

SECTOR ASSESSMENT (SUMMARY): TRANSPORT¹

1. Sector Performance, Problems, and Opportunities

1. **Road network length.** Mongolia has a road network of 48,538 kilometers (km) comprising 12,710 km of state and international roads and 35,828 km of local roads.² Some 6,406 km (13.2%) are paved, of which 3,865 km were upgraded from earthen or gravel roads or newly constructed during 2011–2015. This construction was undertaken as part of the New Development Program, a midterm program ratified by Parliament in 2010.³ This program was expanded through a government action plan for 2012–2016, whereby Ulaanbaatar was to be connected by paved roads to *aimag* centers and *aimag* centers to their border crossing points, if any.⁴

2. **Technical class.** The road network is classified international, state, local, and internal (roads of business entities and organizations, including mining roads), but official records usually exclude internal roads. Mongolian Road Law Amendment, 2017 categorized capital city and local roads separately. Class I-G roads are most commonly constructed in Mongolia.⁵ The proportion of the state road network with class I-G standard increased from 20.4% in 2010 to 44.7% in 2015. In 2015, 42.1% of state roads are underclass⁶ roads that require upgrading.

3. **Road surface.** Most paved roads are classified state or international roads (Table 1). As of 2016, 1,015 km of state roads were under construction, and paved state and international roads will comprise 49% of the state and international network when completed.

Table 1: State and Local Road Lengths and Types of Pavement, 2015
(kilometers)

Administrative Level	Paved		Unpaved			Total
	Cement Concrete	Asphalt Concrete	Gravel	Improved	Earthen	
State and International	40	5,644	1,151	520	5,355	12,710
Local	55	667	565	452	34,089	35,828
Total	95	6,311	1,716	972	39,444	48,538

Source: Government of Mongolia, Ministry of Road and Transport Development, Road Transport Policy Implementation and Coordination Department.

4. **Technical standards.** The technical design standards of roads are based on the level and capacity of roads, i.e., traffic volume is not considered. Mongolia experiences dry and strong winds most of the year because of terrain features and abrupt climate changes, which can cause failure in the bonding of materials in gravel roads and quick deterioration. Earth tracks are preferred over gravel roads in terms of operation and maintenance. In general, rutting takes longer to develop on earth roads than gravel roads, which prompts drivers to use other parallel (earth)

¹ This summary is based on ADB. 2017. Regional Road Development and Maintenance Project. Consultant's report. Manila (TA 8852-MON). Available on request.

² Based on 2015 statistics. Mongolia's road network includes 718 km of privately constructed and operated mining roads, which this sector assessment does not consider.

³ The aim of this program is sustainable and balanced facilitation of development with a comprehensive solution to socioeconomic challenges by bringing the urban planning, energy, engineering infrastructure, and road network to international standards.

⁴ Administratively, *aimags* are provinces and the capital city. *Aimags* are divided into *soums* and *soums* are divided into *baghs*.

⁵ State roads are divided into three classes: class I-G are two-lane 7-meter roads, while classes I and II can have more than two lanes. Local roads are classes IV and V. Class V are formed earth roads.

⁶ Underclass roads are earth tracks, lower than class V standard.

roads. Abandoned roads with rutting gradually return to their natural condition without human involvement and can later be reused. Despite the negative impact on the environment, earth roads allow better riding quality than gravel roads.

5. Low-cost road construction methods, such as bituminous surface treatment seals, could be used more in Mongolia. Other large, sparsely populated countries with low traffic counts, such as Australia and Canada, use this surfacing effectively as an alternative to asphalt concrete pavements. Traffic levels throughout most of Mongolia's road network are too low to justify asphalt concrete paving. Implementing bituminous surface treatment seals could enable a much greater length of road to be improved to an acceptable standard. This approach would also be suitable for improving local roads under the *aimag* administrations.

6. **Road management.** The Road Transport Implementation and Coordination Department in the Ministry of Road and Transport Development (MRTD) is responsible for project management. The Ulaanbaatar City Road Department is responsible for city roads and each *aimag* is responsible for local roads.

7. **State road funding.** Construction, maintenance, and rehabilitation works of state roads and bridges are funded from the state budget, development banks, and international loans and grants. From 2011 to 2015, MNT1.88 trillion (\$778.7 million) was invested in the upgrading and construction of 8,106 km paved and unpaved roads and 3,975 meters of bridges (Table 2). Of this funding, 88% was disbursed for roads connecting Ulaanbaatar with *aimag* centers.

Table 2: State Road Upgrading, Construction, and Investment

Year	Length of Roads (km)			Total Investment (MNT million)		
	State Roads	Local Roads	Total	State Roads	Local Roads	Total
2011	4,712	18	4,730	96,005	1,287	97,292
2012	16	3	19	4,295	1,304	5,599
2013	1,613	183	1,796	829,675	79,888	909,564
2014	587	43	630	311,771	108,800	420,571
2015	868	63	931	414,117	35,132	449,249
Total	7,796	310	8,106	1,655,863	226,411	1,882,275

km = kilometer.

Source: Government of Mongolia, Ministry of Road and Transport Development, Road Transport Policy Implementation and Coordination Department.

8. The construction and maintenance of state roads and road facilities are funded by the State Road Fund and regulated by the Mongolian Road Law. The State Road Fund consists of the fuel tax; annual vehicle license fee; fees for using state roads; and financing from the state budget, loans, aid, and grants. However, insufficient funds have been collected as taxes have been reduced or cancelled to keep gas prices under control amid fuel price increases in the Russian Federation, on which Mongolia depends for much of its fuel. The project aims to improve the management, funding sources, uses of fund resources, and allocation mechanisms of the State Road Fund.

9. The main revenue of the fund is the vehicle tax and road use tax, excluding vehicles registered in Ulaanbaatar (Table 3). This revenue goes directly to the state budget, and the full fund revenues are not directed back to road construction and maintenance. The Road Law requires amendments to ensure that funding levels are adequate and are only for routine and periodic maintenance activities, with adequate fund management and carefully selected and prioritized maintenance activities.

Table 3: Revenue Collected from State Roads from Vehicle Tax and Road Use Fees
(MNT billion)

Year	Revenue		Expenditure	
	State Road Fund	Ulaanbaatar Road Fund	State Road Fund	Ulaanbaatar Road Fund
2009	9.95	6.7	9.1	9.0
2010	10.0	6.3	8.9	11.6
2011	11.2	11.3	9.8	29.0
2012	13.4	14.8	11.2	24.2
2013	39.0	17.4	19.0	64.3
2014	42.1	27.8	22.6	101.1
2015	16.2	30.2	18.0	41.7

Sources: Government of Mongolia, Ministry of Finance; and Ministry of Road and Transport Development, Road Transport Development Center.

10. **State road maintenance.** The state budget provides separate annual allocations for routine maintenance and rehabilitation, but the MOF has not funded any periodic or rehabilitation projects in 2011–2016 since state budgets have prioritized road upgrading and construction projects. The MRTD requests routine maintenance budget from the MOF annually, based on estimates from the maintenance companies, but the amount allocated is constrained to only 15% of estimated needs. According to the estimates by the maintenance companies, MNT1.8 million was required for routine maintenance per km of asphalt concrete road per year, but records show that only MNT1.2 million per km of road was spent during 2012–2016.

11. All works related to the maintenance of the state roads and road facilities are carried out on a contractual basis by 28 road maintenance companies (20 government-owned and eight private) located in towns and *aimag* centers. *Aimags* without maintenance companies award 4-year maintenance contracts to private contractors, based on competitive bidding, with maintenance budgets allocated annually. The length of roads managed by each maintenance company depends on the location, varying from 80 km to 1,285 km. The amounts allocated each year are too small for the companies to invest in modern equipment and technology, and many run at a loss. Low wages limit the availability of engineers and skilled workers. Maintenance planners use outdated, vague, and non-methodical procedures to prepare cost estimates for routine and periodic maintenance plans, which fail to convince decision makers of the urgency of maintenance needs. Lack of coordination between the MRTD and the MOF produces insufficient funding allocations from the state budget, hampering the MRTD's maintenance activities.

12. **Road safety.** The annual routine maintenance allocation does not include any traffic safety maintenance, including the provision and repair of road markings and signs (e.g., warning, prohibitory, priority, and information). The coordination between institutes in charge of traffic safety (traffic police) and transport is poor.

2. Government's Sector Strategy

13. The government's vision, articulated in the National Development Strategy, 2008–2022, is to help Mongolia's *aimags* to capitalize on their competitive advantage through the pursuit of the policy pillars: (i) development of a basic road, rail, and communication infrastructure network that connects the country with its neighbors and (ii) ensuring the efficient and reliable flow of

goods, people, and ideas.⁷ The strategy aims to expand the length of the paved road network from 2,100 km in 2010 to about 12,710 km by 2021, but the likelihood of attaining this goal is very low because of the economic downturn.

14. Mongolia's Sustainable Development Vision by 2030 envisaged the development of a broader economic framework, encompassing more sectors than mining, and prioritized developing the energy and infrastructure sector to achieve the Sustainable Development Goals.⁸ The vision is aimed at Mongolia's competitive capacity at the international level. It includes a three-phase objective from 2016 to 2030 to (i) establish logistics centers at Zamyun-Uud, Khushig valley, and Altanbulag; (ii) increase the length of international and state roads by 2,870 km; (iii) construct the Ukhaa Khudag–Gashuun Sukhait, Erdenet–Ovoot, and Bogd Khan railways; and (iv) develop transit transport. The road transport subsector upgrading identified in the New Development Program has largely been implemented. This program focused on upgrading earthen or gravel roads and some new construction, with little emphasis on or funding for maintenance.

3. ADB Sector Experience and Assistance Program

15. Since 1991, the Asian Development Bank (ADB) has been a major partner in the improvement of the underdeveloped transport network and inefficient cross-border transport of Mongolia, and has assisted in developing two major vertical axis highway corridors linking Mongolia to its neighbors—the People's Republic of China and the Russian Federation.⁹ This has brought development, jobs, and social services to those regions. Improved accessibility has had a positive impact on the lives of the poor. Since 2009, ADB has focused also on reforming road maintenance and improving road asset management aiming to protect road sector investments and maintain the sustainability of assets.¹⁰

16. The overarching goal of ADB's CPS 2017–2020 is to help Mongolia sustain inclusive growth in a period of economic difficulty. The strategic pillars are: (i) promoting economic and social stability, (ii) developing infrastructure for economic diversification, and (iii) strengthening environmental sustainability. The second pillar includes ADB's continued support on the improvement of physical connectivity through infrastructure investments that reduce transport and logistics costs, with a focus on developing regional road corridors.

⁷ State Great Khural 2008. Millennium Development Goals (MDGs) based on Comprehensive National Development Strategy. Ulaanbaatar.

⁸ State Great Khural of Mongolia. 2016. Mongolia Sustainable Development Vision 2030. Ulaanbaatar..

⁹ ADB. Mongolia: Western Regional Road Corridor Investment Program. <https://www.adb.org/projects/41193-014/main>; ADB. Mongolia: Western Regional Road Corridor Development Project – Phase I. <https://www.adb.org/projects/39265-022/main>; and ADB. Mongolia: Regional Road Development Project. <https://www.adb.org/projects/35377-013/main>.

¹⁰ ADB. 2009. Technical Assistance to Mongolia for Road Database Development Using Geographic Information System. Manila.

Problem Tree for Transport Sector

