

## SECTOR ASSESSMENT (SUMMARY): TRANSPORT<sup>1</sup>

### Sector Road Map<sup>2</sup>

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

1. **Sector performance.** Azerbaijan's transport sector accounts for about 6%–8% of the country's gross domestic product (GDP) and plays an important role in enhancing regional cooperation as well as supporting the national economy. The transport sector comprises mainly intercity roads and highways and a railway network. Roads cater for about 79% of total passengers in passenger kilometers (km) and about 28% of total freight volume in ton-km. While freight is mainly carried by railways, the volume carried by roads increased 20 times from 2006 to 2010. The share of roads in the overall transport sector is expected to increase substantially, amplifying the importance of the road subsector in the country's development.

2. The non-urban road network comprises about 25,000 km of roads, including 4,498 km in the Nagorno-Karabakh area and 2,078 km in the Nakhchivan Autonomous area.<sup>3</sup> It consists of 7,016 km of state roads and 17,997 km of municipal roads. The network is dominated by two major highways: (i) the east–west highway linking the country's capital, Baku, to the Georgian border; and (ii) the north–south highway running from the Russian Federation border to the Iranian border through Baku. About 51% of the roads are sealed and 49% are unsealed. However, 60% of the road network is in poor condition.

3. The rate of motorization per 1,000 population is growing rapidly. The vehicle fleet numbered about 983,000 in 2010, an increase of about 60% from about 612,000 in 2005.<sup>4</sup> This is equivalent to 110 vehicles per 1,000 people in 2010 compared with 73 vehicles in 2005. This trend will increase with continued economic growth in the country. In Baku, the car fleet has quadrupled since the early 1990s and there are now 200 vehicles per 1,000 inhabitants.

4. There were 3,179 traffic crashes in 2005, resulting in 1,065 fatalities and 3,668 injuries. The fatality rate in 2005 was 17.4 per 10,000 vehicles, much higher than in some of the best performing European countries. From 2005 to 2010, a downward trend occurred. By 2011, 2,890 crashes were recorded with 1,016 fatalities and 3,031 injuries, but these were an increase of 6.2% (crashes), 9.8% (fatalities), and 5.6% (injuries) from the same period in 2010.<sup>5</sup>

5. The private sector plays a key role in the provision of road transport services, accounting for more than 95% of freight and passenger traffic. The state-owned road transport operators were largely privatized and foreign road transport operators are allowed to set up business. Freight charges and bus fares for domestic road transport are determined based on market conditions, although the government sets prices for urban passenger transport and tariffs for

<sup>1</sup> This summary is based on various Asian Development Bank (ADB) technical assistance reports and consultations with relevant government agencies and other stakeholders.

<sup>2</sup> The focus here is on non-urban transport, but some aspects of urban transport are mentioned. Urban transport is included under the transport and ICT sector in ADB's sector classification under ADB. 2014. *Project Classification System—Staff Instructions*. Manila; but it is included in Sector Assessment: Water Supply and Other Municipal Infrastructure and Services (Summary) (accessible from the list of linked documents in Appendix 2) because of the strategic approach by the Asian Development Bank (ADB) being taken in Azerbaijan for urban infrastructure and services. The urban transport indicators, however, are presented here in the sector results framework.

<sup>3</sup> The Nakhchivan Autonomous Republic is an exclave of the Republic of Azerbaijan and is connected by air transport from the capital of Baku or by road transport via Iran.

<sup>4</sup> State Statistical Committee of the Republic of Azerbaijan. 2011. *Statistical Yearbook of Azerbaijan*. Baku.

<sup>5</sup> Azəryolservis ASC. 2012. *Draft State Program of Azerbaijan Republic on Road Safety for 2013-2017*. Baku.

cross-border and transit traffic. The government has introduced vehicle licensing to enhance vehicle axle-load controls.

6. Rail track totals 2,100 km, with 1,270 km electrified and 828 km double tracked. Azerbaijan Railway (ADY) transports 22.3 million tons of freight and 4.8 million passengers annually, making it a vital mode of transport. The two primary lines are (i) the east–west line (502 km) from Baku to the Georgian border, where the majority of oil and oil products are transported to Black Sea ports; and (ii) the north–south line (211 km) from Baku to the Russian Federation border, which is the preferred route for Azerbaijan’s imports from the Russia Federation.

7. ADY has failed to reinvest earnings adequately into infrastructure and rolling stock, resulting in a serious deterioration of the infrastructure and a chronic decline in the serviceability of the locomotive and wagon fleet. Current rail tracks are in critical condition, with detrimental effects to the overall efficiency of the rail network—183 km of the 502 km on the east–west line and 126 km of the 211 km on the north–south line are under speed restriction.

8. **Problems.** Connectivity is vital for sustainable development in Azerbaijan. However, about 60% of the transport network is aging. The transport network needs to be improved to achieve the objectives of promoting sustainable and inclusive economic growth. These improvements require new investments including enhanced targeted maintenance programs, improved corridor safety and efficiency, development of road design and traffic management standards, and capacity building to facilitate cross-border trade and transit traffic.

9. **Network infrastructure.** The transport network does not meet the needs of the expanding economy. There are about 200 km of four-lane highways, but the rest of the road network is in poor condition. Despite the budget increase from \$5.7 million in 2001 to \$72.0 million in 2011, funding for road maintenance remains insufficient. As a result, a large part of the road network deteriorated rapidly and became redundant. Vehicle axle overloading also contributes to the rapid deterioration of pavements. Poor road conditions—resulting in high transport costs, delayed delivery times, and a high number of crashes—are constraints to the sustained growth of non-oil sectors and poverty reduction.

10. In the absence of a major track rehabilitation program, maintenance costs are expected to climb by 20% per year, while the average effective train speeds decline to 15 km per hour. The electric power system, overhead catenaries, and substations are in critical condition, especially along the east–west line. The 27 substations will require complete refurbishment within a 5-year time frame. The overhead catenaries system is also at or near complete failure condition. The locomotive fleet is also in desperate need of upgrades.

11. **Urban congestion.** The main urban transport issues are concentrated in Baku. Congestion occurs on all major arteries and causes road safety and health concerns. Additionally, the road network is poorly built and not adequately maintained. The lack of parking facilities in the city center causes unregulated on-street parking, which severely impedes the streets’ nominal capacity. In public transportation, Baku metro suffers from severe crowding, causing critical issues on safety and quality of service, while the lack of dedicated bus lanes impede public bus performance. Furthermore, the networks are not integrated, and this underlines the need to set up an urban transport authority for Greater Baku.

12. **Safety.** Transport safety is a very serious problem. Azerbaijan stands to lose more than \$1.2 billion annually as a result of road traffic crashes.<sup>6</sup> Poor road conditions, unsafe driving

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<sup>6</sup> World Bank. 2010. Confronting “Death on Wheels”: Making Roads Safe in Europe and Central Asia. Washington, DC.

behavior, and ineffective enforcement of traffic laws and regulations contribute to this problem. Young drivers and passengers aged 18–25 are particularly at risk of road crashes (footnote 5). No standards are in place to implement road safety measures, including a lack of automated electronic systems to manage urban transport; an absence of computerized systems to identify, process, and collect infringements of traffic regulations; and a lack of speed control and management devices.

13. **Cross-border and transit transport.** Cross-border and transit transport remain inefficient despite Azerbaijan having signed a number of international transport agreements and conventions. Surveys show that 80% of firms experienced delays of 1–3 days in crossing the borders of Azerbaijan.<sup>7</sup> The major causes include poor road conditions, inadequate cross-border facilities, and non-harmonized cross-border procedures with neighboring countries. These issues severely affect the efficiency of cross-border and transit traffic. Development of an integrated and efficient transport network that includes harmonization of cross-border procedures with neighboring countries will facilitate cross-border and transit traffic, and contribute to regional cooperation and integration.

14. **Institutional capacity.** Despite some progress on policy and institutional reforms, institutional capacity in the transport sector remains limited. This is reflected by (i) lack of a legal and regulatory framework for managing the infrastructure network; (ii) weak enforcement of existing regulations, i.e., heavy vehicle controls and road safety; (iii) weak financial management; (iv) lack of private sector interest to participate in infrastructure maintenance; and (v) limited staff experience in management of transport projects.

15. **Opportunities.** The government has prioritized development of transport infrastructure in two programs: (i) the State Program on Poverty Reduction and Economic Development (SPPRED), 2006–2015;<sup>8</sup> and (ii) the State Program on Socioeconomic Development of Regions.<sup>9</sup> The government aims to (i) establish legal and regulatory frameworks; (ii) develop and effectively maintain infrastructure, completing reconstruction of the east–west and north–south routes; (iii) improve road safety; (iv) facilitate cross-border and transit traffic; (v) improve transport services; and (vi) strengthen institutional capacity. The government has also developed a draft National Road Safety Strategy, 2013–2022 and a draft State Program Action Plan, 2013–2017.

16. The railway line from Baku to Beyuk Kesik at the Georgia border along the Central Asia Regional Economic Cooperation (CAREC) Corridor 2 carries a significant volume of transit cargo of oil and oil products from Kazakhstan and Turkmenistan to European markets. The Government of Azerbaijan is upgrading the railway line with support from the World Bank and Czech Exim Bank. The Asian Development Bank (ADB) is considering financing this railway line at the government's request.

## 2. Government's Sector Strategy

17. To implement the transport programs, the Ministry of Transport has drafted a Transport Policy Paper, followed by a Transport Sector Development Strategy developed with ADB assistance.<sup>10</sup> The government's total investment plan for the road network is \$500 million a year over 2006–2015. The government is seeking capital as well as capacity building investments, which include best practices on project design, quality, standards, and reforms. The intention, as

<sup>7</sup> World Bank. 2002. *Trade and Transport Facilitation in South Caucasus: Azerbaijan*. Washington, DC.

<sup>8</sup> Republic of Azerbaijan. 2008. *State Program on Poverty Reduction and Economic Development, 2006–2015*. Baku.

<sup>9</sup> Republic of Azerbaijan. 2009. *State Program on Socioeconomic Development of Regions*. Baku.

<sup>10</sup> ADB. 2005. *Technical Assistance to the Republic of Azerbaijan for the Transport Sector Development Strategy*. Manila.

stated in the government's latest strategy document *Azerbaijan 2020*, is to establish Azerbaijan as a regional trade hub that will attract production and investments and lead to new economic opportunities.<sup>11</sup>

18. The Ministry of Transport developed a Road Network Development Program for 2006–2015, with the objective of developing a safe, efficient, and sustainable transport network in support of the country's economic and social development.<sup>12</sup> The investment component will comprise construction (upgrade and rehabilitation) of 9,500 km of 124 priority roads. The non-investment component will focus on priority reforms, including the development of regulations and operational procedures; encouragement of private sector participation in construction and maintenance; and capacity building for planning, monitoring, evaluation, and reporting. The overall investment reached \$8.46 billion in 2012 prices over the 10-year period.

19. No urban transport strategy is in place, but the World Bank identified urban transport priorities for Baku in 2010.<sup>13</sup> Although some of those priorities have been implemented and some reforms have been passed, there is no master document to refer to, and the fragmented organization in Baku does not provide a framework to implement a comprehensive and sustainable urban transport strategy.

20. The government considers development of the railway sector as important as roads, and has developed a comprehensive program for the development of the Azerbaijan state railway. The railway program recognizes the urgent need to rehabilitate rail tracks and refurbish locomotives. It also proposes to convert the electrification system for the east–west line to 25 kilovolt alternate current from the existing 3 kilovolt direct current, and gradually move to modernized technology. The total cost of the program is estimated at \$2.0 billion over a 5-year implementation period.

### **3. ADB Sector Experience and Assistance Program**

21. ADB assistance to roads focuses on improving the main highways connecting Azerbaijan to its neighboring countries, supporting policy reforms, and promoting capacity development. In addition, ADB's support to feeder roads and rural roads has made important contributions to improving the living situation of villagers. ADB assisted the government in developing a transport sector development strategy during 2005–2006, which has been guiding ADB's assistance to the transport sector.<sup>14</sup> The government is considering ADB's assistance to complement and supplement other aid agencies' ongoing efforts to upgrade the railway sector.

22. ADB approved nine loans and three technical assistance projects to the transport sector, for a total of about \$1 billion. Three of the loans were closed and the other six are under implementation or have awarded the contract. The ongoing projects will consider opportunities to increase women's employment and career development in the sector, address income-generating needs of women along transport corridors, plan and coordinate roadside infrastructure development such as sanitary facilities, and address transport safety and availability of public transport for women and girls.

23. In urban transport, ADB will focus on Baku to improve the traffic conditions, air pollution, and road safety. Urban transport interventions under consideration include commuter rail services, optimizing the Baku bus network, non-motorized transport, parking facilities, and urban roads.

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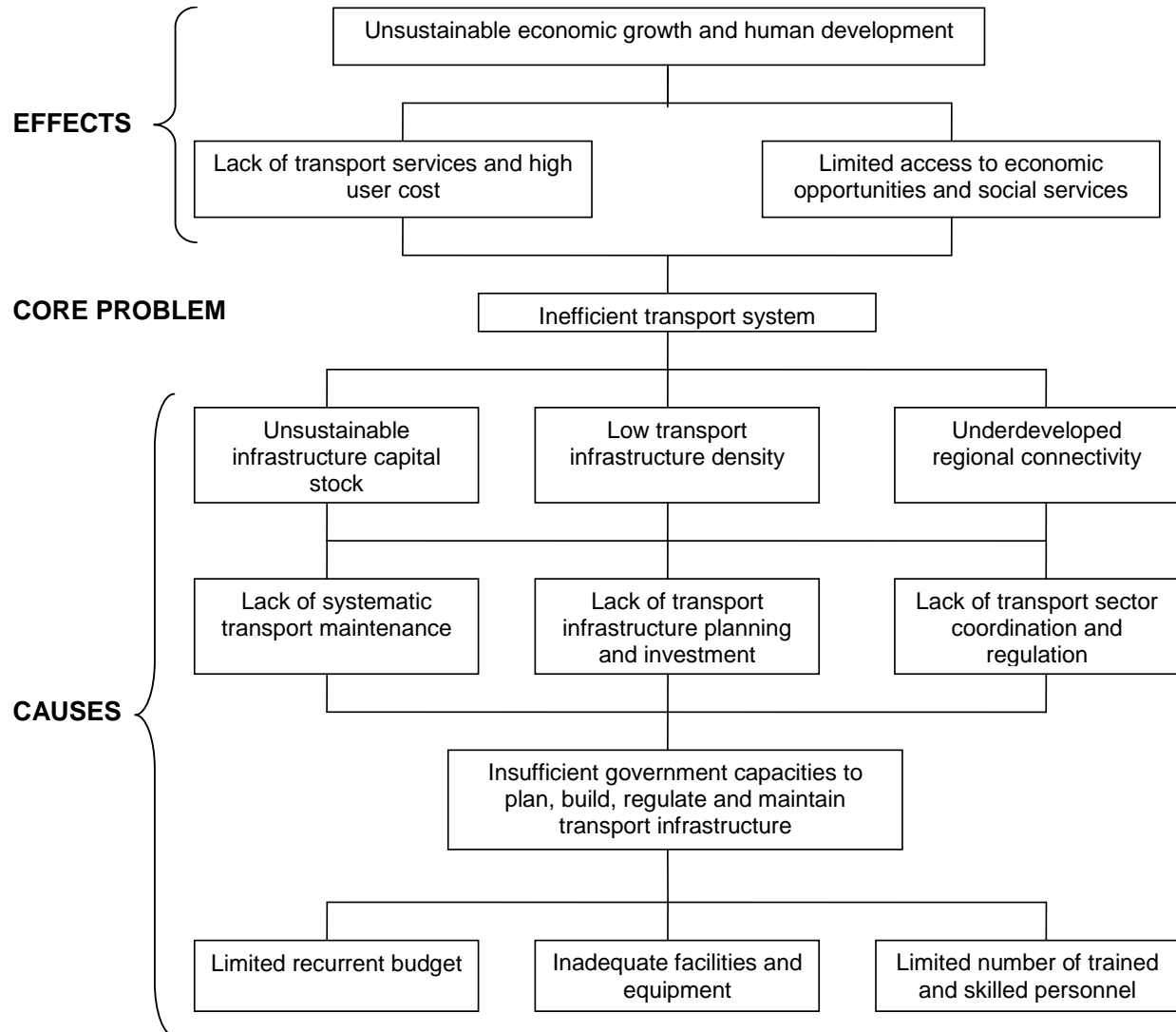
<sup>11</sup> Azerbaijan 2020: Look into the Future (accessible from the list of linked documents in Appendix 2).

<sup>12</sup> Republic of Azerbaijan. 2006. *Public Investment Program in the Road Subsector, 2006–2015*. Baku.

<sup>13</sup> World Bank. 2010. *Strategic Transportation Plan for the Baku Metropolitan Area*. Washington, DC.

<sup>14</sup> ADB. 2005. *Technical Assistance to the Republic of Azerbaijan for the Transport Sector Development Strategy*. Manila.

## Problem Tree for Non-Urban Transport Sector



### Sector Results Framework (Transport, 2014–2018)<sup>a</sup>

Country Sector Outcomes		Country Sector Outputs		ADB Sector Operations	
Sector Outcomes with ADB Contribution	Indicators with Targets and Baselines	Sector Outputs with ADB Contribution	Indicators with Incremental Targets	Planned and Ongoing ADB Interventions	Main Outputs Expected from ADB Interventions
More efficient, reliable, and safer movement of people and goods to domestic and international markets	<p>Road freight traffic increased by 25% in 2020 (2010 baseline: 11,325 million ton-km)</p> <p>Passenger traffic by road increased 20% in 2020 (2010 baseline: 16,633 million passenger-km)</p> <p>Road traffic deaths per 100,000 population reduced by 25% (to 7.7) by 2020 (2010 baseline: 10.3)</p> <p>Reduced number of buses operating in the city center from 700 (2014) to 400 by 2018, while keeping the same level of service.</p> <p>Travel time on selected urban corridors for general traffic and public transport decreased by 20% by 2020<sup>b</sup></p> <p>Commuter rail services introduced for Baku-Sumgayit (50 km.) and carrying 17,000 passengers at peak hour</p>	Increased, efficient, and safe transport infrastructure network and services	<p>Percentage of roads in good and fair condition increased to 50% in 2020 (2010 baseline: 10%)</p> <p>Rehabilitated and reconstructed roads and highways increased by 200 km by 2020 compared with 2010</p>	<p><b>Planned key activity areas</b></p> <p>International, national, and local roads rehabilitation (60% of funds); sector-wide management and reforms (10% of funds); public transport and non-motorized traffic (30% of funds)</p> <p><b>Pipeline projects with estimated amounts</b></p> <p>MFF Baku Sustainable Urban Transport Investment Program, Tranche 1 (\$50 million)</p> <p>MFF Third Road Network Development Program (3 tranches - \$300 million)</p> <p><b>Ongoing projects with approved amounts</b></p> <p>MFF Road Network Development Program (3 tranches - \$445 million)</p> <p>MFF Second Road Network Development Investment Program (2 tranches - \$500 million)</p>	<p><b>Planned key activity areas</b></p> <p>About 200 km of highways and roads rehabilitated</p> <p>Road maintenance improved, performance-based contracts implemented, and asset management</p> <p>Mainstreaming road safety, and sustainability of road network established</p> <p>Improved governance by developing road standards and specifications</p> <p><b>Pipeline projects</b></p> <p>200 km of four-lane highways developed/rehabilitated</p> <p>10 km of urban road constructed, including bus priority and non-motorized transport measures</p> <p><b>Ongoing projects</b></p> <p>100 km of four-lane highways and 75 km of local roads constructed and rehabilitated</p> <p>Four weigh bridges installed and functioning</p> <p>Toll regulations and legal framework developed</p>

ADB = Asian Development Bank, km = kilometer, MFF = multitranche financing facility, PPTA = project preparatory technical assistance, TA = technical assistance.

<sup>a</sup> The urban transport indicators are presented here as per ADB. 2014. *Project Classification System—Staff Instructions*. Manila. Urban transport is in Sector Assessment: Water Supply and Other Municipal Infrastructure and Services (Summary) (accessible from the list of linked documents in Appendix 2).

<sup>b</sup> The baseline will be determined once the urban corridors are selected.

Source: Asian Development Bank.