

ROAD MAINTENANCE FINANCING AND EFFECTIVENESS, 2012–2016

A. Introduction

1. The purpose of this note is (i) to monitor the status of road maintenance financing and effectiveness since the approval of Loan 2949-BAN: SASEC Road Connectivity Project in 2012,¹ and (ii) to make an assessment of the sustainability of the road subsector.

2. The scope of this analysis covers national, regional, and zilla (district) roads. This note (i) discusses the background of the strategy to clear the maintenance backlog by the Roads and Highways Department (RHD), (ii) presents the maintenance financing and effectiveness between 2012 and 2016, and (iii) summarizes the findings and recommendations.

B. Background

3. **Road network and conditions in 2011.** The RHD is currently responsible for the management of national, regional, and zilla roads. A survey of road conditions conducted in 2010–2011 presents the following detailed findings in Table 1.

Table 1: Survey Results of RHD Road Network Conditions, 2010–2011
(km)

| Roads | Good | Fair | Poor | Bad | Very Bad | Total Surveyed |
|------------------|-----------------|-----------------|-----------------|-----------------|--------------|------------------|
| National | 755.62 | 1,441.12 | 742.83 | 344.70 | 77.97 | 3,362.24 |
| Regional | 260.53 | 1,403.06 | 1,357.04 | 475.07 | 106.78 | 3,602.48 |
| Zilla (District) | 422.19 | 1,503.27 | 3,233.51 | 2,216.27 | 312.95 | 7,688.19 |
| Total | 1,438.34 | 4,347.45 | 5,333.38 | 3,036.04 | 497.7 | 14,652.91 |

km = kilometer, RHD = Roads and Highways Department.

Source: Roads and Highways Department estimates.

4. **Backlog in 2011.** The survey revealed that the proportion of roads in the Good–Fair condition for the national, regional, and zilla road categories are 65%, 46%, and 25%, respectively. The remaining roads are in Poor–Very Bad condition, forming the backlog of roads requiring rehabilitation. The backlog for national, regional, and zilla roads are 35%, 54%, and 75%, respectively. This is summarized in Table 2 below.

Table 2: Proportion of RHD Roads in Good–Fair and Poor–Very Bad Conditions, 2011
(km)

| Road Class | Total Length | Roads in Good–Fair Condition | Roads in Poor–Very Bad Condition |
|------------------|---------------|------------------------------|----------------------------------|
| National | 3,537 | 2,311 (65%) | 1,226 (35%) |
| Regional | 4,275 | 1,974 (46%) | 2,301 (54%) |
| Zilla (District) | 13,458 | 3,377 (25%) | 10,081 (75%) |
| Total | 21,271 | 7,662 (36%) | 13,608 (64%) |

km = kilometer.

Source: Roads and Highways Department estimates.

¹ ADB. 2012. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Administration of Loan and Technical Assistance Grant to the People's Republic of Bangladesh for the South Asia Subregional Economic Cooperation Road Connectivity Project*. Manila (Loan 2949-BAN)

5. **Maintenance backlog clearance strategy.** To improve the road network conditions, in the loan agreement for Loan 2949-BAN: SASEC Road Connectivity Project, the government committed the following strategy and targets to clear the maintenance backlog: “The Borrower shall...ensure that RHD has eliminated the backlog maintenance in 10 years by FY2023/24 for national and regional highways, and reduces to a maximum of 30% of the total district road length, that is, annual clearance of backlog maintenance at least 120 km for national highways, 230 km for regional highways and 350 km for district roads....”

C. Clearance of Road Maintenance Backlog

6. **2016 survey and estimate.** Based on the survey conducted by the RHD in February to May 2016, the estimate of road conditions in 2016 is shown in Table 3.

Table 3: Proportion of RHD Roads in Good–Fair and Poor–Very Bad Conditions, 2016
(km)

| Road Class | Total Length | Roads in Good–Fair Condition | Roads in Poor–Very Bad Condition |
|------------------|---------------|------------------------------|----------------------------------|
| National | 3,813 | 3,036 (80%) | 773 (20%) |
| Regional | 4,247 | 2,939 (69%) | 2,301 (31%) |
| Zilla (District) | 13,242 | 3,377 (53%) | 10,081 (47%) |
| Total | 21,302 | 13,420 (63%) | 7,882 (37%) |

km = kilometer.

Source: Roads and Highways Department estimates.

7. **Speed of maintenance backlog clearance.** By comparing the road network conditions in 2011 and 2016, the average annual clearance in the last 5 years is shown in Table 4. Overall, the RHD has been well on track in clearing the maintenance backlog but with different levels of performance on different classes of roads. While the RHD could reach the average annual targets for backlog clearance on national (121% of the target) and zilla roads (207% of the target), the clearance of maintenance backlog on regional roads has been behind the planned speed of implementation.

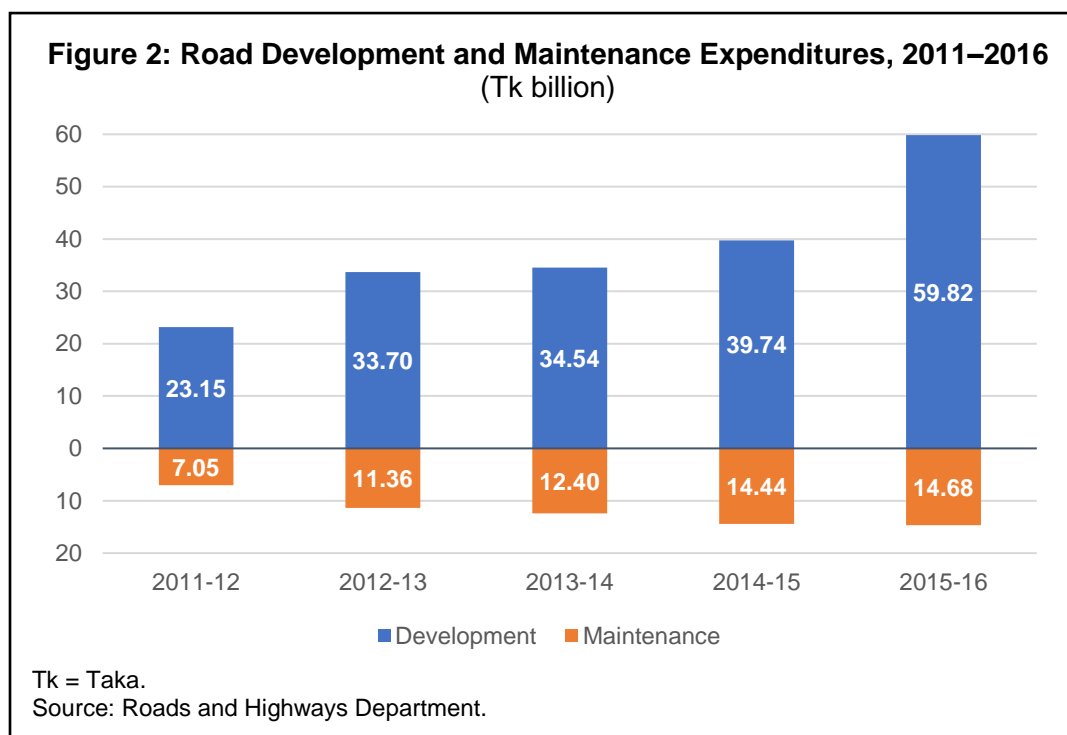
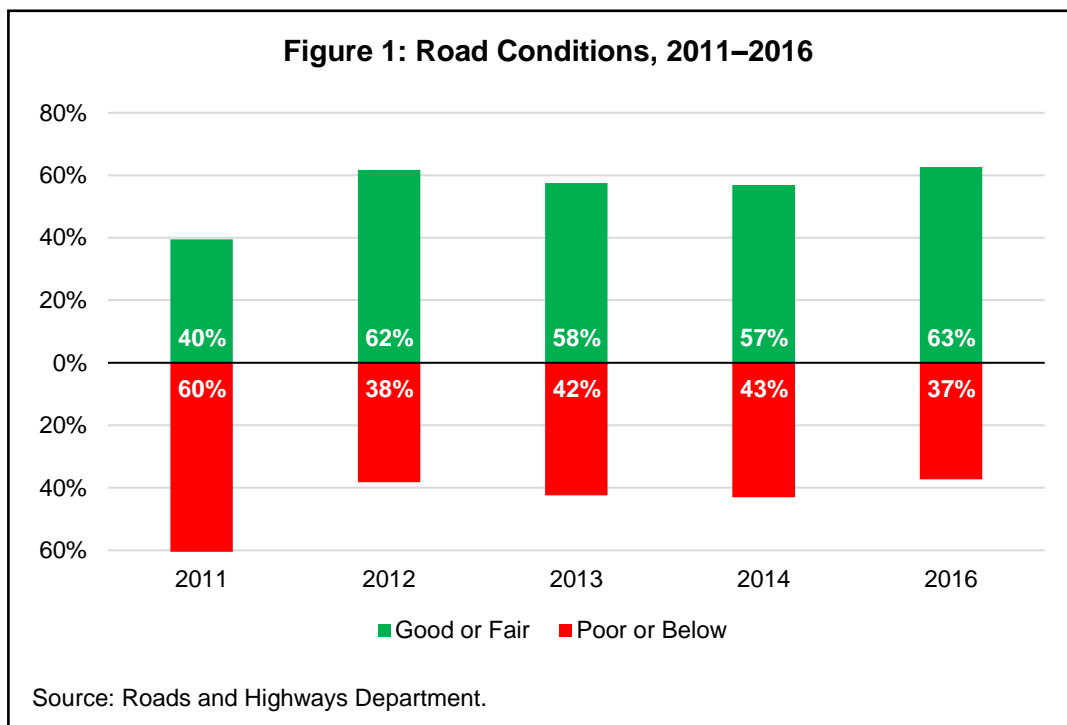
Table 4: Status of Clearance of Maintenance Backlog, 2011–2016
(km)

| Road Class | Total Clearance of Maintenance Backlog | Average Annual Clearance | Target as per Loan Agreement |
|------------------|--|--------------------------|------------------------------|
| National | 725 | 145 | 120 |
| Regional | 965 | 193 | 230 |
| Zilla (District) | 3,631 | 726 | 350 |
| Total | 5,758 | 1,152 | 700 |

km = kilometer.

Source: Roads and Highways Department estimates.

8. **Road maintenance financing and road conditions.** A close look at the trend of road maintenance financing and road conditions, as illustrated in Figures 1 and 2, shows that (i) the RHD cleared a large portion of maintenance backlog in 2012, maintained the network conditions at the same level until 2014, and speeded up implementation in 2016, and (ii) RHD expenditures on both development and maintenance have grown at similar speeds.



D. Findings

9. These findings indicate a positive trend in achieving the long-term sustainability of the road subsector provided that the RHD can speed up backlog clearance and improve performance in regional road maintenance.