

## SECTOR ASSESSMENT (SUMMARY): AGRICULTURE, NATURAL RESOURCES, AND RURAL DEVELOPMENT

### Sector Road Map

#### 1. Sector Performance, Problems, and Opportunities

1. Bangladesh has a population of about 165 million people (2018) and a land area of 147,570 square kilometers (km<sup>2</sup>), making it one of the most densely populated countries in the world; it is also one of the most vulnerable to climate risk.<sup>1</sup> Two thirds of the country are less than 5 meters above mean sea level, and the country is located in the deltas of the Ganges, Brahmaputra, and Meghna rivers. Bangladesh made steady economic progress during 2012–2019, with annual gross domestic product (GDP) growth exceeding 6% on average. The United Nations declared Bangladesh eligible to graduate from least-developed to developing country status by 2024.<sup>2</sup> The country's Seventh Five Year Plan, fiscal year (FY) 2016–FY2020<sup>3</sup> supports this aim and seeks to achieve average growth of at least 7% per year over the plan period;<sup>4</sup> it has been on track to meet this target, with annual GDP growth of 7.9% in FY2016 and 7.3% in FY2017. In FY2019, Bangladesh outperformed the Asian Development Outlook 2019 projections, accelerating to 8.1% on robust private consumption and exports. Growth is likely to remain strong. The Asian Development Outlook 2019 forecasts that Bangladesh will grow at an average of 8% over FY2018–FY2020,<sup>5</sup> however due to the coronavirus disease pandemic outbreak, this growth is unlikely to be achieved.

2. Agriculture constitutes about 14% of Bangladesh's GDP, which is in the same range as the rest of South Asia. Although the share of agriculture has declined gradually, over 50% of the national workforce remains directly or indirectly employed in agriculture, and the sector remains a major contributor to poverty reduction, with rising wages. Annual growth in agriculture was less than 2% during 1972–1992 (the first two decades after independence), rising to 3% during 2000–2010, and 3.5% during 2011–2019 (footnote 4). The country has achieved near self-sufficiency in cereal production, with a strong emphasis on rice production, which has grown by 3.2% per year, well above the rate of population growth. The Seventh Five Year Plan focuses on maintaining self-sufficiency in cereal production and diversifying crops, increasing productivity, and promoting agribusiness to increase rural income and economic development. The plan cites the major challenges in agriculture as the promotion of production technology, nutrition, value chains, and maintaining food security. The major constraints are insufficient market infrastructure and the impacts of climate change on transport, as a result of poor road conditions and intense monsoons. The plan puts forward specific strategies to overcome the challenges and constraints in agricultural development.

3. Road transportation is the dominant mode of transportation in Bangladesh, carrying more than 70% of passenger and 60% of freight traffic (footnote 4). Road ownership is divided among the (i) the Roads and Highways Department, which owns and maintains national highways, regional highways, and *zila* (district) roads; and (ii) the Local Government Engineering Department (LGED) and local government institutions (LGIs), which own and maintain *upazila*

---

<sup>1</sup> United Nations. Statistics Division. [World Statistics Pocketbook](#).

<sup>2</sup> United Nations, Department of Economic and Social Affairs. 2018. [Leaving the LDCs category: Booming Bangladesh prepares to graduate](#). News release. 13 March.

<sup>3</sup> The fiscal year (FY) of the Government of Bangladesh and its agencies ends on 30 June. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2017 ends on 30 June 2017."

<sup>4</sup> Government of Bangladesh, Planning Commission. 2015. *Seventh Five Year Plan, FY2016–FY2020*. Dhaka.

<sup>5</sup> Asian Development Bank. 2019. *Asian Development Outlook 2019 update: fostering growth and inclusion in Asia's cities*. Manila.

(subdistrict) roads (UZRs), union roads (UNRs), and village roads.<sup>6</sup> Bangladesh's total road network covers 374,245 km, of which 352,943 km (94%) are rural roads.

4. Rural connectivity is a key component of rural development in Bangladesh. Rural roads help significantly in generating increased agricultural incomes and productive employment opportunities, and also promote access to economic and social services. Rural roads are lifelines for rural residents. Bangladesh's large rural road network includes many roads constructed in 1990–2010 on earthen embankments owned by union *parishads* (rural councils) or *zila parishads* (district councils). These roads are vital to the agriculture sector. Since 1995, the Government of Bangladesh, with the support of the international development community, has continued to expand and improve the rural road network. Rural infrastructure in Bangladesh improved significantly during 1996–2016, but rural connectivity remains weak, impeding physical and economic access to goods and services. About 40% of the rural population has access to all-weather roads, which make up just 28% of the country's rural roads. The government is making a sustained effort to improve the rural road network through its own resources and in cooperation with development partners. It proposes to increase the percentage of rural roads in the country rated “good” in steps, from 43% in 2016 to 80% in 2020.<sup>7</sup>

5. The current project and the proposed additional financing will improve the accessibility of the rural road network in agriculture value development zones in Bangladesh, increasing the engagement of the rural population in agricultural production and agribusiness development. It will support the government's agricultural strategy, envisaged in the plan's goals of increasing agricultural productivity, encouraging commercial agriculture and agribusiness development, increasing employment opportunities for rural poor people, and reducing the poverty level. The project is in line with the country partnership strategy for Bangladesh, 2016–2020 of the Asian Development Bank (ADB) and the ADB's Strategy 2030.<sup>8</sup>

6. **Maintenance of rural roads.** There is a significant backlog of rural road maintenance because the budget allocated to maintenance is insufficient. The government budgetary allocation for rural road maintenance is inadequate. Although the rural road maintenance budget increases each year, it is insufficient to meet maintenance needs. Details of the maintenance budget allocation and estimated maintenance need, including for rehabilitation and reconstruction of roads in disrepair, are in Table 1. The average allocation from 2012–2018 is about 15.0% of the estimated need, which has added to the large maintenance backlog. The allocation for rural road maintenance increased by an average of 15.6% per year during 2012–2018, indicating that more investment is required to overcome the problem.

**Table 1: Allocation of Funds from 2012–2019<sup>a</sup>**

Financial Year	Calculated Need (Tk million)	Allocated			Spent	
		Tk million	% of Need	% Increase	Tk million	% of Allocation
2011–2012		6,250.00				
2012–2013	57,210	7,600.00	13.28	21.60	7,600.00	100
2013–2014	52,630	8,350.00	15.87	9.87	8,350.00	100
2014–2015	48,040	9,750.00	20.30	16.77	9,750.00	100
2015–2016	97,040	10,750.00	11.08	10.26	10,750.00	100
2016–2017	76,220	12,580.00	16.51	17.02	12,580.00	100
2017–2018	112,590	17,300.00	15.37	37.52	17,300.00	100
2018–2019	120,000 <sup>b</sup>	18,000.00	15.00	4.05	18,000.00	100

<sup>a</sup> District fund allocation for rural road and bridge maintenance, Road Maintenance and Road Safety Unit, Local Government Engineering Department.

<sup>b</sup> Estimate.

Source: Local Government Engineering Department.

<sup>6</sup> Bangladesh Gazette. 6 November 2003.

<sup>7</sup> Good roads comprise all-weather (paved) and gravel roads.

<sup>8</sup> ADB. 2016. *Country Partnership Strategy: Bangladesh, 2016–2020*. Manila; ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

## 2. Government's Sector Strategy

7. The Local Government Division launched its rural roads and bridge maintenance policy in 2013. The policy commits the government to funding road maintenance on an incremental basis. The key strategies are (i) reducing the backlog in road maintenance; (ii) improving and rehabilitating the roads to a climate-resilient standard; (iii) improving maintenance skills and institutional capacity; (iv) establishing a comprehensive and reliable inventory for roads, bridges and culverts; (v) establishing a link between the inventory and geographical information system spatial database; and (vi) upgrading the road and bridge maintenance standards.

8. The government's sector strategies are well defined in the Seventh Five Year Plan. One of the priorities for the transport sector is to continue to repair, maintain, improve, and expand existing roads on a priority basis. The plan has set strategic priorities for rural transport development and management: (i) build double lane carriageways or upgrade and maintain selected busy UZR and UNRs that carry larger commercial vehicle traffic, and roads that integrate with the multimodal transport system; (ii) maintain existing paved rural road network; (iii) improve UZR, UNRs, and prioritized village roads with strategic importance that connect road, railway, and waterway networks; and (iv) initiate preparation of the land use map. The proposed project is in line with both priorities, as UZR and UNRs will be rehabilitated and widened to improve rural road connectivity.

9. The government's 5-year planning process regularly sets targets for improvements to the national rural road network. The plan's current targets are in Table 2. The plan's budget allocation for the LGED indicates an annual increase of almost 20% during the period to achieve these targets. During the Sixth Five Year Plan (FY2011–FY2015), 28,697 km of rural roads were constructed and/or maintained, and 125,856 meters of bridges and/or structures were built in the country. Lessons from the Sixth Five Year Plan include: (i) the development of the rural road network contributed to a reduction in the intensity of rural poverty, (ii) Bangladesh's Human Development Index rating increased thanks to the improved rural road network,<sup>9</sup> (iii) development planning should be supported by proper land use planning, (iv) rural roads built in 1990–2010 did not have proper geometry or design, (v) land acquisition involves huge administrative difficulties, (vi) overloaded vehicles significantly damage rural roads and increase maintenance costs, (vii) road safety has become a challenge, and (viii) roadside developments obstruct drainage. The rural roads and bridge maintenance policy provides directives to arrange maintenance funds through public–private partnership, with the involvement of LGIs, but the Sixth Five Year Plan notes that implementation will require significant capacity building of LGIs and other stakeholders.

**Table 2: Targets to Improve Upazila and Union Road Networks to Good and Fair Condition**

Year	2014 (base year)	2016	2017	2018	2019	2020
Planned percentage <sup>a</sup>	33%	43%	52%	62%	72%	80%
Estimated length of UZR and UNR (km) <sup>b</sup>	27,237	35,491	42,920	51,173	59,427	66,030
Achieved (km)	27,237	30,456	(...)	(...)	(...)	(...)
Achieved percentage	33%	37%	(...)	(...)	(...)	(...)
Estimated length of rural roads to be maintained each year (km)		8,254	7,429	8,253	8,254	6,603

km = kilometer, UNR = union road, UZR = *upazila* road, (...) = data not available

<sup>a</sup> Government of Bangladesh, Planning Commission. 2015. *Seventh Five Year Plan, FY2016–FY2020*. Dhaka.

<sup>b</sup> UZR and UNRs total 82,538 km. Paved roads total 53,432 km, of which 57% (30,456 km) were assumed to be in fair and/or good condition in 2015.

Source: Local Government Engineering Department.

<sup>9</sup> The United Nations Development Programme (UNDP) ranks countries into four tiers of human development by combining measurements of life expectancy, education, and per capita income into the Human Development Index (HDI) in its annual Human Development Report.

### 3. ADB Sector Experience and Assistance Program

10. ADB supports inclusive economic growth and poverty reduction in Bangladesh through the strategic priorities identified in the country partnership strategy for Bangladesh, 2016–2020 (footnote 8). ADB's Strategy 2030 also promotes rural development by improving rural market connectivity and agricultural value chain linkages (footnote 8). Recognizing the importance of rural infrastructure for economic growth and poverty reduction in Bangladesh, ADB and other development partners, including German development cooperation through KfW, have supported the government's efforts to develop rural infrastructure through several projects.<sup>10</sup> After initially focusing on building rural roads, bridges, culverts, and the capacity of LGIs, ADB broadened its support to include the construction of growth center markets, flood shelters, and union *parishad* offices. Subsequently, gender considerations and community participation in rural infrastructure planning, implementation, and operation and maintenance were included.

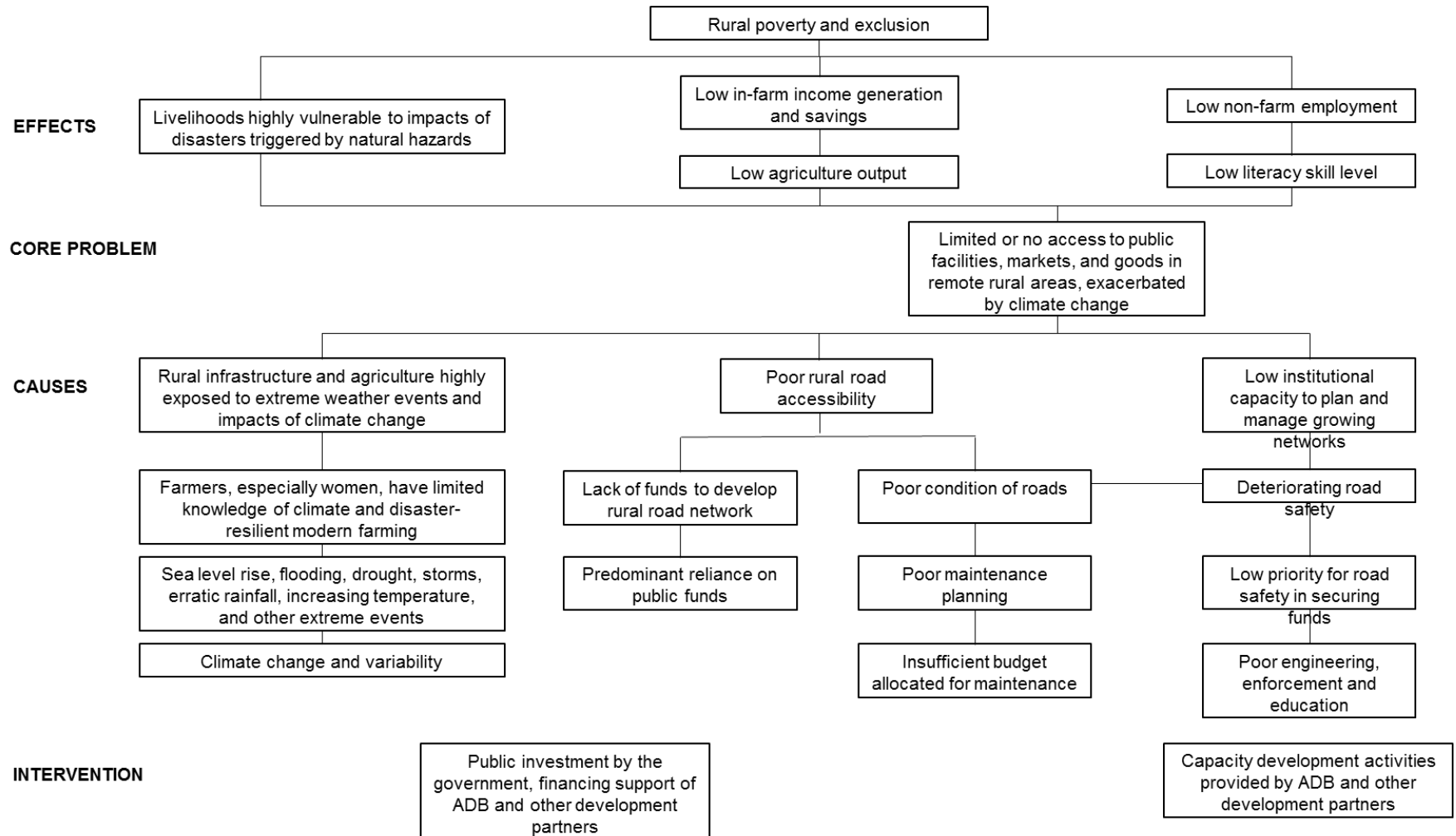
11. In rural infrastructure development, ADB aims to foster rural connectivity through improved road connectivity, upgraded marketing facilities, and better rural infrastructure management. ADB's priorities are (i) ensuring the local community participates in the decision-making process; (ii) promoting gender equity in economic opportunities; (iii) ensuring proper operation and maintenance, technical skills enhancement, and capacity building of LGIs; (iv) developing climate change-resilient infrastructure; and (v) raising awareness on road safety.

12. Rural infrastructure projects have a high potential to reduce poverty and increase social inclusiveness. ADB, other development partners, and the LGED have implemented several such projects; the resulting lessons were incorporated in the design and implementation arrangements of subsequent rural infrastructure projects, and include (i) using advance action; (ii) establishing soil laboratories in LGED regional offices to enable adequate soil and material testing before construction; (iii) training contractors on contract and financial management; (iv) adopting a participatory approach to project planning and implementation as a standard practice; (v) conducting a road user cost study; (vi) institutionalizing labor contracting societies to maintain rural roads, and plant and maintain trees; (vii) providing sections for women in most markets; (viii) institutionalizing gender and development principles in the LGED; (ix) sharpening the poverty focus of projects; and (x) building the capacity of local governments. The current project includes pilot routine maintenance in works contracts for 5 years to encourage the LGED to adopt maintenance contracts in future projects to ensure better asset quality and improved maintenance.

---

<sup>10</sup> ADB-supported projects include (i) ADB. 1988. *Loan to Bangladesh for Rural Infrastructure Development*. Manila; (ii) ADB. 1992. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and a Technical Assistance Grant to the People's Republic of Bangladesh for the Second Rural Infrastructure Development Project*. Manila; (iii) ADB. 1997. *Loan to Bangladesh for Third Rural Infrastructure Development*. Manila; (iv) ADB. 2002. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of Bangladesh for the Rural Infrastructure Improvement Project*. Manila; (v) ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Administration of Department for International Development of the United Kingdom Grant to the People's Republic of Bangladesh for the Second Rural Infrastructure Improvement Project*. Manila; (vi) ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of Bangladesh for the Sustainable Rural Infrastructure Improvement Project*. Manila, and (vii) ADB. 2018. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grant People's Republic of Bangladesh: Rural Connectivity Improvement Project*. Manila.

## Problem Tree for Agriculture, Natural Resources and Rural Development



ADB = Asian development Bank