

SECTOR ASSESSMENT (SUMMARY): URBAN TRANSPORT¹

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Dhaka, the capital city of Bangladesh and the center of its political, cultural, and economic life, has been growing at astonishing levels since the independence of the country in 1971. Its metropolitan area (Greater Dhaka) is home to almost 17 million people in an area of 1,528 square kilometers (km²). By 2020, the megacity's population is expected to rise to 20 million people. It is also one of the most densely populated cities in the world, with more than 45,000 people per square kilometer in the core area. Per capita income averages \$550 per year, and 30% of the population lives in poor conditions, with very limited access to transport services.

2. The existing urban transport system is a major bottleneck for the development of the city. Anarchic urbanization caused by poor transportation and land-use planning has resulted in decreased accessibility, level of service, safety, comfort, and operational efficiency, causing increased costs, loss of time, air pollution, and psychological strain, and posing a serious risk to the economic viability of the city and the sustainability of its environment.

3. The city's urban transport system is unique among cities of comparable size in the world, being predominantly road-based with a substantial share for nonmotorized transport, notably cycle rickshaws. Buses and minibuses, the cheapest and only public transport system, have not been able to increase their share and cater to the demand because of service deficiencies. Long waiting and boarding times, overloading, lack of easy transfer, and long walking distance from the residence or workplace to bus stops are some of the problems that users face daily. The state-owned Bangladesh Road Transport Corporation operates local and long-distance buses. Many private bus operators provide local bus service and nonstop bus service between downtown and the suburbs.

4. The general situation can be illustrated by the situation in the project corridor. According to a household survey carried out under the project preparatory technical assistance, 70% of the daily trips in the project's main transport corridor have the city center as their origin or destination, whereas 30% only are internal trips within transport zones impacted by the corridor. Trips in the study area are currently made by buses or minibuses (40%), cars or auto-rickshaws (22%), and nonmotorized modes—mainly cycle rickshaws (38%). At present, 45 bus companies are operating 61 routes in the corridor, and own nearly 75% of the bus fleet. According to the records of Bangladesh Road Transport Authority on 5 May 2010, 61 bus routes operated and either originated or terminated in the project corridor. The authorized fleet size is 3,356 buses and minibuses, out of which only 2,598 permits have been issued by the authority for 948 buses and 1,650 minibuses.

5. In addition, the city's road space is limited, with few alternative connector roads, lacking effective maintenance and management, most of it with geometrical conditions not suitable for buses. With such a significant share for nonmotorized transport, there are no effective bicycle lanes and safe sidewalks. Available sidewalks for pedestrians are mostly occupied by vendors and unauthorized parking. Most traffic signals are manually controlled by traffic police, without properly coordinated automated systems. Because of the poor coordination between various

¹ This summary is based on: ADB. 2011. *Preparing the Greater Dhaka Sustainable Urban Transport Corridor Project*. Consultant's report. Manila (TA 7415-BAN). Available on request.

public agencies, there is no organized effort to handle the situation. Although few laws are in place to manage transport flow, vehicle conditions, and road space utilization, they are poorly enforced and often ignored. Traffic management and enforcement requires urgent attention to address the deteriorating urban transport system.

6. To ensure a sustainable future for Dhaka, public transport focused on people's mobility needs and accessibility has to be improved and given priority over simple road projects. International experience documents that interventions promoting nonmotorized transport, modal shift from private vehicles to public transport, and integration of land-use and transport planning also help lower greenhouse gas emissions in the long run. Implementation of mass transit solutions is in great and urgent need.

2. Government's Sector Strategy

7. Government initiatives have been undertaken since the 1990s, mostly through studies such as the (i) Dhaka Integrated Transport Study, 1994; (ii) Dhaka Urban Transport Project, 1999–2005; and (iii) the Strategic Transport Plan (STP), 2005, approved by the government in 2008 and which serves as the current basis for urban transport planning in Dhaka. Those studies and the STP focus mostly on formulating strategies for the development of urban transport infrastructure until 2030. They include a road management program and recommendations for the establishment of a new unitary authority to integrate transport and land use planning at a strategic level. The STP emphasizes the large size of investment needs in Dhaka in transport, and recommends a program that includes three bus rapid transit (BRT) routes, three metro rail systems, and 50 highway projects, including the construction of a 29 kilometer elevated expressway, with a total investment of \$5.5 billion. The STP also defines three possible land use scenarios, and recommends proceeding on the basis of a growth pole scenario.² On that ground, the STP recommends a large number of infrastructure projects, many of which occur in the immediate urban fringe of Dhaka, to encourage development in a planned and controlled manner. A longer-term land use scenario was therefore formed to encourage some diversification away from Dhaka by the creation of satellite towns, linked to the city center with mass transit systems.

8. Nonetheless, most of the projects in urban transport are studied on an ad hoc basis under line agencies, with very limited integration or policy framework, and are primarily road-based, such as road widening and major intersection grade separation. To improve the urban transport system's sustainability, the capacity to look at the wider implications both in terms of interaction of plans between agencies and linkages of programs and operations is limited. Consistent, comprehensive, and integrated plans and operations are required to reap full benefits and these will require additional capacity under a wider, more holistic policy approach to urban transport. The plethora of agencies and often overlapping roles restrict strategic development of the sector. Capacity development for a more inclusive approach to traffic planning, infrastructure programming and implementation, and service operation is required.

9. Institutional issues are the main constraint to realizing the STP's ambitious objectives to modernize the sector and implement challenging infrastructure projects. Because of a fragmented institutional scheme, plans such as the STP are often specific in nature and are not fully implemented. To improve the current scenario, the need to move toward a greater consensus on the formulation of a sound and efficient institutional framework was identified. The

² A growth pole scenario refers to an urban development scenario where new urban poles are developed in a city's periphery to welcome new urban dwellers, investment and industries, and counter-balance the main city's attraction to promote a more balanced and organized metropolitan development.

current Dhaka Transport Coordination Board, under the Roads and Railways Division (Ministry of Communication), lacks the capacity and empowerment to coordinate effectively. A clearer definition of its roles and responsibilities is needed. The decision to transform it into Dhaka Transport Coordination Authority was approved by the cabinet of the Prime Minister in October 2009 and is awaiting approval from Parliament. The creation of this new transport authority at the metropolitan level will centralize the functions of planning, management, and regulation of the transport system, while improving coordination with other agencies under the Ministry of Communication and other departments and institutions at national, district, and municipal levels.

3. ADB Sector Experience and Assistance Program

10. **ADB's strategic vision.** Sustainable urban transport is a new area for Bangladesh and for the Asian Development Bank (ADB), but it is at the heart of the recently approved Sustainable Transport Initiative (STI),³ which recognizes the need to align ADB's transport operations with Strategy 2020 and with the changing needs of ADB's developing member countries.⁴ The STI promotes the development of transport systems that are sustainable (i.e., accessible, safe, environmentally friendly, and affordable), thereby delivering lower greenhouse gas emissions in the long run and reducing effects on climate change. Urban transport projects are scaled up in ADB's transport portfolio (20% in 2010–2012). ADB will focus its future urban transport interventions on people's mobility needs and accessibility. Solutions that improve the modal shift from private vehicles to public transport, promote walking and nonmotorized transport, and integration of environmental and land use planning into the transport system, will be given priority over infrastructure and road projects. Model projects such as BRT and rail mass rapid transit (MRT) will be developed.

11. **ADB assistance.** Within this framework, the first section (Gazipur–Airport) of a north–south BRT corridor from Gazipur to Sadhargat (line 3 in the STP proposal) will be implemented under ADB financing. The proposed project is a pilot project designed based on the STI principles, and will be the first mass transit system built in Bangladesh. The implementation of BRT services along the first section is a critical step to start the public transport network and the sector improvement process. In a second phase, the second section of the corridor (Uttara–Sadhargat) is being studied by the World Bank under the Clean Air and Sustainable Environment Project. The ADB section has been conceptualized as a pilot corridor because of easier institutional and operational features, which will ease implementation of the World Bank phase and other BRT lines included in the STP. This first BRT system will promote economic growth, social development, and quality of life in the Gazipur City Corporation. The commuting time of residents and garment workers will be reduced along the corridor. General mobility, notably for women and the poorest, will be improved through a low fare and accessibility policy.

12. **Cooperation with development partners.** Potential for joint cooperation between ADB, the Japan International Cooperation Agency, and the World Bank is high—notably in the area of technical integration between different mass transit systems, inter-modality, and organizational developments—with the creation of a unique authority in charge of the overall transport system and the establishment of special project organizations to manage different mass transit systems operated by the private sector.

³ ADB. 2010. *Sustainable Transport Initiative*. Manila.

⁴ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

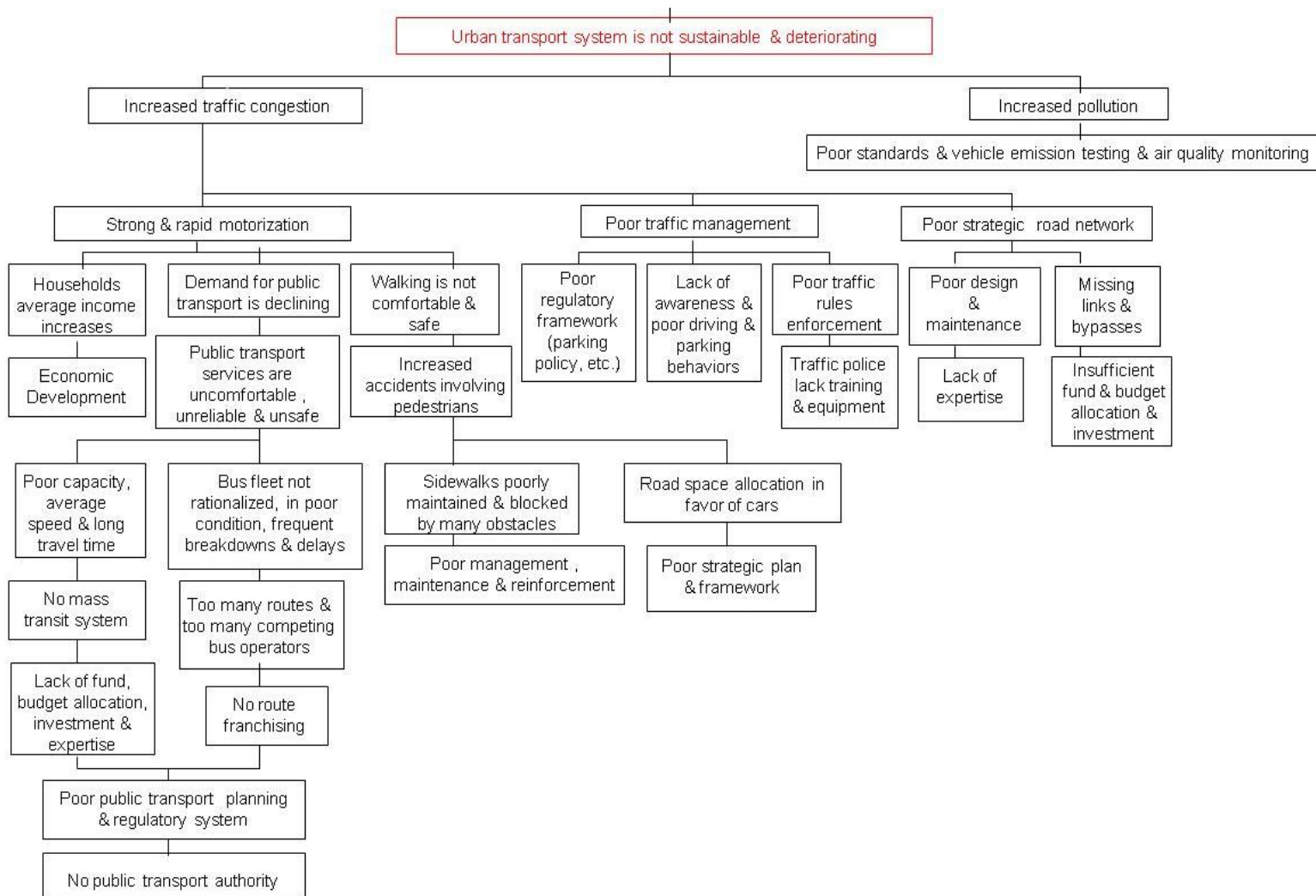
13. The World Bank has provided assistance in urban transport since 1995, and its first project, the Dhaka Urban Transport Project, led to the drafting of the STP for Dhaka in 2005. This document is now considered the basis for any urban transport project in Dhaka. Currently, the World Bank is implementing the Clean Air and Sustainable Environment Project, which includes a strong urban transport component focusing on traffic management and on the feasibility of a BRT corridor and bus network restructuring in Dhaka's city center. The Japan International Cooperation Agency has also been supporting urban transport since 2009 through a feasibility study for an MRT line in Dhaka, corresponding to the MRT line 6 in the STP. Together, these three initiatives are paving the way toward achieving the goals set forth in the STP.

14. **Investment opportunities and interventions for ADB.** Following this first urban transport project, opportunities for ADB's intervention are real, from traffic management improvement to other mass transit infrastructure, such as those recommended in the STP.

15. An urban development strategy will be formulated under associated capacity development technical assistance to improve the integration of land use strategies and a transport plan, and set up new urban nodes and potential other densification areas around the BRT stations. A policy to capture part of the land's added value generated by the implementation of the BRT will also be formulated as part of an attempt to generate additional financing for the improvement of the urban transport system. Advertising, concessions, opportunities to introduce taxes on real estate development or economic activities, and solutions such as rights auction or transfer development rights mechanism will be studied. Beside classic investments, this is an opportunity for ADB to become involved in a later integrated urban infrastructure project, associating mass transit with other municipal infrastructure improvement on a large scale.

16. BRT systems also provide opportunities for larger private sector participation, such as (i) activities related to the core business of the BRT operation (operation of the buses and associated facilities, fare collection, and distribution among operators); (ii) complementary businesses (fleet and other BRT facilities maintenance); (iii) safety; (iv) commercial activities and real estate developments around stations and terminals; and (v) additional businesses derived from the integration of other public transport services into the BRT system (feeder systems with conventional buses, rickshaws, etc.). For the proposed project, it has been agreed to develop the BRT terminal near the airport as part of a multimodal hub; integrating a new railway station; conventional bus routes; links to the airport and the future elevated expressway, parking facilities, and commercial developments (hotel, shopping mall, etc.). Other similar public-private partnership schemes can be developed, following best practices established by this first project.

Problem Tree for Urban Transport



Sector Results Framework (Urban Transport, 2011–2015)

Country Sector Outcomes		Country Sector Outputs		ADB Sector Operations	
Outcomes with ADB Contribution	Indicators with Targets and Baselines	Outputs with ADB Contribution	Indicators with Incremental Targets	Planned and Ongoing ADB Interventions	Main Outputs Expected from ADB Interventions
<p>Increased share of public transport and nonmotorized transport in major urban areas</p> <p>Improvement of line capacity and organizational efficiency</p> <p>Resources and instruments for financing long-term private investment in infrastructure developed and improved institutional arrangements to facilitate PPPs put into effect</p>	<p>Mass transit systems in Dhaka under construction by 2015</p> <p>Strategic Transport Plan for Dhaka lists 3 BRT routes and 3 MRT systems by 2025</p> <p>Dhaka Transportation Coordination Board restructured into Dhaka Transport Coordination Authority, and special project organizations established for BRT and metro projects by 2015</p> <p>Infrastructure projects financed under PPP (intermodal hub, elevated expressways, etc.) by 2015</p>	<p>Urban transport systems improved and made more sustainable</p> <p>Mass transit systems developed and well managed and operated</p>	<p>1 or 2 BRT systems developed by 2015 (2010 baseline: 0)</p> <p>Urban population with access to mass transit system reaches 1 million (2010 baseline: 0)</p> <p>Mass transport corridors to reach 12 million passenger-kilometers by 2020</p>	<p>Planned key activity areas</p> <p>Mass transit systems (60% of funds)</p> <p>Traffic management (20% of funds)</p> <p>Organizational development (20% of funds)</p> <p>Pipeline projects with estimated amounts</p> <p>Greater Dhaka Sustainable Urban Transport Project (\$145 million)</p> <p>Chittagong Urban Transport Improvement Project (\$50 million)</p> <p>Ongoing projects with approved amounts</p> <p>None</p>	<p>Planned key activity areas</p> <p>1 or 2 BRT systems</p> <p>Equipment provided, and capacity built for traffic police</p> <p>Pipeline projects</p> <p>20 km BRT system built as the first section (Gazipur–Airport) of a north–south BRT corridor from Gazipur to Sadhargat (Line 3 in the Strategic Transport Plan proposal)</p> <p>10 important junctions improved</p> <p>Special project organization to manage the BRT system established and operational</p> <p>Ongoing projects</p> <p>None</p>

ADB = Asian Development Bank, BRT = Bus Rapid Transit, km = kilometer, PPP = public–private partnership.
 Source: Asian Development Bank.