Report Number: ICRR0021663

1. Project Data

Project ID	Project Name
P110371	IN: Sustainable Urban Transport Project
Country	**Practice Area(Lead)**
India	Transport

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
IBRD-78180	30-Nov-2014	105,516,222.00
Bank Approval Date	**Closing Date (Actual)**	
10-Dec-2009	31-Mar-2018	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	105,230,000.00	0.00
Revised Commitment	88,821,782.08	0.00
Actual	88,821,782.08	0.00

Prepared by	Reviewed by	ICR Review Coordinator	Group
Victoria Alexeeva	Peter Nigel Freeman	Ramachandra Jammi	IEGSD (Unit 4)

Project ID	Project Name
P100589	IN: Sustainable Urban Transport Project (P100589)

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
TF-95549		16694439.92
Bank Approval Date	**Closing Date (Actual)**	
10-Dec-2009		

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	0.00	18,450,000.00
Revised Commitment	0.00	16,694,439.92
Actual	0.00	16,694,439.92

2. Project Objectives and Components

a. Objectives

The project development objective (PDO) was “to promote environmentally sustainable transport nationally and to improve the usage of environment-friendly transport modes through demonstration projects in selected cities”. (Loan Agreement dated February 5, 2010, page 5)

The PDO statement in the Project Appraisal Document (PAD, page 6) was essentially the same; it clarified that it was to promote environmentally sustainable urban transport in India and to improve the usage of environmentally friendly transport modes in project cities.

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

Yes

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

Yes

Date of Board Approval

17-Nov-2015

c. Will a split evaluation be undertaken?

No

d. Components

Component 1: Capacity Development Assistance for Urban Transport (appraisal US$7.8 million; actual US$4.37 million) was designed to provide technical assistance to the Ministry of Urban Development (MoUD) to improve national, state and local capacity to implement the National Urban Transport Policy. It included: (i) development of implementation strategies and plans to implement key urban transport reforms envisioned in the National Urban Transport Policy; (ii) piloting model urban transport databases; (iii) assisting cities in the identification and preparation of potential environmentally friendly urban transport investments; and (iv) developing a national/local government cooperative research program on sustainable

urban transport, aiming at finding local solutions for planning, operation, and management problems encountered by local practitioners.

Component 2: City Demonstration Projects (appraisal US$336.8 million; actual US$311.3 million) supported design and implementation of demonstration projects in six selected cities (in five participating states) that would create models of sustainable transport solutions for other Indian cities to replicate. These projects would focus on four themes: (i) Public transport development; (ii) Non-motorized transport development; (iii) Pilot Intelligent Transport System (ITS); and (iv) Integrated land use and transport planning and transit-oriented development. The six cities, selected by the Government of India (GOI) through a competitive selection process, include Pune and Pimpri-Chinchwad (in Maharashtra), Naya Raipur (in Chhattisgarh), Jalandhar (in Punjab), Indore (in Madhya Pradesh), and Mysore (in Karnataka).

Revisions under Components:

In 2012, under Component 2: (i) the Pune City (in Maharashtra) was replaced by a new city Hubli-Dharwad (in Karnataka), due to the lack of progress under the former one; (ii) other works associated with implementation of the bus rapid transit system in Pimpri-Chinchwad, Government of Maharashtra, were cancelled.

In 2015, a public bike sharing sub-project was added for Mysore as a new subcomponent under the City Demonstration Projects Component that would include bicycles, centralized control centre, docking stations and technical assistance for promoting sustainable urban transport in the city. Support to non-motorized transport (NMT) was expanded, from the funds committed to Jalandhar that was dropped at the time of project approval; the traffic signal priority was dropped from Indore's Intelligent Transport System (ITS) scope, as it had been implemented through government own funds, and an Automatic Vehicle Location System (AVLS) was added.

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

Project cost: The total project cost at closure was US$318.67 million, 8% lower than the appraised estimate of US$346.8 million.

Financing: The project was financed through the blend of an IBRD loan of US$105.23 million and a Global Environment Facility (GEF) grant of US$20.3 million administered by the World Bank. The IBRD loan was to finance activities under Component 2 in three pilot cities: Pune, Pimpri-Chinchwad, and Naya Raipur. The GEF grant was to finance Component 1 and technical assistance activities in all six cities participating under Component 2. At closure, the IBRD loan disbursed at US$88.82 million and the GEF grant- at US$16.7 million.

Borrower contribution: The GoI contributed US$40.31 million as compared to its commitment of US$61.6 million, including US$8.4 million from the Ministry of Urban Development (MoUD) (PAD, page 7). The

contribution for States was US$126.55, as compared to the estimated US$68.1 million. The cities contributed US$46.3 million, as compared to the estimated US$93.3 million. Overall, the total contribution from the Borrower was US$213.16 million, as compared to the estimated commitment of US$223.1 million.

Dates: The project was extended twice by a total of 3 years and four months- by one year in 2012 at the time of inclusion of Hubli-Dharwad, and the second time by 28 months in 2015 due to delays in completion of five of the six demonstration projects. Overall, the project was restructured five times during the implementation period that included the revision in activities (described above in Section 2d), modification of the results framework (see Section 9), and reallocation of the GEF grant between the project implementing units (PIUs).

3. Relevance of Objectives

Rationale

At appraisal, rapid urbanization in India was accompanied by growth in traffic volumes and congestion, increased air pollution, and more traffic accidents. The increasing mode share by private vehicles contributed to increasing greenhouse gas (GHG) emissions. Only 20 of the 87 cities with over half a million population had an organized public transport system; and if the trends continued, GHG emissions would be 8-10 times higher by 2030. The institutional arrangements for urban transport management in India were characterized by high fragmentation and often overlapping functions. Since 2006, the MoUD has been working with a number of states and cities to develop an India-GEF-World Bank-UNDP Sustainable Urban Transport Program (referred as the SUTP Program). The aim was to strengthen the national and local governments capacity in urban transport planning and management in a more integrated and comprehensive manner (PAD, pages 1-3). The project supported the implementation of India National Urban Transport Policy (NUTP), particularly those aspects of the policy that emphasized: (a) priority to the use of public transport; (b) priority to non-motorized transport; and (c) capacity building for developing and implementing sustainable transport systems (at both national and local levels) (PDA, p.6).

The PDO remained consistent with the government strategic goals in support of urban transport defined in the GoI's 12th Five Year Plan and the WBG Country Partnership Framework in India (FY18–FY22), in particular to help cities become more green, livable, productive, and resilient by investing in affordable and sustainable public transport services, including mass rapid transit systems in large cities, as well as improving management systems for controlling air pollution in select cities - as specified under one of the WBG engagement focus areas of promoting resource-efficient growth (CPS, FY18-FY22).

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To promote environmentally sustainable transport nationally.

Rationale

The theory of change was that capacity building, knowledge exchange and training program would lead to better understanding and ability to implement environmentally sustainable urban transport at the national level. The project team clarified that the activities focused on building capacity at the national, state and city level (looking beyond the demo cities at cities across India) with a focus on support to cities and states in areas of the reform (as part of the Guidance Document preparation) and preparation of sustainable urban transport projects and approaches (through LUTP training program).

* A split-rating assessment is not applied as the original outcome indicator was revised for clarification and better measurement of the TA activities implemented by the project.

Outputs

7 guidance documents were developed for cities:

- Guidance documents for setting up and operationalizing the Unified Metropolitan Transport Authority (UMTA) and the Urban Transport Fund (UTF) (city specific support to Amravati, Bhopal, Hyderabad, Kochi, Lucknow, Jaipur, Tiruchirapally)
- Guidance documents for setting up and operationalizing Traffic Control Centers and National Urban Transport Helpline (city specific support to Ahmedabad, Delhi, Guwahati, Mumbai)
- Guidance documents for ToD, public bike sharing, and nonmotorized transport (city specific support to Bhopal, Mumbai, Vadodara, Gurgaon, Aizawl and Vizag);
- Model contracts and guidance documents for private operation of city buses (city specific support to Jalandhar, Kochi, Mira Bhayandar).

Training under the Leaders in Urban Transport Planning (LUTP) program was carried out and included the participation of 207 senior officials in the international offerings and a further 242 officials in the course organized in the India Chapter at Centre for Environmental Planning and Technology (CEPT) University (Ahmedabad). This represented a total of 449 officials across India covering over 47 cities and 29 states.

Outcome

As a result of the LUTP training program or the city-specific support under the guidance document preparation, the ICR reports that 16 environmentally friendly urban transport practices and approaches were adopted by the respective national, state, and city officials, as compared to the target of 6. This outcome indicator was modified from the original one, as it was difficult to measure and not fully representative of the activities proposed under the capacity building component. The ICR (Annex 7) reports the following results:

- 7 projects and approaches initiated under LUTP program were adopted by the cities (based on a review of the LUTP achievements in 2017). These were (I) implementation of strategies to decongest Delhi Metro in peak hours (covering differential pricing, multiple interchange points); (ii) revitalizing city bus in Nagpur; (iii) Ccreating transit-oriented zones in Ahmedabad; (iv) policy guidelines for electric rickshaw; (v) improving pedestrian infrastructure in Aizawl; (vi) water metro system in Kochi; and (vii) driver training in Delhi Transport Corporation to reduce road fatalities (fatal accidents fell from 73 to 28 between 2012 and 2018).
- 4 cities proceeded with various reforms (3 on UMTA and 1 on ToD) based on the technical assistance provided as part of the city-specific support under guidance documents: (i) Kerala Metropolitan Transport Authority Act covering Kochi, Trivandrum, and Calicut passed by the Legislative Assembly of Kerala subject to suggestions by Select Committee; (ii) ToD policy issued for MRT investments in Madhya Pradesh.
- 4 cities (Bhopal, Chandigarh, Jaipur, and Mira-Bhayandar) proceeded to implement city bus modernization programs under the approved GEF Efficient and Sustainable City Bus Services project (P132418) in line with the preparation support extended.
- MoHUA released a ToD Policy for MRT systems based on the ToD Guidance Document developed. This is applicable on all rail- and non-rail-based MRT projects with national government support.

Rating
Substantial

OBJECTIVE 2
Objective
To improve the usage of environment-friendly transport modes through demonstration projects in selected cities.

Rationale
The theory of change was that through investments in public and non-motorized transport in six cities would improve the usage of environment-friendly transport modes, as evidenced by increase in their mode share and decrease in GHG emission reduction in the selected cities.

Outputs

The originally selected cities were Pune and Pimpri-Chinchwad (in Maharashtra), Naya Raipur (in Chhattisgarh), Jalandhar (in Punjab), Indore (in Madhya Pradesh), and Mysore (in Karnataka). The support in Pune was dropped for slow progress, and the city of Hubli-Dharwad was added. Jalandhar was dropped subsequent to negotiations and did not become part of the approved project (ICR, para 12).

1. In Pimri-Chinchwad,

- One BRT corridor was operational at project closure against the targeted two.

2. In Naya Raipur,

- 2 public transport corridors were built, and in operation between Naya Raipur and Raipur, as planned. One corridor was a BRT -Lite system and the other had an ordinary bus service. 68 km of footpath and cycle tracks were built in Naya Raipur. The target was 36km, and the ICR reports that the city used its own funds to build additional kms.

3. In Hubli-Dharwad,

- The BRT system was constructed as planned but with a delay. It began trial runs in October 2018, after project closure. Footpaths, foot-over-bridges and access at intersections were built.

4. In Mysore,

- The Intelligent Transport System (ITS) system was installed on city bus transport and is operational. It is utilized to improve the overall system performance 93% of its intended of revenue vehicle km of service, against the target of 80%.
- A public bike sharing system became operational in June 2017. It become the first citywide system to be launched in India. The ICR reports that the feedback was positive and it informed the design and launch of other systems in the country.

5. In Indore,

- The ITS system was installed on the BRT system as planned and is operational. It is utilized for 98% of its intended of revenue vehicle km of service, against the target of 80%.

Outcome

- In Pimpri-Chinchwad, the public transport mode share increased from 4.2% in 2009 to 8.8% in 2018, as compared to the target of 8%. The ICR (para 23) reports that roughly 28% of the shift was from personal modes. The shift from car users in the post BRT scenario shows an increasing trend from 3 percent in 2016 to 8 percent in 2017. The user satisfaction is reported to have been improved. The percentage of women using the BRT has increased compared to the pre-BRT services (from 33 percent to 36 percent on Corridor 2 and from 23 percent to 32 percent on Corridor 3) (the ICR, para 30).
- In Naya Raipur, the public transport trip mode share between Raipur and Naya Raipur increased by 42.4 % that exceeded the revised target of 40% but was slightly below the original target of 50%. The share of women passengers has grown from 26.2 percent to 28 percent. At appraisal, as clarified by the project team, the state capital of Naya Raipur was not functional and state headquarters continued to operate out of Raipur, the trips between Raipur and Naya Raipur were insignificant and public transport mode share negligible or zero.
- In Hubli-Dharwad, the public transport mode share data are not available as the Hubli-Dharwad BRT system became operational at project closure (the target was 33%). The ICR reports (page 14) that preliminary surveys suggest that 18 percent of the shift to BRTS is from personalized modes of which

9 percent are car users. The user feedback is positive, and ratings are especially high with regard to travel time savings, reliability, and facilities.

- The reduction in Co2 emissions in the project cities was estimated at 312,000 tons, exceeding the target of at least 128,000 tons lower that BAU forecasts CO2 emissions over 10 years.

Rating
Substantial

Rationale
The overall efficacy is substantial, as both objectives are assessed as substantially achieved.

Overall Efficacy Rating

Substantial

5. Efficiency

Economic analysis

At appraisal, a formal cost-benefit analysis (CBA) was carried out for the two investment projects: a non-motorized transport improvement project in Pune and the BRT corridor development project in Pimpri-Chinchwad. The former was subsequently dropped from the project support. The economic analysis for Pimpri-Chinchwad covered only two of the corridors and was limited by lack of data on general traffic volumes from which the main benefits would be derived (reduction in road user costs and reduction in GHG). Based on infrastructure investment of US$126.5 million and various assumptions about costs and benefits, the analysis showed an economic internal rate of return (EIRR) of 24 percent and a net present value (NPV) of US$185 million. The EIRR of Hubli-Dharwad project that was added during implementation was estimated to be 29.5 percent with an NPV of US$448 million.

At closure, the overall EIRR of the Pimpri-Chinchwad, Naya Raipur, and Hubli-Dharwad projects was estimated at 11.2 percent with an NPV of INR 19.3 billion or US$276 million. The ICR (page 15) reports that the ex-post benefits were lower for several reasons, including cost increase by 15 percent in rupee terms (that declined in U.S. dollar terms by roughly 9 percent owing to the rupee depreciation) and the fact that benefits had not yet accrued by project closure in two of the major projects Hubli-Dharwad BRTS and Pimpri-Chinchwad BRTS Corridor 4 that became operational after project closure.

Operational/ Administrative Efficiency

The project closing date was extended by 32 months. There were substantial implementation delays in the project cities, in particular in Pimpri-Chinchwad, Hubli-Dharwad, and Naya Raipur. There were multiple causes of delay, as specified by the ICR (para 35), including (a) protracted land acquisition and resettlement; (b) non-familiarity of PIUs with World Bank procedures and weak technical capacity for planning and implementation; (c) constant need for coordination with other key stakeholders and agencies; (d) works contractor nonperformance owing to not only poor project management and cash flow issues but also non-familiarity with modern construction designs and materials; (e) lack of familiarity with new concepts such as ITS among consultants, vendors, and clients; and (f) wavering commitment and priority accorded to the project at the agency level with changes in officials.

Efficiency Rating

Modest

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	✓	24.00	37.00 ☐ Not Applicable
ICR Estimate	✓	11.20	70.00 ☐ Not Applicable

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

6. Outcome

Relevance of the objectives is rated high. The project helped promote environmentally sustainable transport nationally and improve the usage of environment-friendly transport modes through demonstration projects in selected cities in a substantial way. The efficiency is assessed as modest due to lower economic rates of return and operational inefficiencies. The overall project outcome rating is moderately satisfactory.

a. Outcome Rating

Moderately Satisfactory

7. Risk to Development Outcome

Institutional. The LUTP training under the capacity-building component ensured that participants were from across India and from diverse fields such as policy making, planning, public transport operations, environment, and traffic enforcement. Being senior officials, they are in a good position to influence their organizations and initiate environmentally friendly actions in their respective fields and move the environmentally friendly urban transport agenda forward. The project focused on strengthening public sector

institutions both by setting up new institutional structures to deliver higher-quality services and by establishing a series of official guidelines on urban mobility institutions like Unified Metropolitan Transport Authority (UMTA). The guidelines, published online and shared through prominent events like the Urban Mobility of India series, supported the dissemination of such approaches across all states and to other countries, in line with the new Lighthouse Program.

Financial. The risk of BRT infrastructure being underutilized arises from possible lack of capacity of the transport agencies to adjust the network to fully avail of the BRT infrastructure or to assign sufficient number of buses. This is more likely in situations where the financials are adverse, and the travel time benefits not as obvious. In Pimpri-Chinchwad, the proper deployment of buses on Corridors 3 and 4 has been affected by the financial issues being faced by PMPML and their limited fleet. The ICR (para 56) reports that the new buses should have been available from April 2019.

Technological. The operational, planning, and resource management benefits of the ITS system in Mysore and Indore are immediately evident and generally appreciated by the operating companies. The Mysore ITS has further progressed and become the first to implement an open data policy. Many cities visited Mysore to learn from their experience.

8. Assessment of Bank Performance

a. Quality-at-Entry

The project team ensured that the adequate implementation arrangements and flexibility was built in the project design that involved multiple states and cities. The project included three significant infrastructure developments, two of which had substantial land acquisition and associated social safeguards. Expert NGOs were involved to support the project supervision. At appraisal, the Bank supplemented the IBRD resources with the GEF grant and worked together with the UNDP- GEF to assist GoI in preparation and implementation of the SUTP Program (PAD, p.11). The project team indicated that AusAid, DFID and KGGF trust funds played an important role in helping the team mobilize the international and domain expertise, and support study visits and knowledge exchanges, ensuring exposure to good practices, improved quality of designs and implementation of the project activities and therefore overall outcomes.

The M&E was adequate, with some minor shortcomings (see Section 9). With regard to the safeguards' arrangements, as Pimpri-Chinchwad was included into the project toward the end of the preparation cycle, it suffered from a rushed Resettlement Action Plan and Environmental Management Plan preparation, and this proved to be problematic during project implementation, as discussed in Section (ICR, page 18). The main risks were adequately identified and the overall risk rating was assessed as substantial at appraisal, with fiduciary, governance and corruption risks rated substantial (PAD, page 16). The project team, however, underestimated the risks related to land

acquisition and resettlement as well as local weak capacity. The scheduled closing date was highly optimistic for such an ambitious project.

Quality-at-Entry Rating
Satisfactory

b. Quality of supervision
A total of 22 supervision missions were carried out over the project life, or a mission about every four months. This ensured a regular dialogue and review, tracking of progress, and following up of commitments. The ICR reports (para 53) that the World Bank mobilized the support of experts to the cities on particular design, technical, or operational matters and also arranged study visits to maintain interest levels and to provide exposure to best practices. All implementation support missions paid strong attention to fiduciary and safeguard aspects.

The team used the Steering Committee meetings effectively to take timely decisions with regard to dropping and inclusion of cities and demo projects, extensions, and raising issues with regard to NURM funding as well as coordination with central agencies such as Railways and Ministry of Road Transport and Highways.

The completion of land acquisition and the associated settling of legal challenges caused extreme delays in Pimpri-Chinchwad and significant delay in Hubli-Dharwad. The issues were often exacerbated owing to outdated land records, large informal settlements, frequent litigation and court cases, and limitations in the capacity of city agencies (ICR, page 18). As reported by the ICR (para 53), safeguards non-compliances such as in Pimpri-Chinchwad and the frequent changes of officials in Indore were escalated to the highest levels in the state government. At closure, there were still pending issues in the implementation of mitigation measures under the environmental safeguards due to delays in civil works under the project and payment of compensation under the social safeguards that were mainly due non-availability of the people to receive compensation or lack of ownership documents (see Section 10). The project team subsequently confirmed that the issues were being addressed.

Quality of Supervision Rating
Satisfactory

Overall Bank Performance Rating
Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The original results framework had two outcome indicators to measure the achievement of the two PDOs. The first outcome indicator, however, did not fully reflect the nature of capacity-building proposed under the first component. In particular, '*the number of cities that develop an identifiable urban transport planning process (that is, managed by professional units of government, following certain procedures and guidance, and involving various level of analytical work) increases*' was unclear and difficult to measure. As clarified by the Restructuring Paper (2015), the capacity building activities were not specifically designed to help create organizations, develop systems and processes "to develop an identifiable urban transport planning process increases'. The second outcome indicator of a mode share in the project cities with BRT was appropriate, measurable, and attributable to the investments undertaken in the cities. The GEO indicator measured the GHG emission reduction resulting from the project investments in the cities.

The first outcome indicator was subsequently revised to a more focused indicator, i.e., "the number of environmentally friendly urban transport practices and approaches provided by the project that are adopted by cities". The target of 6, however, was rather conservative for a 9-year project implementation period. The outcome target of 50 percent public transport mode share for trips between Raipur and Naya Raipur was reduced by 10 percent as it was considered ambitious. A number of intermediate indicators were also revised or dropped to streamline the results framework and avoid duplication (RP, 2015). Overall, the intermediate indicators lacked the km length of the BRT corridors to track the implementation progress. The indicator of overall roads km was dropped.

b. M&E Implementation

The ICR (para 39) reports that almost all of the cities implemented comprehensive M&E studies over the project life. Baselines were established, and M&E reports were submitted at multiple stages, allowing tracking during the project life. The M&E studies sought to deepen the cities' understanding of the project performance, users and nonusers in their city, perceptions and opinions, and areas in which improvements were needed.

c. M&E Utilization

The ICR (para 41) reports that the M&E process was used to track technical performance of the PBS and ITS in Mysore, which proved valuable when problems emerged with the on-bus units. In Naya Raipur, M&E was instrumental in evaluating the performance of the service, building new stations, and revising the service plan to reduce delays and improve travel time performance. In Pimpri-Chinchwad, the work was effectively used to make a stronger case for improved intersection designs and passenger access and addressing bus bunching issues through traffic signal phasing redesign.

M&E Quality Rating
Substantial

10. Other Issues

a. Safeguards

This was a Category B project that triggered three safeguards policies Environmental Assessment (OP/BP 4.01), Physical Cultural Resources (OP/BP 4.11), and Involuntary Resettlement (OP/BP 4.12) (PAD, 22-23).

Environmental Assessment. Some project activities were expected to have adverse impacts on environmental resources, mostly confined to the construction phase – increased noise and dust, reduced safety for road users and workers (PAD, Annex 10). The ICR (para 43) reports that while most of the BRT construction activities had been completed, there remain some mitigation measures which were still under implementation at project closure. These included installation of noise barriers on Corridor 4 in Pimpri-Chinchwad; and in Hubli-Dharwad, there were some delays in implementing the landscaping/plantations works on the median of the BRT corridor as well as the Green BRT Plan (initially prepared to respond to an NGO complaint but later helped the project integrate environmental aspects into project activities) and implementing the Rayapur tank mitigation works to increase storage capacity. At closure, the overall implementation of environmental safeguard measures was rated moderately satisfactory. According to the information received from the project team at the time of the IEG ICR Review (May 2019), in Hubli-Dharwad, the landscaping along the median was completed, and balance 2110 plantation of trees (of 27510) was ongoing along the corridor. The Rayapur tank was deepened as per EMP specifications and residual stabilization and landscaping works were ongoing. The fabrication of the noise barrier on Corridor 4 in Pimpri-Chinchwad progressed but the erection was slow owing to contractor resourcing issues.

Physical Cultural Resources. The ICR does not discuss the implementation and compliance with this safeguard policy under this project, although there is a reference to resistance from religious trustees for relocation of affected worship structures that was one of the most challenging in Hubli-Dharwad BRTS (para 46). The project team subsequently informed that the impact to religious structures was supervised as part of Involuntary resettlement (OP 4.12), since these religious structures were mostly on private lands and were acquired as part of the land acquisition process. The trustees of these structures were paid compensation as part of land acquisition and were provided additional support for reconstruction of alternative structures in the adjacent areas or in-situ reconstruction in case of partial impacts. In cases where there was continued resistance (4 out of 17), the road width was compromised and construction of carriage width was limited to within available Right of Way (RoW), thus avoiding the impacts including one Muslim place of worship (Dargah).

Involuntary Resettlement. Land acquisition related impacts include 75 ha of private land affecting more than 11,000 landowners including physical displacement of 425 families. In addition, about 500 tenants and informal settlers were also affected. At the time of project appraisal, impacts were envisaged for only about 1,200 persons in Pimpri-Chinchwad.

The ICR (para 45) reports that the impacts in Naya Raipur were implemented in a compliant manner by providing alternative housing in a government scheme to four displaced families and allotting shops on

rental basis to three affected small keepers. In the case of Pimpri-Chinchwad, the impacts included private land acquisition from more than 10,000 landowners and displacement of 400 families including 144 informal settlers. The implementation of this subproject faced several challenges such as inordinate delays in resettlement, payment of compensation, prolonged court cases, longer stay of displaced families in transit camp, and land hand-over to contractors. The commitment and capacity of the Pimpri Chinchwad Municipal Corporation (PCMC) was an issue throughout the project implementation and the safeguards management for OP 4.12 remained Unsatisfactory or Moderately Unsatisfactory for a period of three years, during July 2015–March 2018, due to non-compliances with payment of compensation and delays in shifting of displaced families. In the case of those affected by land acquisition, the compensation for about 80 percent of 10,000 affected landowners were deposited in the courts for want of ownership documents.

In the case of Hubli-Dharwad, the impacts include land acquisition of 30 acres affecting 1,043 landowners and 500 tenants/informal settlers and displacement of 21 families. The key challenges encountered in this subproject included compensation rates for private lands, resistance from religious trustees for relocation of affected worship structures, and compensation for road margin areas. Relocation of affected workshop places was one of the most challenging under Hubli-Dharwad BRT system (para 46).

The ICR (para 47) reports that there were few outstanding residual actions at the time of writing the ICR (February 2019), related to payment compensation to 7 landowners and resettlement of 9 informal families in Pimpri-Chinchwad and pending compensation payment to 33 landowners and resettlement assistance to 7 tenants in Hubli-Dharwad. These delays are due to non-availability of the people to receive compensation or lack of ownership documents. The ICR states (para 47) that "the compliance with OP 4.12 was met with prolonged delays". According to the information received from the project team at the time of the IEG ICR Review (May 2019), the progress was as follows: in Pimpri-Chinchwad, the land acquisition compensation was pending in case of 5 land owners (out of 230) for want of ownership documents, and allotment of alternative houses was pending for 5 families (out of 401) for want of supporting documents or transfer of ownership to a legal heir or under advance stage of process. In case of Hubli, the compensation has been paid to all land owners except 131 (out of 1043) who have refused the offered compensation and approached the court for compensation review. Their compensation has been deposited in the court and would be paid as per court's decision. The resettlement assistance payment in the case of 8 tenants (out of about 500) was no longer required, because the corridor improvement had been completed within available right of way.

b. Fiduciary Compliance

Financial Management. The ICR (para 48) reports that the project's overall performance on financial management aspects was consistently rated moderately satisfactory. Key challenges faced in the first few years of the project included (a) delay in entrustment of external audit of the PIAs with the Office of the Comptroller and Auditor General of India, (b) delays in transfer of funds from state treasuries to the bank accounts of the PIAs (especially in the case of Atal Indore City Transport Services Limited), (c) inadequate budget provisioning in the state government annual budgets, and (d) delays in receipt of counterpart funding (especially on contracts partly funded under the National Urban Renewal Mission scheme of the GoI). Submission of audit reports and interim unaudited financial reports of the PIAs by the PMU was largely on time throughout the project period.

The ICR (para 50) reports that there were two key FM issues that the project struggled with: (a) weak internal audit and (b) accounting of the advances sanctioned to individual PIAs. The project design envisaged constitution of an audit committee at MoUD for review of the internal audit reports for the PIAs. Several supervision missions throughout the project period found that the audit committee had not been convened regularly and/or internal auditors were not in place or when internal audits were conducted, their quality left much to be desired. There were gaps in the internal control processes adopted by the PIAs' timely extension of contracts. With respect to accounting of advances, since the World Bank systems maintained a single account for making advance disbursements across all PIAs, details of advances provided to each PIA had to be maintained manually leading to some instances of incorrect documentation of expenditure and inconsistencies in the reconciliation.

Procurement. The ICR (para 51) reports that the procurement was carried out both at the center and state levels. The center-PMU also provided assistance to the PIAs in states, to help them understand and carry out procurement properly. Prior-review thresholds were kept low, and in addition, it was agreed that contracts above a defined value but below the agreed prior-review thresholds will be prior-reviewed by the PMU. This process enabled the project to expedite procurement. Despite this progress and strengthening of procurement processes, some weaknesses remained, as observed in the postprocurement review conducted in states. These included, in some cases, the delay in progress of works, contract award details not published in their website, no insurance in civil works, and delays in payment and accepting suo moto discount after bid opening, which is considered negotiation. These issues appeared to be due to a lack of awareness about procurement guidelines among officials handling procurement highlighting the need for regular training.

c. Unintended impacts (Positive or Negative)

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d. Other

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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Satisfactory	Satisfactory	---
Quality of M&E	Substantial	Substantial	

Quality of ICR	---	Substantial

12. Lessons

IEG selected three lessons from the ICR, with some adaptation of the language:

- **BRT projects need to establish comprehensive teams similar to metro projects.** BRT systems are complex projects that are more than infrastructure design and contracting of civil works. They include operational dimensions such as bus service plan, design of operating procedures, traffic management, pedestrian access, safety processes, among other. They include land acquisition and safeguard management processes, communication, and consultation processes. The experience under this project was that the 'BRT office' tended to be on a small scale, reliant on units of the mother agencies for much of the technical support, and with a primary focus on civil works. The non- construction elements (i.e., land acquisition) as well as operations tended to continue to reside in other departments or agencies. This led to fragmentation in planning and delivery, gaps in communication and responsibilities, and understaffing in critical areas. BRT projects must be implemented through nodal entities and should be more substantial and multifunctional so that they have the capability to deal with all the issues in an integrated way.

- **BRT and ITS only realize their true potential when there is the ability to utilize them.** BRT infrastructure and ITS have great potential, but this potential can only be achieved when there is the business/service plan and the organizational capacity to utilize them well. To a large extent, the cities supported under this project only began to prepare themselves for the operational phase as the works were being completed, while they needed to do so several years earlier. The ITS in Mysore provides an excellent model of how it progressively used the data and functionality of the ITS to adjust its schedules and routes, to tackle a wide range of long-standing operational problems, and gradually incorporated the ITS into its processes throughout the organization. Ridership development requires greater effort. In Pimpri-Chinchwad, the weak capacity of PMPML and deteriorating fleet have led to a declining service on its operational BRT corridors despite a positive public response to the system.

- **It is better to avoid two-stage and temporary resettlement in the land acquisition process.** Under this project, the shifting of displaced families to transit housing for 18 months resulted in people living there for about six years due to inordinate delays in construction of alternative housing causing hardship to displaced families. Similarly, the three-month temporary displacement of shopkeepers in Hubli-Dharwad resulted in a 10-month wait for shopkeepers to bring them back to the original site due to delay in construction schedules. This suggests avoiding two-stage resettlement or temporary displacement and instead planning for permanent resettlement.

13. Assessment Recommended?

Yes

Please Explain

It would be useful to follow up on the results of this project and see to what extent the guidelines have been adopted and implemented.

14. Comments on Quality of ICR

The ICR is outcome-oriented and written in line with the guidelines. It provides a clear and candid analysis of key factors that affected implementation, with a good level of detail. Lessons are based on project experience. In the efficacy section, the ICR discusses technical assistance in detail but there is no discussion of outputs under the infrastructure investment component, so it is not clear what outputs and investments were delivered in the demonstration cities to support the achievement of the second objective. While the results framework has the infrastructure-relevant intermediate indicators, there is no data related to km length of the BRT systems and/or feeder roads if applicable, and other aspects such as ridership. The project team subsequently clarified that the core indicator for length of roads constructed was dropped because the project did not finance road construction other than the two grade separators on the BRT corridors in Pimpri-Chinchwad and so it was not deemed to be a representative indicator. In both Hubli-Dharwad and Pimpri-Chinchwad the BRT corridor road construction was financed through counterpart funds and no feeder roads were undertaken. It was felt that ridership was an outcome of the project and since public transport mode share was already an indicator capturing public transport ridership relative to other trips it was not separately included. The ridership information was shared in Annex 7.

The ICR does not report the arrangements for resolving and completing pending safeguards issues after project closure, and does not specifically mention the Physical Cultural Resources OP triggered under the project. The project team subsequently provided the required information regarding the safeguards. Annex GHG Analysis is well elaborated but there is no annex with details of the surveys referred to in the ICR.

a. Quality of ICR Rating
Substantial