



1. Project Data

Project ID

P107649

Project Name

IN:Karnataka State Highway Improv Pro II

Country

India

Practice Area(Lead)

Transport

L/C/TF Number(s)

IBRD-80220,TF-92428

Closing Date (Original)

31-Dec-2016

Total Project Cost (USD)

295,395,984.11

Bank Approval Date

24-Mar-2011

Closing Date (Actual)

28-Dec-2018

IBRD/IDA (USD)
Grants (USD)

Original Commitment

350,000,000.00

440,000.00

Revised Commitment

295,395,984.11

182,629.91

Actual

295,395,984.11

182,629.91

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2. Project Objectives and Components

a. Objectives

The Project Development Objectives (PDOs) as stated in the Loan Agreement (Schedule 1, page 5) and the Project Appraisal Document (PAD, page v):



"To accelerate the development of Karnataka's Core Road Network through leveraging public sector outlays with private sector financing, and the improvement of the institutional effectiveness of the road sector agencies to deliver effective and safe roads to users".

This review is based on the two objectives: (1) To accelerate the development of Karnataka's core road network through leveraging public sector outlays with private sector financing; and (2) To improve the effectiveness of the road sector agencies to deliver effective and safe roads to users.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

No

c. Will a split evaluation be undertaken?

No

d. Components

There were four components (PAD, pages 8-9).

1. Road Improvement Works. The estimated cost at appraisal was US\$603.00 million. The actual cost was US\$638.82 million. This component aimed at supporting capital improvement and maintenance works of the selected priority Core Road Network (CRN), through a combination of traditional and Public-Private Partnership (PPP) contracts (Design, Built, Finance, Operate, Maintain and Transfer (DBFOMT) concessions).

2. Highway Financing Modernization. The estimated cost at appraisal was US\$374.00 million. The actual cost was US\$280.00 million. This component aimed at assisting the government in implementing the concept of co-financing with private financial institutions through Technical Assistance (TA) and pilot co-financing transactions for the CRN.

3. Road Safety Improvement. The estimated cost at appraisal was US\$13.60 million. The actual cost was US\$9.20 million. This component aimed at assisting the government to address road safety issues through strategic and institutional measures.

4. Road Sector Policy and Institutional Development. The estimated cost at appraisal was US\$11.80 million. The actual cost was US\$8.10 million. This component aimed at supporting the implementation of a new medium-term Institutional and Strengthening Action Plan for 2010-2016.

This component was not specified in the loan agreement.

Project Management. The estimated cost at appraisal was US\$2.00 million. The actual cost was US\$6.10 million, more than three times the appraisal estimate. This component provided financing for establishing a Project Management Unit (PMU).



e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project cost. The estimated cost at appraisal was US\$1,005.00 million. The actual cost was US\$942.10 million. The difference between the appraisal estimate and actual cost was due to exchange rate changes during implementation.

Project financing. The project was financed by an IBRD loan of US\$350.00 million and the Global Road Safety Facility Trust Fund (TF) of US\$0.40 million. Amount disbursed of the loan US\$295.30 million. Amount disbursed of the TF US\$0.10 million. The difference between the appraisal estimate and actual disbursement was due to exchange rate changes during implementation. There was parallel financing for complementary road safety activities from the Asian Development Bank (ADB).

Borrower contribution. Contribution from the government was estimated at US\$155.00 million at appraisal. Their actual contribution was about 60% more than planned at US\$246.70 million. Contribution from foreign private commercial sources was estimated at US\$500.00 million. Their actual contribution was US\$416.00 million.

Dates. The project approved on March 24, 2011, became effective four months later July 17, 2011, and was scheduled to close on December 31, 2016. The project closed two years behind schedule on December 28, 2018.

Other changes. These changes were made through a Level 2 restructuring on May 23, 2016.

- The closing date was extended by two years for completing ongoing activities.
- The targets for some indicators were changed. The target for generating at least US\$500.0 million in new private sector capital for the CRN was revised downwards to US\$400.0 million, as two roads that were to be under PPP concessions, did not receive bids that met the Value-for-Money threshold of the government. These roads were hitherto to be upgraded through traditional contracts. With this change, the target for upgrading roads through traditional contracts was increased from 269 Kilometers (Km) to 534 km and the target for upgrading roads through PPP concessions, was reduced from 562 km to 301 km. The target at appraisal for operation and maintenance of roads through co-financing arrangements was reduced from 400 km to 363 km, following detailed techno-feasibility studies.
- The closing date for two covenants was extended to December 31, 2017.
- Funds were reallocated between categories.

Split rating. A split rating was not conducted, given that only one target was revised among other outcomes and applying a split rating would not affect the rating for the achievement of outcomes.

3. Relevance of Objectives

Rationale



Country context. At appraisal, road development in Karnataka State, located in the southwest of India, lagged the growth in vehicle registration. As compared to 70% of the national highway road network, only 35% of state highways and 25% of major district roads were reported to be in good/fair condition. On the road safety front, a combination of factors, including an inadequate enforcement system and growing motorization, contributed to road safety issues, with the state accounting for about 7% of the road fatalities in the country.

Government strategy. The Government's Eleventh Five Year Plan (2007-2012), highlighted the need for leveraging private sector financing for infrastructure development. Karnataka government's Infrastructure Policy of 2007 articulated a PPP policy, for enabling the Karnataka Road Development Corporation Limited (hereafter referred to as KRDC), undertake road projects through PPP contracts. In July 2010, the Karnataka government enacted a tolling policy, allowing KRDC and private concessionaires to toll state highways and major district roads. The government's Medium-term Institutional and Strengthening plan for 2010-2016, aimed at road sector reforms and institutional development of the sector. Alongside this, the government took measures to improve road safety, that were in line with the recommendations of the Sundar Committee report on Road Safety and Traffic Management in India. The Government of Karnataka's *Vision 2020* document issued in 2010, highlighted the need for developing infrastructure to boost the state's productive potential and for institutionalizing good governance across the state through enhancing transparency, accountability and public participation.

Bank strategy. The PDOs are well-aligned with the Bank strategy. At appraisal, the Country Assistance Strategy for 2009-2012, supported infrastructural development and highlighted the need for providing knowledge and lending solutions, matching the needs of a middle-income country and addressing road safety issues. The first engagement area of the Country Partnership Strategy for 2013-2017, underscored the importance of physical connectivity within the country. The CPS noted that India's infrastructure needs could not be addressed through public physical investments alone, and that private participation was required for rehabilitating highways (CPS, page 8). The second focus area of the Bank's current Country Partnership Framework (CPF) for 2018-2022, reiterated the need for enhancing competitiveness, through addressing connectivity constraints and leveraging private sector financing through PPP arrangements (CPF, page 17). The current CPF also articulated the need for interventions aimed at improving road safety.

This project aimed at consolidating the results of a prior Bank-financed project (First Karnataka State Highway Improvement Project), which improved 2,385 km of state highways and major district roads. The implementation arrangements of this project were similar to the prior project, rated as satisfactory by the Independent Evaluation Group's (IEG) review of the project.

Rating

High

4. Achievement of Objectives (Efficacy)



OBJECTIVE 1

Objective

To accelerate the development of Karnataka's core road network through leveraging public sector outlays with private sector financing.

Rationale

Theory of change. The causal links between project activities, outputs and outcomes were logical, and the intended outcomes were monitorable. Capital improvement activities for upgrading the CRN through traditional and PPP contracts, together with institutional strengthening activities (such as, developing a tolling strategy, preparing a medium-term financing plan and maintaining non-rural roads through co-financing), were likely to mobilize private-sector financing. The outputs of these activities can be expected to increase the share of roads in good/fair condition and thereby aid in lowering transport and travel time costs.

Outputs (ICR, pages 9 -11 and pages 28-38).

- Advisory services provided under the auspices of this project, enabled Karnataka Public Works, Ports and Inland Water Transport Department (hereafter referred to as KPWD), to prepare a plan for improving 24,800 kilometers (km) of the CRN. This plan included a financing strategy for mobilizing private financing from domestic financial institutions and an innovative structure for term loan repayment by securitizing revenue from toll proceeds.
- 831 km of the CRN were upgraded to bituminous layer to two-lane carriageway, at closure, slightly short of the revised target of 845 km. This included 503 km of roads under traditional contracts (as compared to the revised target of 534 km) and 300 km through DBFOMT concessions (as compared to the target of 301 km). The ICR (paragraph 21) notes that the KRDCL mobilized about US\$97.00 million from the private sector, representing about 60% of the construction costs of the roads (with the balance 40% coming from the bank loan and co-financing from a commercial bank). The ICR (paragraph 19) notes that these roads had been handed over to KPWD for regular maintenance. The DBFOMT approach was tested for the first time in the project. The concession period of these contracts was ten years and they were under the operation and maintenance phase of eight years when the project closed. The work on the remaining 19 km of road was delayed due to pending land acquisition issues when the project closed (discussed in section 10a). According to the information provided by the team, the work on the remaining roads were expected to be completed by the end of December 2019.
- 1,078 km of non-rural roads were rehabilitated as targeted.
- These activities were completed as targeted: (i) Financing strategy for the CRN: and (ii) White paper on KRDCL financial policy, corporate governance and KRDCL reorganization.
- About 0.83 million person-days of unskilled employment opportunities were created. Of these, 69% were local workers (including 17% women).
- According to the ICR (page 30) 93% of the land acquisition and resettlement activities of the project were completed as compared to the target of 100%.
- A HIV/AIDS prevention program was completed through iterative and sensitization sessions. About 55,000 local villages and about 6,000 construction workers were reached through the campaign in 75 locations.

Outcomes.



- 70% of the total classified road network (24266 km) were reported to be in good/fair condition (with an international roughness index less than four), at closure. This exceeded the target of 50% (19735 km).
- Karnataka government generated US\$416.5 million from the private sector by end of the project. This exceeded the revised target of US\$400.0 million but was below the original target of US\$500 million.
- Travel time on project roads decreased by 30% to 40% at project closure (as compared to the target of 25%) at project closure. The vehicle operating cost on project roads decreased by 19% (as compared to the target of 15%).

Rating

Substantial

OBJECTIVE 2

Objective

To improve the effectiveness of the road sector agencies to deliver effective and safe roads to users.

Rationale

Theory of change. The causal relationship between project activities, outputs and outcomes were logical and the intended outcomes were monitorable. Creating an lead agency for specifically addressing road safety issues, training and capacity building of the agency staff and implementing a multi-sector safe corridor demonstration program, were expected to improve the effectiveness of road sector agencies to provide safe roads and these were expected to reduce road accidents.

Outputs.

- The upgraded roads described above, were constructed with enhanced road safety measures (such as adequate signage and markings, dedicated traffic lanes delineated by raised pavement markers, grade separated pedestrian crossings, footpaths and junction designs, paved shoulder) and other safety devices, according to the safety standards prescribed by the Indian Road Congress.
- Karnataka adopted a Road Safety Policy aimed at reducing road accidents and road fatalities by 25% and 30%. This policy is currently being implemented by the newly-created Traffic and Road Safety cell. Karnataka established a Karnataka State Road Safety Authority to oversee the Road Safety program as targeted and established a separate budget for the program.
- KPWD adopted standard operating procedures and protocols for identifying and rectifying blackspots and prepared a yearly rectification program. About 143 blackspots were treated in 2018-2019.
- A road safety demonstration corridor was implemented on a stretch of 62 km of roads as targeted. The corridor comprised: (1) *Engineering measures* (40 major and minor junctions, traffic signs, cycle tracks, footpaths, three truck laybys, metal crash barriers, speed calming measures, bus shelters, thermoplastic bar marking, solar traffic signals and raised pavement markers); (2) *Enforcement measures*, including equipment for the police (such as breath analyzers, laser speed guns, defibrillators and digital cameras), speed limit restrictions, post-crash traffic management and investigation of accidents; (3) *educational measures* (community awareness and outreach through media brochures and short films, placing traffic wardens outside schools, traffic parks and



training Institute for drivers): and (4) *health care measures* (framework for strengthening post-crash management). A communication campaign was organized to spread awareness among road-users.

- A Medium-term Institutional and Strengthening Action Plan was developed for the KPWD for 2010-2016 as targeted for funding state highway corridors. The project contributed to the following key areas of the plan: (1) *Business process effectiveness* (such as, International Organization for Standardization (ISO) certification, environmental management, revised Departmental Code, and Online Project Management System): (2) *Asset sustainability* (such as, a Planning and Road Asset Management Center, Karnataka Road Asset management System, budget allocations based on the Karnataka Road Asset Management System, road inventory and condition database of the road network): (3) *Performance and accountability* (advanced level equipment for quality control, online grievance redressal system and two rounds of user satisfaction surveys: and (4) *Human resources* (training needs assessments, three-year training plan and cloud-based E-Learning Management system).

Outcomes.

- Road accidents in the road safety demonstration corridor pilot site reduced by 60%. Fatalities on the corridor reduced by 41% when the project closed in December 2018, exceeding the target of 21%.

Rating

Substantial

OVERALL EFFICACY

Rationale

The project achieved its intended outcome of leveraging public sector outlays with private sector financing in the road sector and addressing road safety issues in the demonstration corridor. Overall, except for minor shortfalls in meeting some physical targets, the project met the target of all the key outcome indicators. In view of these factors, overall efficacy is rated as substantial.

Overall Efficacy Rating

Substantial

5. Efficiency



Economic analysis. An economic analysis was conducted at appraisal and at closure, for activities associated with upgrading the roads, using the Bank's Highway Development and Management Model (HDM -4). These activities accounted for 97% of the project cost. The project benefits were assumed to come from savings in vehicle operating costs, travel time savings and lower maintenance costs. The Net Present Value (NPV) at 12% discount rate was US\$835.2 million and the average ex post Economic Internal Rate of Return (EIRR) was 32%, as compared to the ex ante EIRR of 30%. All corridors were economically viable. The difference between the ex post EIRR and the ex ante EIRR was due to the higher than anticipated traffic rates on project roads at closure.

Administrative and operational issues. The project timeline was extended by two years. The time overruns in civil works were about 13 months on average. However, innovative contracting approaches resulted in significant reduction in time overruns (only seven percent against the traditional item-rate contracts in which the maximum time overrun was 183%). The roads constructed under DBFOMT contracts were for the most part completed as scheduled and in some cases ahead of schedule. Disbursements in the initial years were slow, with only 16% disbursement in three years of implementation. This was due to a combination of factors: (i) land acquisition and resettlement issues, due to frequent transfers of key staff, inadequate coordination between the engineering and land acquisition/resettlement staff, delays in land acquisition and resettlement compensation, that were exacerbated by India's new acquisition act. (ii) delays in preparing PPP contracts (as there were no readily available documents for this type of contracts) and delays in finalizing the Value-for-Money methodology (this model was being piloted for the first time in India). Two of the initially envisaged PPP contracts had to be converted to traditional contracts due to inadequate market response, and this contributed to a gap of two years between project conceptualization and commencement of works: and (3) frequent turnover of the PMU staff and delays in creating the Traffic and Road Safety Cell. These factors were however rectified, following the recommendations of the Mid-Term Review. Although most of the activities were completed at closure, with the extension of the closing date, some resettlement issues were pending (discussed in section 10a).

In sum, while there were some administrative and operational issues, efficiency is rated as substantial, given the robust economic justification for the project.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	30.00	97.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	32.00	97.00 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.



6. Outcome

The relevance of the PDO is rated as high. Efficacy of the two objectives - to accelerate the development of the core road network through leveraging private sector financing and to improve the effectiveness of the road sector agencies to deliver effective and safe roads to users - are rated as substantial, as the outcomes were realized. Efficiency is rated as substantial, in view of the economic justification for the project. Taking these ratings into account, outcome is rated as satisfactory.

a. Outcome Rating

Satisfactory

7. Risk to Development Outcome

Institutional risk. Roads improved under this project are likely to be sustained for their designed surface life, in view of the built-in-long- term maintenance provisions in the DBFOMT annuity contracts (ICR paragraph 67). The project management systems and tools are also likely to be sustained, given that these were customized to the requirements of the state funded works of KPWD. There are risks associated with financing the maintenance of state highways and major district roads, since only 53% of the road user charges in 2009 (as compared to 34% in 2004-2005), are returned by the government for funding road maintenance activities.

8. Assessment of Bank Performance

a. Quality-at-Entry

This project was prepared based on the lessons from the prior Bank-financed project (the Karnataka State Highway Improvement project). Lessons incorporated, included implementing institutional and policy reforms in a phased, incremental manner and integrating environmental management plans with construction contracts to improve compliance (PAD, paragraphs 46 -48). Early during preparation, the team assisted KPWD in securing a Public Private Infrastructure Advisory Facility (PPIAF) grant for preparing a road sector financing strategy (including through leveraging private sector financing). The preparation team also secured a Global Road Safety Partnership Grant for road safety initiatives. Several risks were identified at appraisal, including uncertainty regarding the market response for PPP contracts, risks associated with implementing sector reforms and risks associated with a multi sectoral road safety agenda. Mitigation measures incorporated at design, included using traditional contracts if PPP arrangements proved to be infeasible and setting a lead agency for specifically addressing road safety issues. With mitigation measures, the project risk was rated as Medium (PAD, page 57). The implementation arrangements were appropriate - with the Project Implementation Unit (PIU), housed in the KRDCL, the main implementing agency. Many of the PIU staff, had been responsible for executing the prior Bank-financed project and were familiar with Bank's fiduciary procedures. The arrangements



made at appraisal for monitoring and evaluation (discussed in section 9) and safeguards and fiduciary compliance (discussed in section 10), were appropriate.

There were minor shortcomings at Quality-at-Entry. The design underestimated the time taken for some project activities, which were the first of its kind in Karnataka. The delays in finalizing and awarding PPP contracts, co-financing arrangements, and land acquisition and resettlement issues, contributed to the two-year extension of the project closing date.

Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

Fourteen implementation support missions were conducted over the project lifetime of nine years, implying on average, twice a year supervision missions. The missions were supplemented by interim missions and technical visits (ICR, paragraph 63). The supervision teams were multi-disciplinary and aided in identifying problems and providing solutions for issues that hindered implementation (such as, co-financing arrangements for maintaining non-rural roads from commercial banks and non-banking financial institutions) and by recommending solutions to improve performance (such as through finalizing the Value for Money methodology and addressing deficiencies associated with design in the road safety demonstration corridor). The support supported by the team aided in completion of most activities, albeit with some delays. There was continuity of leadership and knowledge, with most of the team members involved in the prior-Bank financed project, retained for this project. Although only about 16% of the loan was disbursed in nearly three years of implementation, the Mid Term Review (MTR) was a turning point. Following the MTR in 2014 which identified the adjustments needed for the project, the project was appropriately restructured in 2015. This aided in expediting implementation in the latter years of the project. The Bank team played a useful role in coordinating with the Asian Development Bank and other donors involved with the road safety TA.

The resettlement activities were not fully complete when the project closed. The ICR (paragraph 65) notes that the team will continue to monitor the completion of the remaining activities relating to land acquisition and resettlement.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization



a. M&E Design

The key outcome indicators were appropriate for monitoring performance. The three indicators - increase in the share of the core road network in good/fair condition, increase in private sector contribution to the CRN, reduction in vehicle operating cost and travel time cost on the corridors - were appropriate for monitoring performance with respect to the first PDO. The reduction in road-accident related fatalities on the safe corridor project, was appropriate for monitoring project performance with respect to the second PDO. The M&E design could have benefitted from additional indicators aimed at monitoring the institutional dimension of the project (such as financial viability of the KRDCL) and the extent to which road user charges are returned to the KRDCL for financing the maintenance of the road assets to date).

The baseline data had been collected at appraisal. The M&E design also envisioned three rounds of road user satisfaction surveys (one at project start, one at mid-term and one at project closure).

b. M&E Implementation

The results framework was adjusted in response to the market response to PPP contracts. The ICR (paragraph 47) notes that although there were data collection issues initially, these were rectified. The ICR also notes that the quarterly progress reports (including the Mid-Term Review report), were provided to the Bank in a timely fashion. A project management system was developed during implementation to monitor the physical and financial progress of all components. An impact evaluation study was conducted at closure to assess the impact and outcome of land acquisition.

As compared to the planned three road user satisfaction surveys, only two were conducted (at the start and at mid-term). There was no final round of survey at closure as planned. An impact evaluation study was conducted at project closure to assess the impact of land acquisition (discussed in section 10a).

c. M&E Utilization

The online project management system developed under the project to monitor performance, continues to be used for monitoring KPWD works to date (ICR, paragraph 49). This information can also be publicly-accessed through the websites of KPWD and KRDCL

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards



The project was classified as a Category A project under World Bank Safeguard policies. Four safeguard policies were triggered at appraisal: Environmental Assessment (OP/BP 4.01); Forests (OP/BP 4.36); Physical Cultural Resources (OP/BP 4.11); and Involuntary Resettlement (OP/BP 4.12). No other safeguard policies were triggered during implementation (ICR, paragraph 14).

Environmental safeguards. The PAD (paragraph 65) notes that adverse environmental impacts were expected to be minor, as the project roads were not in environmentally-sensitive areas. An Environmental Assessment (EA) of selected roads was conducted at appraisal. Independent consultants conducted a review of the EA, given that it was a category A project. The review concluded that the EA process complied with the Bank's environment guidelines (PAD, paragraph 65). An Environmental Management Plan (EMP) and corridor-specific EMPs were prepared and publicly-disclosed at appraisal. The ICR (paragraph 53) notes that there was compliance with environmental safeguards.

Forests. The ICR (paragraph 52) notes that about 10.57 hectares of forest land was taken over after obtaining statutory clearances from the authorities. The ICR (paragraph 52) notes that compensatory tree plantation was carried out along the project corridors. Over 153,000 saplings were planted against a plan of over 223,000. The ICR (paragraph 57) notes that the tree planting activities were subject to delays due to a combination of factors, including insufficient availability of samplings and weather conditions. The ICR notes that the planting of the remaining saplings are to be completed by December 2019.

Physical cultural resources. The ICR does not provide any information on whether there were any issues pertaining to physical cultural resources during implementation.

Involuntary resettlement. The PAD (paragraph 64) reports that a Resettlement Policy Framework (RPF) and a Resettlement Action Plan was prepared and publicly-disclosed. The project was expected to require 602 acres of private land, affecting about 6,800 landowners. In addition, about 2,200 informal settlers were to be affected (this included physical displacement of about 200 households, of whom 140 were informal settlers) (ICR, paragraph 54). The ICR (paragraph 56) notes that implementation of land acquisition and resettlement faced several challenges during implementation, including delays in land acquisition, problems in dealing with Non-Governmental Organizations (NGOs).

The ICR (paragraph 57) notes some of the good land acquisition and resettlement practices in the project included: (i) establishment of a dedicated land acquisition units within the Project Implementation Unit and the KRDCL for faster land acquisition; (ii) developing resettlement sites wherever possible to resettle displaced families; (iii) quick alignment with India's new land registration provisions which came into effect in 2014; (iv) providing an additional 25% compensation as an incentive; (v) using NGOs to support the Project Affected People (PAP), and using independent consultants for monitoring of land acquisition and resettlement activities; (vi) regular updating of resettlement unit costs for inflation adjustment; and (vii) social inclusion of informal settlers for resettlement assistance.

Two impact evaluations on land acquisition and resettlement implementation were conducted by independent consultants (one in Mid-term in 2014 and one in 2019). The key findings of the impact evaluation conducted in 2014 were: On the positive side, there was overall improvement in living standards, with respect to average incomes and the average size of the new houses. However, over 90% of PAP were not satisfied with the compensation amounts and about 20% had approached the courts for resolving compensation amounts. The impact evaluation conducted in 2009 was carried out through a sample household of 700 PAP households in project-intervened areas. A survey of a smaller sample of 110 households from controlled population was carried out to compare the current living standards of PAPs with



a population with similar socioeconomic background in the project area. The study showed a significant improvement in the overall living conditions of the resettled households under the project. 69% of the project households rated it satisfactory.

93% of the land acquisition activities had been completed at closure. The ICR (page 61) notes that as of June, 2019, there were some pending land acquisition and resettlement issues. This included on the project side: (i) additional land acquisition of 6.23 acres in 15 villages identified recently for drain improvements: (ii) outstanding compensation payments to 21 land owners whose compensation were expected to be announced shortly: (iii) resettlement assistance payments to six families: and (iv) issue of ownership titles to 27 families in a resettlement site.

b. Fiduciary Compliance

Financial management. A financial management assessment of the PIU and the KRDCCL was conducted at appraisal. The PIU staff had experience with executing the prior Bank-financed project and the financial management system of KRDCCL, a government-owned corporation, was deemed to be adequate. The assessment concluded that the arrangements were adequate, and the financial management risk was rated as moderate at appraisal (PAD, paragraph 54). The ICR (paragraph 58) notes that financial management was deemed to be satisfactory during implementation and that the internal and external audits were submitted in a timely fashion. According to the information provided subsequently by the team, the audits were unqualified.

Procurement management. A procurement assessment of the implementing agencies conducted at appraisal, concluded that the procurement arrangements were satisfactory at appraisal. Many of the staff had experience in handling procurement functions (PAD, paragraph 61). A procurement plan was prepared at appraisal and the plan was to be updated during implementation to reflect actual project needs. The ICR (paragraph 59) notes that there were some procurement issues during implementation, such as delays in preparing procurement documentation, slippages in procurement time lines for consultancy services and goods and issues pertaining to contract management. There were no reported cases of mis-procurement.

c. Unintended impacts (Positive or Negative)

d. Other

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	



Bank Performance	Satisfactory	Satisfactory
Quality of M&E	Substantial	Substantial
Quality of ICR	---	Substantial

12. Lessons

The ICR draws the following main lessons from the experience of implementing this project, with some adaptation of language.

1. Adequate resources and time are required for planning and preparing innovative and complex initiatives on civil works for institutional strengthening. The experience of this project demonstrated that the design underestimated the time required for preparing bid documents and terms of reference by institutions who were not familiar with the DBFOMT approach. These factors contributed to delays in implementation.

2. There can be several benefits from new contracting structures and incentive systems. The new contracting structure (modified annuity and co-financing projects) in this project resulted in a substantial reduction and elimination of time and cost overruns as compared to the prevailing predominant contracting mode (that is, item rate contracts). The long-term concessions provided for good operation and maintenance of the road assets in the post-construction period.

3. Physical/engineering improvements are necessary but may not be enough for addressing road safety issues. The experience of this project demonstrated that engineering improvements at the network level, need to be complemented by robust programs for enforcement, education and awareness, with coordinated efforts from all stakeholder departments to address road safety issues.

4. Environmental management can be facilitated when it is integrated as part of the construction contracts. The experience of this project demonstrated that implementation of environmental measures during construction is likely to be more effective if integrated as part of the construction contracts.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is well-written and provides a clear narrative of the issues during implementation. It candidly discusses the problems encountered in implementing what was an innovative scheme in the state. It is also candid in discussing the issues associated with land acquisition and resettlement. The ICR is consistent with the guidelines both with respect to ratings and the performance narrative and provides enough evidence to support the achievements. The economic analysis provided in annex five of the ICR is detailed and informative and the ICR provides a useful comparative assessment of other state initiatives in India in annex eight.



The ICR could have been more concise. The main text of the ICR at 24 pages is more than the recommended length of 15 pages.

a. Quality of ICR Rating
Substantial