



## 1. Project Data

**Project ID**

P096023

**Project Name**

IN: Orissa State Roads

**Country**

India

**Practice Area(Lead)**

Transport &amp; ICT

**L/C/TF Number(s)**

IBRD-75770

**Closing Date (Original)**

31-Dec-2014

**Total Project Cost (USD)**

265,000,000.00

**Bank Approval Date**

30-Sep-2008

**Closing Date (Actual)**

30-Jun-2016

**IBRD/IDA (USD)**
**Grants (USD)**

Original Commitment

250,000,000.00

0.00

Revised Commitment

79,283,120.31

0.00

Actual

79,283,120.31

0.00

**Prepared by**

Kavita Mathur

**Reviewed by**

Peter Nigel Freeman

**ICR Review Coordinator**

Christopher David Nelson

**Group**

IEGSD (Unit 4)

## 2. Project Objectives and Components

### a. Objectives

“The objective of the project was to remove transport bottlenecks in targeted transport corridors of the State of Odisha (formerly known as Orissa) for greater investment and economic and social development activities in the State of Odisha” (Loan Agreement page 5, Project Appraisal Document page 11).

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

No



**c. Will a split evaluation be undertaken?**

No

**d. Components**

**Component A: Road Corridor Improvement Component** (appraisal cost US\$305.9 million; actual cost US\$124.8 million). This component was to support the widening, strengthening, and selective realignment of about 461 km of existing roads to double-lane standard. In addition to the physical works, the project would finance costs associated with supervision consultants, implementation of Environment Management Plans, Resettlement and Rehabilitation (R&R), Indigenous People (Tribal) Development Plan (TDP), HIV/AIDS mitigation measures, and road safety awareness campaign.

Revised component: At the first restructuring (January 31, 2013), the scope of the component was reduced i.e. the total length was reduced from 461 km to 310 km.

Revised component at first restructuring Revised component at first restructuring

**Component B: Public-Private Partnership (PPP) Enabling Support, Sector Policy and Institutional Development, and Implementation Support** (appraisal cost US\$15.9 million; actual cost US\$8.9 million). This component would assist the Government of Odisha (GOO) to: (i) introduce private sector participation in financing and management in the road sector; (ii) modernize and strengthen the capacity of Odisha Works Department (OWD); (iii) improve the policy, institutional and legal framework of the State of Odisha road sector, and (iv) implement and monitor the project.

Revised component: At the first restructuring (January 31, 2013), PPP enabling support was dropped.

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

**Project Costs:** The estimated total project cost was US\$322.5 million. Actual costs were US\$134.3 million.

**Financing:** The loan amount at appraisal was US\$250 million. At the first restructuring (January 31, 2013), US\$ 54 million was cancelled as the scope was reduced. The loan amount was US\$196.0 million. At the second restructuring (June 18, 2015), US\$33.0 million resulting from appreciation of US dollar against Indian rupees was cancelled. Thus the loan amount was reduced from US\$196 million to US\$163.0 million. The actual loan was US\$79.4 million.

There was no cofinancing.

**Borrower Contribution:** The actual counterpart financing was US\$54.9 million compared to the appraisal commitment of US\$72.5 million.

**Dates:** At the first restructuring (January 31, 2013), the closing date was extended by 18 months from December 31, 2014, to June 30, 2016.



### 3. Relevance of Objectives & Design

#### a. Relevance of Objectives

The Bank's engagement in the transport sector as discussed in the Country Assistance Strategy (CAS - Report No. 29374-IN) for the period FY05-08, was to contribute to the empowerment of the poor and vulnerable groups by helping improve access to markets, jobs and services (CAS para 122). The Bank sought to substantially increase its volume of lending to the transport sector (CAS para 46) to underpin accelerated growth and improved service delivery. At the state level, the Bank would try to build a productive development relationship with four states where poverty was concentrated in India and where public institutions were considered to be at their weakest - Bihar, Jharkhand, Odisha and Uttar Pradesh (CAS para 56). The Bank would selectively engage in states and support upgrading of the most heavily trafficked sections of the state highways (CAS para 123). Therefore, at appraisal, the objective "to remove transport bottlenecks in targeted transport corridors of the State of Odisha for greater investment and economic and social development activities" was consistent with the Bank's Country Assistance Strategy.

The PDO remained aligned with the first engagement area "Integration" of the current Country Partnership Strategy (CPS Report No. 91199) for the period FY13-17 (CPS page 32), for which one of the outcome is "improved transport connectivity". The PDO were relevant to the Government of India 12th Plan Goal of upgrading national and state highways to the minimum of two-lane standards (CPS page 35). During implementation, the scope of the project was reduced following new priorities of the Government (reduction and length of roads and 'PPP Enabling Support' was dropped). The Government's support waned during implementation and counterpart funding was lower than appraisal estimate.

Overall, the relevance of objective is substantial.

#### Rating

Substantial

#### b. Relevance of Design

The project design logic - clear and realistic objectives supported by relevant project activities – was sound. The project activities were closely linked to the project development objectives. The first component, road corridor improvement included six roads in three economic potential corridors. Improvement of roads in these corridors would reduce transport bottlenecks and could help in improving the mining sector, tourism and economic activities in the state. The institutional component sought to improve inclusion of the private sector, operational efficiency, and governance in the management of roads.

The relevance of design was substantial.

#### Rating



Substantial

## 4. Achievement of Objectives (Efficacy)

### Objective 1

#### Objective

The PDO was to remove transport bottlenecks in targeted transport corridors for greater investment and economic and social development activities in the State of Odisha.

#### Rationale

Note: Although two of the PDO indicators were dropped (vehicle operating costs and favorable response by firms about the condition of road corridors improved under the project), reworded, or added, a split rating is not done because the new indicators such as the "Improvement in Road User Satisfaction Index" and "Improvement in Network Congestion Indices" was not assessed due to unavailability of target data.

#### Outputs

- At project closure 150 km were improved (i.e. 50 percent of the revised target of 303 km and 33 percent of the original targets of 461 km).
- The 'PPP enabling support' designed to provide technical assistance to prepare PPP transactions was removed from the project because of noncompliance by the GOO with Bank's safeguards policies.
- A road asset management system (RAMS) was developed.
- The Road Sector Policy was prepared and at project closing had not been adopted by GOO (awaiting government approval).
- Operational guidelines were developed for planning, management, knowledge management, and training specific for financial management and procurement.
- The Road Network Master Plan was prepared.
- A new Road Safety Policy, Action Plan, and supporting institutional arrangements were developed and are operational.
- A study to create a road fund was completed.
- OWD complied with the right to information (RTI) Act by (a) implementing the disclosure policy, and (b) maintaining the website with latest information.



## Outcome

Institutional capacity of OWD was improved. At project closing, OWD was using the Road Asset Management System (RAMS) developed under the project to prepare financial budgeting and planning for road maintenance in Odisha. The maintenance plans for roads and bridges and finalization of road works for 2015–2016 were prepared using RAMS. However, since physical targets for road improvement were not met, the project did not remove transport bottlenecks in the targeted corridor. The project did not improve the performance, safety, and carrying capacity of priority roads in the State of Odisha. On the two road links completed, vehicle speed increased by 32.5 percent, which was slightly lower than the target of 36 percent. No data was collected for vehicle operating cost savings. There is no evidence that congestion was reduced. The impact of the project roads on greater investment and economic and social development activities was not measured.

Efficacy is rated as negligible.

## Rating

Negligible

## 5. Efficiency

At appraisal economic analysis was conducted for three individual corridors, six individual roads. Overall Economic Rate of Return (ERR) was estimated at 25.1 percent (PAD page 81). The evaluation was done using the Highway Development and Management Model (HDM 4). HDM 4 is a globally accepted analytical tool for economic analysis of highways investment alternatives, which simulates life cycle conditions and costs and provides economic decision criteria for multiple road design and maintenance alternatives. The main project economic benefits taken into account were savings in vehicle operating costs, travel time costs, distance savings for bypasses, and maintenance cost reductions resulting from the road improvements.

At the first restructuring, two of the three corridors were dropped. Finally, only two of the six project roads were completed. Ex-post economic analysis used the same assumptions as the appraisal analysis. Actual upgrading costs and the actual annual traffic growth rates for the project roads was used. The ERRs for these roads are as follows:

The Khariar to Bhawanipatna road (68 km) was part of Corridor 2 and ex-ante ERR was 22.3 percent (PAD page 87). The ex-post ERR was 19.4 percent. The actual upgrading unit costs were 1.60 times higher than the appraisal estimate. However, the actual annual traffic growth is 11.7 percent, i.e. 1.73 times higher than the appraisal estimate.

The Berhampur-Bangi Jn road (139 km) that was part of Corridor 3 and ex-ante ERR was 15.4 percent (PAD page 87). The ex-post ERR for Berhampur to Taptapani road (38 km) [which is a section of Berhampur-Bangi



Jn road] is 18.6 percent. The actual upgrading unit costs were 1.81 times higher than the appraisal estimate. However, the actual annual traffic growth is 19.8 percent, i.e. 2.93 times higher than the appraisal estimate.

The overall ex-post ERR was 25.1 percent compared to the ex-ante ERR of 18.6 percent. Given than only two of the six projects roads were completed (reduced project scope) with a delay of 18 months, overall, project efficiency is rated modest.

## 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    | ✓               | 25.10           | 95.00<br><input type="checkbox"/> Not Applicable |
| ICR Estimate | ✓               | 18.60           | 93.00<br><input type="checkbox"/> Not Applicable |

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

## 6. Outcome

The relevance of objective and relevance of design are both rated substantial. Project efficiency is rated modest. The project did not improve the performance, safety, and carrying capacity of priority roads in the State of Odisha. There is no evidence that congestion was reduced. The impact of the project roads on greater investment and economic and social development activities was not measured. The project outcome is rated unsatisfactory.

### a. Outcome Rating

Unsatisfactory

## 7. Rationale for Risk to Development Outcome Rating

The project assisted in building the capacity for road maintenance, however, there are some gaps. At project closure, OWD was using the Road Asset Management (RAM) system for both capital and “operation and maintenance” budgeting. However, although at state level an axle-load control strategy was developed, ICR is not clear whether the strategy was implemented. The study to create the road fund was completed, however, a road fund was not established. A sustainable road financing options study was prepared and the GOO and at



project closure the recommendations were being reviewed for implementation (page 28). The ICR reports that the Government of Odisha (GOO) is committed to the funding for all the policy and institutional changes made under the project.

The government is also planning to fund all of the physical improvements that were envisaged under the project and is planning to request the Bank for another loan which would fund both the civil works currently being funded by the GOO on a retroactive basis and additional roads prioritized in the Road Master Plan. There is, however, a substantial risk of slippage in progress and abandonment of some of the policies/works if the expected funds from the World Bank are not realized.

Risk to development outcome is rated substantial.

**a. Risk to Development Outcome Rating**

Substantial

## **8. Assessment of Bank Performance**

**a. Quality-at-Entry**

The project design included lessons from previous projects (PAD paras 37 to 39). Safeguards were appropriately identified. Most risks were identified, except for project management risk. OWD was unfamiliar with Bank procurement and safeguards requirements.

While the PIU was well defined with all the required cells, the capacity and skills was inadequate. The key staff as procurement officer, safeguards officer and other technical staff were not in position by appraisal and it took substantial period of 18 months before the appropriate skilled staff were recruited during implementation.

The ICR reports (para 68) that the project did not meet many of the readiness criteria before it was taken for Board approval. For example, the bids for the phase 1 of road works were supposed to have been received prior to negotiation and award finalized prior to Board approval. However, this was not met. Also, the arrangement to use NGOs as part of Land Acquisition (LA) and Resettlement and Rehabilitation (R&R) was cumbersome.

**Quality-at-Entry Rating**

Moderately Unsatisfactory

**b. Quality of supervision**

The ICR reports (para 69) that supervision team provided regular feedback, however, most of the agreed



measures suggested by the Bank team were not implemented by the client (i.e. PMU, the contractors and the consultants). The Bank's took drastic actions such as suspension of loan, but this came too late and had less impact than expected. It took 17 months for the GOO/OWD to implement the project covenants and get the suspension lifted. The ICR reports (para 70) that the two major restructurings could have been done far earlier in the life of the project.

The Bank team hired three consultants to help in project supervision, focusing on engineering/quality, environment, and social safeguards. However, this did not work out well due to lack of clear communication and assignment of responsibilities. OWD considered the involvement of these consultants as interference and micromanagement of project activities and pushed back and became less enthusiastic in project management (ICR para 37). Consequently, the consultants were withdrawn.

### **Quality of Supervision Rating**

Unsatisfactory

### **Overall Bank Performance Rating**

Moderately Unsatisfactory

## **9. Assessment of Borrower Performance**

### **a. Government Performance**

During preparation, the Government of Odisha (GOO) was committed to the project and preparation activities were completed without much delays. However, the support waned during implementation. Counterpart funding was lower than appraisal estimate. The ICR reports (para 72) that there were delays in staffing of the Project Management Unit (PMU), which adversely affected project implementation. The key staff such as procurement officer, safeguards officer and other technical staff were not in position at the start of the project. It took substantial period - eighteen months before the appropriate skilled staff were recruited. The project director was not empowered to make decisions. Also, the GOO was not able to make decisions on urgent matters, for example, the civil work contractors were not provided support to obtain quarry licenses necessary for road construction. Furthermore, late decisions caused delays in recruitment of a third-party monitoring entity, which affected quality of works. GOO commitment improved only slightly after the loan disbursement suspension was lifted.

### **Government Performance Rating**

Unsatisfactory

### **b. Implementing Agency Performance**

The Odisha Works Department (OWD) was the project's implementing agency. The Project Management Unit (PMU) was created to assist OWD in project implementation. However, its staffing was not always adequate, and quality of outputs were not consistent (ICR para 73). The ICR further reports that OWD management failed to take timely decisions to correct the many problems pointed out by the Bank's supervision missions. The PMU lacked capacity for contract management (para 28). The GOO/OWD staff





also had to become familiar with the World Bank's processes and requirements, which took longer than expected.

The performance of the consulting firm in advising the OWD in selecting good contractors and supervising them was not satisfactory. Neither the civil works contractors nor the construction supervision consultant (CSC) performed to expectation, leading to contract cancellations (para 26). The three different lead partners on the civil works contracts deserted the project sites, leaving the contract execution to the local partners in all three contracts (para 28).

The late engagement of NGOs for implementation of Resettlement and Rehabilitation (R&R) of Project Affected Persons (PAPs) delayed the implementation of the Environment Management Plan, which further delayed the handing over of land to contractors.

OWD's shortcomings ultimately led to implementation delays, substantially reduced project scope, and led to the non-utilization of two-thirds of the original loan amount.

### **Implementing Agency Performance Rating**

Unsatisfactory

### **Overall Borrower Performance Rating**

Unsatisfactory

## **10. M&E Design, Implementation, & Utilization**

### **a. M&E Design**

The M&E design included following outcome indicators: (a) reduction in vehicle operating costs in project corridors; (b) increase in vehicle speed in project corridors; and (c) road user's satisfaction about road condition. There were indicators to measure OWD efficiency and transparency: (i) operation and maintenance arrangement for the Core Road Network (CRN) put in place; (ii) core business functions being fully operational; (iii) OWD meets right to information (RTI) disclosure requirements and implements the Governance and Accountability Action Plan (GAAP); and (iv) road safety action plan put in place.

The PAD reports (PAD para 49) that all required baseline data had been collected and that during project implementation, bi-annual data will be collected on road conditions, traffic volume, vehicle operating costs and vehicle speeds on project financed roads. Also, at least three road user satisfaction surveys will be carried out, firstly at the start of the project, then at project mid-term and finally just before project closure, to assess road user's satisfaction.

However, there were no indicators to directly measure the PDO i.e. the impact of improved roads on greater investment and economic and social development activities in the State of Odisha.



## **b. M&E Implementation**

During the first restructuring, two of the PDO indicators were dropped (vehicle operating costs and favorable response by firms about the condition of road corridors improved under the project; one was reworded, and new indicators such as the "Improvement in Road User Satisfaction Index" and "Improvement in Network Congestion Indices" were added.

The ICR (para 39) reports that during the initial project implementation period, indicators were monitored. However, monitoring capacity was weak. Once the project started experiencing implementation delays due to slow progress in works, contract management issues, low disbursements and finally suspension of loan disbursements, no data was collected. New indicators were not assessed due to unavailability of target data. Project monitoring improved after the loan suspension was lifted. Monitoring was included in Aide Memoires and Implementation Status and Results Reports (ISR).

## **c. M&E Utilization**

The monitoring of safeguards identified social safeguards issues and the PPP support component was dropped from the project.

### **M&E Quality Rating**

Negligible

## **11. Other Issues**

### **a. Safeguards**

The project was classified as Category "A" and following six safeguard policies were triggered: Environmental Assessment (OP/BP/GP 4.01); Natural Habitats (OPBP 4.04); Cultural Property (OP 4.11); Indigenous Peoples (OP/BP 4.10); Forests (OP/BP 4.36); and Involuntary Resettlement (OP/BP 4.12).

#### **Environmental Safeguards**

Environmental Assessment (OP/BP/GP 4.01): At appraisal, Environmental Assessment was conducted for all project corridors. Public consultations were held and reports were disclosed at the Bank's InfoShop and at the state and local level (websites and libraries, respectively). A Biodiversity Assessment Study dealing with protection, avoidance, and minimization of adverse impact on forests, wildlife, and designated protected areas was also prepared.

Regarding the implementation of environmental safeguards, the ICR reports (para 32) that there were substantial deficiencies in implementation of environmental management safeguards, particularly related to regulatory compliance, work site management, traffic management during the construction, and construction camps' management. There was a lack of attention by the supervision consultants and the



contractors on implementing the EMPs, which were eventually corrected after World Bank intervention.

Natural Habitats (OPBP 4.04): No information on compliance with this policy.

Forests (OP/BP 4.36): The ICR reports (page 37) that while cutting some trees was unavoidable, efforts were made to save trees. Odisha Forest Development Corporation planted 176,000 saplings under this project.

## **Social Safeguards**

Involuntary Resettlement (OP/BP 4.12): A Social Impact Assessment was carried out for all road corridors and covered Land Acquisition (LA), resettlement action plan (RAP), Resettlement & Rehabilitation (R&R) plan, and institutional arrangements to implement these plans.

Annex 9 of the ICR provides details on land acquisition, persons relocated and the grievance mechanism system. The project conducted public consultations explaining the R&R framework were conducted. Also, focus group discussions were carried out, particularly with women and vulnerable PAPs. NGOs assisted with social mobilization and organizing and operationalizing Village-Level Grievance Redressal Committees (VLGCs). The PMU kept a detailed record of PAPs. More than 90 percent of PAPs were resettled or rehabilitated.

Land acquisition involved 7,698 cases/awards out of which compensation was paid to owners of land covered by 6,312 cases/awards. The compensation has yet to be paid to the remaining 1376 cases/awards. Of these, 253 could not be paid as they had gone to various courts to seek judicial redress of their grievances related to various concerns including enhanced compensation. These awardees can only be paid after courts give their verdicts and the judicial process is concluded. Cases/awards concerning 84 awardees had been referred to Endowment Commissioner as they relate to temple land under dispute. The settlement of 84 cases/awards relate to administrative processes and the project has referred to the State Level Empowerment Committee.

A total of 6,058 PAPs were considered as eligible PAPs and out of these 5,730 had been relocated, however, 328 have still to be relocated. A total of 828 PAPs lost their residential structures and 730 (88 percent) had been relocated. A total of 2,915 commercial structures were affected, of which 93 percent were relocated.

The ICR reports that the PMU had commissioned the study of social safeguards and social development impacts, which is expected to be finalized in March 2017 (para 44).

Cultural Property (OP 4.11): The ICR reports (Annex 9, paras 6 and 7) that the project was able to successfully relocate the places of worship because of the participatory processes that were followed with regard to the religious significance as well as the valuation of structures considering the ornamental and artistic work of temple structures. The participatory process involved consultations with already existing temple committees and in cases where they did not exist, the project facilitated the formation of temple committees.



The project relocated all 88 religious structures in year 1 and out of these 36 had been reconstructed in year 1. Similarly, 118 out of 121 religious structures in year 2 had been relocated out of which reconstruction of 56 structures had been completed. The payment for all structures was made into the joint accounts maintained in the name of temple committees and the Tahasildars concerned. The release of funds was coordinated by an NGO and the Assistant Executive Engineer-cum-Nodal Officer on the basis of the progress of construction.

Indigenous Peoples (OP/BP 4.10): The policy on Indigenous Peoples was not triggered during implementation (Annex 9, paras 3 and 4).

## **b. Fiduciary Compliance**

**Procurement:** During the early years of implementation, procurement capacity was weak due to lack of skilled staff. It took about 18 months to hire staff with required skills, however, there were procurement delays. Three contracts were awarded to three Joint Venture (JV) firms, that had the same local contractor. There was very slow progress and the lead firm dropped out. The local firm did not have resources to complete the works. The three contracts were terminated after a long delay. The delays in civil works contracts performance were largely because of poor contract/project management (ICR para 47). A workshop was conducted to assess local contractor capacity. Following the recommendation of the workshop, the National Competitive Bidding threshold was increased from US\$10 million to US\$20 million and contracts were repackaged into six contracts instead of the original three contracts. The procurement activities were completed in five months. All this caused major delays in completion of civil works and reduction in the scope of the project. The procurement capacity of the Project Management Unit (PMU) was improved through training in contract management.

**Financial Management:** All project related payments were centralized at the Project Management Unit (PMU) and new banking technologies were introduced and used to make timely payments. The PMU maintained a commitment/payments register, tracking all contracts. Summary monthly accounts were submitted to the Office of the Accountant General (AG) for compilation into monthly State Appropriation Reports. The quarterly reports for the project (based on AG monthly reports) were timely and annual audits were conducted. The ICR further notes that the project financial management arrangements were considered as 'good practice' and have been used in other Bank projects in India.

## **c. Unintended impacts (Positive or Negative)**

None reported.

## **d. Other**

None reported.



## 12. Ratings

| Ratings                     | ICR                       | IEG                       | Reason for Disagreements/Comment  |
|-----------------------------|---------------------------|---------------------------|---|
| Outcome                     | Unsatisfactory            | Unsatisfactory            | ---   |
| Risk to Development Outcome | Modest                    | Substantial               | There is a substantial risk of slippage in progress and abandonment of some of the policies/works if the expected funds from the World Bank are not realized. |
| Bank Performance            | Moderately Unsatisfactory | Moderately Unsatisfactory | ---   |
| Borrower Performance        | Unsatisfactory            | Unsatisfactory            | ---   |
| Quality of ICR              |                           | Substantial               | ---   |

### Note

When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.

The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

## 13. Lessons

The ICR included a number of lessons of which following have broad applicability:

- The project team need to ensure that all of the readiness criteria were met and project management issues were addressed before Board submission. In cases where project management issues do arise, a project management consultant should be recruited to support the Project Implementation Unit. Readiness criteria in procurement, safeguards and M&E are as important as financial management and project management.
- The activities such as Land Acquisition (LA), Resettlement and Rehabilitation (R&R), and implementation of the Environmental Management Plan (EMP) should begin as early as project preparation. Contracts should not be signed if encumbrance-free road sections are not available for immediate construction works. This should be agreed with the client ahead of implementation to avoid delays during implementation.
- The roles and the relationship between the Construction Supervision Consultant (CSC) and the implementing agency should be clearly defined.
- Red flags on project implementation should be monitored progressively to the end. In this project, where



the lead Joint Venture (JV) absconded from the site and the junior partner did not have capacity to continue, the Bank team could have compelled the client to invoke contractual provision on the poor performance by the JVs.

#### **14. Assessment Recommended?**

No

#### **15. Comments on Quality of ICR**

The ICR is candid and provides a good account of challenges encountered during implementation. The coverage of involuntary resettlement safeguards is comprehensive. However, the discussion of environmental safeguards was sparse, specifically the natural habitats and forestry safeguards.

##### **a. Quality of ICR Rating**

Substantial