractors on rural road management. Therefore, measures need to be in place to ensure that (i) female participation in such programs is encouraged, (ii) data on all training across RCTRCs are maintained in a sex-disaggregated manner, and (iii) social inclusion and gender-responsive elements are included in training modules. Timely steps taken in this regard will ensure standardized processes, a consistent approach, and sustainable results across all RCTRCs.
- **Recruitment of women staff.** Affirmative measures should be in place to ensure that female candidates are encouraged to apply for positions in rural road network management units and RCTRCs. The office policy should include all necessary provisions applicable for female staff members, including gender-responsive infrastructure.
- **Gender focal points at the project implementation unit.** All PIUs should be mandated to include gender focal points, and this can be uniformly extended to all

PMGSY PIUs as well. Regular training should be planned to build capacities of the gender focal points.

- **Standardized monitoring formats.** Standardized monitoring formats specific to workforce participation, VGRC composition, vulnerable populations including FHHs, linkage with development schemes, etc. can be developed and monitored centrally by NRIDA for all PMGSY roads. This will ensure uniform and consistent reporting on important parameters.
- **Gender capacity building of contractors.** NRIDA should develop and endorse an exclusive training module for all PMGSY contractors on safeguards and gender. The module is to be used for routine training of all PMGSY contractors.

## APPENDIX 1

# Methodological Framework

Assessment Parameter	Methodology	Scope	Guiding Questions
GAP Design	Desk review of relevant documents, questionnaires, and interviews of project staff	Entire project (T1 and T2)	<p><b>Qualitative aspects:</b></p> <ul style="list-style-type: none"> <li>• Is there a clear rationale for involving and benefiting women and other marginalized groups?</li> <li>• Has the GAP design leveraged opportunities by optimizing the provisions as indicated in the Pradhan Mantri Gram Sadak Yojana (PMGSY) document?</li> <li>• Do GAP indicators include baselines and targets? If yes, what is the basis of assigning them?</li> <li>• Is there an effort to include female participation in decision-making?</li> <li>• What are the provisions included for the marginalized females?</li> <li>• GAP: strengths, critiques, and recommendations</li> </ul> <p><b>GAP achievements:</b></p> <ul style="list-style-type: none"> <li>• Cumulative achievements for both tranches</li> <li>• Road-specific achievements for the sample selected (10 roads) for the assessment</li> <li>• Good practices across states</li> <li>• Constraints and opportunities</li> </ul>
GAP Implementation	Desk review of relevant documents, questionnaires, and interviews of project staff	Entire project (T1 and T2)	<ul style="list-style-type: none"> <li>• What is the reporting frequency of state-specific GAP implementation?</li> <li>• How are data collected and reported?</li> <li>• Are there provisions for adequate human resources and budget for GAP implementation?</li> <li>• Are there any data constraints?</li> <li>• What are the challenges in achieving state-specific targets across GAP and gender-specific DMF indicators?</li> <li>• Good practices across states</li> <li>• Constraints and opportunities</li> </ul>
Project Qualitative Results	FGDs with select groups and IDIs with community members	Select roads in each state	<p><b>Focus areas and focus groups in FGDs:</b></p> <ul style="list-style-type: none"> <li>• Health: ASHA workers</li> <li>• Education: ICDS and Sarva Shiksha Abhiyan staff</li> <li>• Economic empowerment: Women SHG members</li> <li>• General benefits to community members: Elected women representatives</li> </ul> <p><b>IDIs:</b> IDIs with community members (female beneficiaries) will focus on socioeconomic benefits.</p>

ASHA = accredited social health activist, DMF = design and monitoring framework, FGD = focus group discussion, GAP = gender action plan, ICDS = Integrated Child Development Services, IDI = in-depth interview, SHG = self-help group, T1 = tranche 1, T2 = tranche 2.

## APPENDIX 2

# Questionnaire for Project Staff

### Instructions:

- The information to be provided are exclusively for tranche 1, 2, and 3.
- Wherever relevant, indicate data source and annex documents.
- Wherever relevant, indicate staff designation, dates of commencement, etc.

### General Inputs

- |           |  |
|-----------|--|
| Tranche 1 | <ol style="list-style-type: none"><li>1. Was there a gender focal point appointed for gender action plan (GAP) oversight?</li><li>2. Was there a gender specialist associated with GAP implementation and reporting?</li><li>3. Who was assigned responsibility for GAP implementation, monitoring, and reporting? Please indicate start date of engagement.</li><li>4. Number of staff training on GAP and number of staff trained on gender</li><li>5. Number of human resources dedicated to GAP implementation, monitoring, and reporting. Please include information on staff with additional as well as exclusive responsibility.</li><li>6. What was the project budget for GAP implementation?</li><li>7. Was sex-disaggregated data maintained for all beneficiary-related activities? Please specify.</li><li>8. Total number of GAP reports submitted along with submission dates (annex reports)</li><li>9. Specify any innovations related to effective implementation of GAP identified and piloted.</li><li>10. Specify women represented in grievance redressal committees (GRCs).</li></ol> |
|-----------|--|

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| Tranche 2 | <ol style="list-style-type: none"><li>1. What was the project budget for GAP implementation?</li><li>2. Was sex-disaggregated data maintained for all beneficiary-related activities? Please specify.</li><li>3. Total number of GAP reports submitted along with submission dates (annex reports)</li><li>4. Specify any innovations related to effective implementation of GAP identified and piloted.</li><li>5. Specify women represented in GRCs.</li></ol> |
|-----------|--|

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| Tranche 3 | <ol style="list-style-type: none"><li>1. What was the project budget for GAP implementation?</li><li>2. Was sex-disaggregated data maintained for all beneficiary-related activities? Please specify.</li><li>3. Total number of GAP reports submitted along with submission dates (annex reports)</li><li>4. Specify any innovations related to effective implementation of GAP identified and piloted.</li><li>5. Specify women represented in GRCs.</li></ol> |
|-----------|--|

### Overall Impact and Case Stories

- |   |  |
|---|--|
| 1 | Specify any impact story related to tranche 1, tranche 2, or tranche 3.  |
| 2 | Identify issues and concerns related to GAP implementation and reporting related to tranche 1, tranche 2, tranche 3. |

## **India Gender Equality Results Case Study—Rural Connectivity Investment Program**

*Connecting People, Transforming Lives*

This publication presents stories that showcase how improved connectivity has transformed lives—especially of women and girls—in rural communities of India. It presents the contributions of the Asian Development Bank’s Rural Connectivity Investment Program (RCIP) in five states: Assam, Chhattisgarh, Madhya Pradesh, Odisha, and West Bengal. Enhanced connectivity has improved people’s quality of life in the five RCIP states and contributed to a range of socioeconomic benefits for the rural communities served. It has also helped advance development goals central to sustainable and inclusive growth.

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