



## Yunnan Highway Asset Management Project (P132621)

EAST ASIA AND PACIFIC | China | Transport Global Practice |  
IBRD/IDA | Investment Project Financing | FY 2015 | Seq No: 13 | ARCHIVED on 26-May-2021 | ISR46508 |

Implementing Agencies: Yunnan Highway Bureau, People's Republic of China

**Key Dates****Key Project Dates**

Bank Approval Date: 31-Mar-2015

Effectiveness Date: 19-Aug-2015

Planned Mid Term Review Date: 31-Mar-2018

Actual Mid-Term Review Date: 09-Apr-2018

Original Closing Date: 31-Dec-2020

Revised Closing Date: 30-Jun-2022

**Project Development Objectives**

Project Development Objective (from Project Appraisal Document)

The Project Development Objective is to improve the efficiency and cost-effectiveness of highway asset management in Yunnan.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

**Components Table**

Name

Highway Asset Management Improvement:(Cost \$58.28 M)  
Maintenance and Emergency Response Capacities Enhancement:(Cost \$161.69 M)  
Pilot of Cost-Effective Maintenance Technologies:(Cost \$25.38 M)  
Strengthening Institutional Capacities:(Cost \$8.13 M)

**Overall Ratings**

| Name                                 | Previous Rating                       | Current Rating                        |
|--------------------------------------|---------------------------------------|---------------------------------------|
| Progress towards achievement of PDO  | <input type="checkbox"/> Satisfactory | <input type="checkbox"/> Satisfactory |
| Overall Implementation Progress (IP) | <input type="checkbox"/> Satisfactory | <input type="checkbox"/> Satisfactory |
| Overall Risk Rating                  | <input type="checkbox"/> Substantial  | <input type="checkbox"/> Moderate     |

**Implementation Status and Key Decisions**

The overall implementation progress of the project is satisfactory. With effort and commitment of YHB, the development of integrated management information system was completed and put into trial run in October 2020. This system has been improved based on the trial operation and partially put into operation. The emergency command center of YHB has been used to address emergency events and operation needs, which significantly enhances the efficiency and timeliness of YHB's emergency response and operation. The civil works of all the 303 maintenance stations and emergency response centers has been completed and put in use, and equipment has been delivered to enhance their maintenance and emergency response capacities. The pilots of cold-recycling asphalt pavement for basecourse and preventive maintenance technologies have been completed. Experience and lessons from the pilot projects are being summarized, which will be incorporated to technical guidance for improving maintenance decision and implementation to lower road maintenance cost and environmental impact. YHB also made a progress in promoting the application of technical assistances. The first subsequent valuation of the road assets under YHB's management completed in April 2021. A trial application of



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accounting guideline at Puer Highway Bureau completed, and the guideline was reviewed by domestic experts in January 2021. In addition, YHB launched a one-year trial operation of Highway Maintenance Manual since June 23, 2020. The Manual is being upgraded to provincial technical standard. The Standard of Highway Data Collection developed by the project is being upgraded to provincial technical standard as well.





## Risks

### Systematic Operations Risk-rating Tool

| Risk Category  | Rating at Approval | Previous Rating                      | Current Rating                       |
|--|--------------------|--------------------------------------|--------------------------------------|
| Political and Governance                                     | --                 | <input type="checkbox"/> Low         | <input type="checkbox"/> Low         |
| Macroeconomic  | --                 | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    |
| Sector Strategies and Policies                               | --                 | <input type="checkbox"/> Substantial | <input type="checkbox"/> Moderate    |
| Technical Design of Project or Program                       | --                 | <input type="checkbox"/> Substantial | <input type="checkbox"/> Moderate    |
| Institutional Capacity for Implementation and Sustainability | --                 | <input type="checkbox"/> Substantial | <input type="checkbox"/> Substantial |
| Fiduciary  | --                 | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    |
| Environment and Social                                       | --                 | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    |
| Stakeholders   | --                 | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    |
| Other  | --                 | <input type="checkbox"/> Moderate    | <input type="checkbox"/> Moderate    |
| Overall  | --                 | <input type="checkbox"/> Substantial | <input type="checkbox"/> Moderate    |

## Results

### PDO Indicators by Objectives / Outcomes

|   |             |                   |                  |             |
|---|-------------|-------------------|------------------|-------------|
| cost-effectiveness of highway asset management                            |             |                   |                  |             |
| ▶ Percentage of highways in good/fair condition (Percentage, Custom)      |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 0.00        | 0.00              | 0.00             | 0.00        |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| <input type="checkbox"/> National Highways (Percentage, Custom Breakdown) |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |



|   |             |                   |                  |             |
|---|-------------|-------------------|------------------|-------------|
| Value   | 50.20       | 86.74             | 86.32            | 60.22       |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| □ Provincial highways (Percentage, Custom Breakdown)  |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 50.00       | 74.22             | 76.23            | 60.03       |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| ▶ Percentage of periodical and rehabilitation maintenance funds allocated based on the recommendations of the asset management system. (Percentage, Custom) |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 0.00        | 0.00              | 0.00             | 75.00       |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |

|  |             |                   |                  |             |
|--|-------------|-------------------|------------------|-------------|
| efficiency of highway asset management   |             |                   |                  |             |
| ▶ Length of network per routine maintenance staff member (Km/staff) (Text, Custom) |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 3.70        | 4.62              | 4.84             | 4.80        |
| Date   | 31-Dec-2013 | 30-Dec-2020       | 30-Dec-2020      | 30-Jun-2022 |

### Intermediate Results Indicators by Components

|  |             |                   |                  |             |
|--|-------------|-------------------|------------------|-------------|
| Highway Asset Management Improvement   |             |                   |                  |             |
| ▶ Establishment of an integrated highway asset management information system (Yes/No) (Text, Custom) |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | No          | Yes               | Yes              | Yes         |
| Date   | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| ▶ Annual maintenance funds (RMB/km) (Text, Custom)   |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 38,800      | 48,776            | 48,817           | 48,500      |



| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
|---|-------------|-------------------|------------------|-------------|
| <b>► Percentage of paved road network surveyed (Percentage, Custom)</b> |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 0.00        | 0.00              | 0.00             | 0.00        |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| <b>☐ Road (Percentage, Custom Breakdown)</b>                            |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 60.00       | 97.30             | 97.50            | 80.00       |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| <b>☐ Bridge (Percentage, Custom Breakdown)</b>                          |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 60.00       | 88.50             | 88.80            | 80.00       |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |

| Maintenance and Emergency Response Capacities Enhancement  |             |                   |                  |             |
|--|-------------|-------------------|------------------|-------------|
| <b>► Percentage of Maintenance Stations and Emergency Response Centers Enhanced (Percentage, Custom)</b> |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 0.00        | 0.00              | 0.00             | 0.00        |
| Date   | 31-Dec-2013 | 12-Jun-2020       | 09-Apr-2021      | 30-Jun-2022 |
| <b>☐ Stations (408 in total) (Percentage, Custom Breakdown)</b>  |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 45.00       | 100.00            | 100.00           | 100.00      |
| Date   | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| <b>☐ Centers at prefecture level (16 in total) (Percentage, Custom Breakdown)</b>                        |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 6.00        | 100.00            | 100.00           | 100.00      |
| Date   | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |



|  |             |                   |                  |             |
|--|-------------|-------------------|------------------|-------------|
| <input type="checkbox"/> Centers at county level (126 in total) (Percentage, Custom Breakdown) |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 50.00       | 100.00            | 100.00           | 100.00      |
| Date   | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| ▶Time to respond to emergency events (Text, Custom)  |             |                   |                  |             |
|  | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value  | 4 hours     | 3 hours           | 3 hours          | 3.00        |
| Date   | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |

|   |             |                   |                  |             |
|---|-------------|-------------------|------------------|-------------|
| Pilot of Cost-Effective Maintenance Technologies                  |             |                   |                  |             |
| ▶Number of innovative technology contracts piloted (Text, Custom) |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 0.00        | 4.00              | 4.00             | 4.00        |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |

|   |             |                   |                  |             |
|---|-------------|-------------------|------------------|-------------|
| Strengthening Institutional Capacities  |             |                   |                  |             |
| ▶Percentage of technical assistances completed and adopted (Percentage, Custom)   |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 0.00        | 60.00             | 75.00            | 100.00      |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| ▶Staff trained and Satisfactory rated training programs (Text, Custom)            |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 0.00        | 6,467(85%)        | 7457(91%)        | 4,977 (80%) |
| Date  | 31-Dec-2013 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |
| <input type="checkbox"/> of which, female staff trained (Text, Custom Supplement) |             |                   |                  |             |
|   | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
| Value   | 0.00        | 2,011(85%)        | 2456(91%)        | 1,692 (80%) |



► Public Engagement (public report responded) (Percentage, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00        | 0.00              | 0.00             | 100.00      |
| Date  | 01-Sep-2020 | 30-Dec-2020       | 09-Apr-2021      | 30-Jun-2022 |

Performance-Based Conditions

Data on Financial Performance

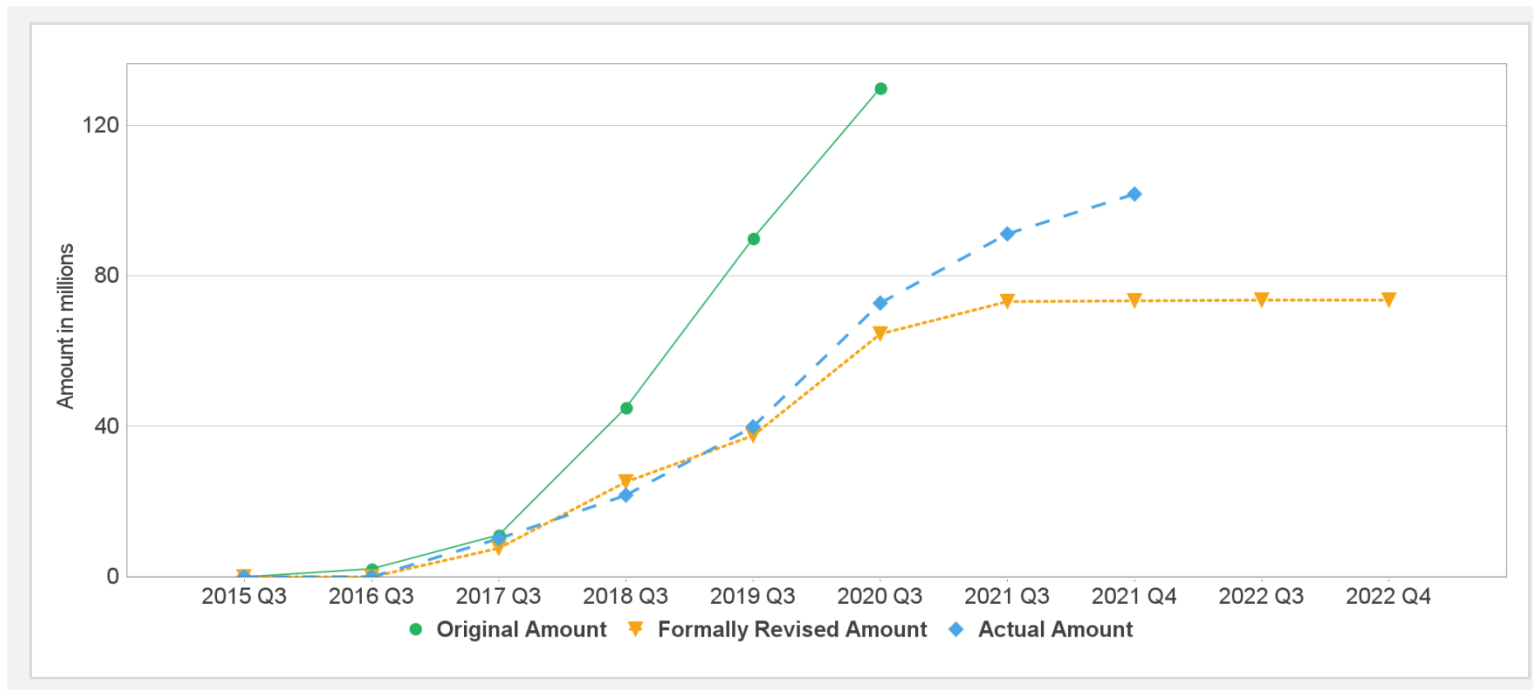
Disbursements (by loan)

| Project | Loan/Credit/TF | Status    | Currency | Original | Revised | Cancelled | Disbursed | Undisbursed | % Disbursed |
|---------|----------------|-----------|----------|----------|---------|-----------|-----------|-------------|-------------|
| P132621 | IBRD-84850     | Effective | USD      | 150.00   | 150.00  | 0.00      | 108.43    | 41.57       | 72%         |

Key Dates (by loan)

| Project | Loan/Credit/TF | Status    | Approval Date | Signing Date | Effectiveness Date | Orig. Closing Date | Rev. Closing Date |
|---------|----------------|-----------|---------------|--------------|--------------------|--------------------|-------------------|
| P132621 | IBRD-84850     | Effective | 31-Mar-2015   | 10-Jun-2015  | 19-Aug-2015        | 31-Dec-2020        | 30-Jun-2022       |

Cumulative Disbursements







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**PBC Disbursement**

| PBC ID | PBC Type | Description | Coc | PBC Amount | Achievement Status | Disbursed amount in Coc | Disbursement % for PBC |
|--------|----------|-------------|-----|------------|--------------------|-------------------------|------------------------|
|--------|----------|-------------|-----|------------|--------------------|-------------------------|------------------------|

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**Restructuring History**

Level 2 Approved on 02-Sep-2020 ,Level Approved on 09-Dec-2020

**Related Project(s)**

There are no related projects.

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