

SECTOR ASSESSMENT (SUMMARY): URBAN TRANSPORT

Sector Road Map

1. Sector Performance, Problems, and Opportunities

a. Context

1. In 2009 transport and communications in Viet Nam accounted for 4.5% of the country's gross domestic product, which had more than doubled since 2004. For urban transport, the greater urban areas of Ha Noi and Ho Chi Minh City (HCMC) have 14 million residents, almost 6 million of whom are employed, generating 20 million passenger trips per day. These are the only urban centers that require substantial urban transit services, as all secondary cities have fewer than 1 million people. Efficient transportation in these two major cities is essential for their continued economic growth, which has been faster than the national average for well over a decade, and for them to serve as hubs providing critical support and services to many sectors.

2. Strong growth in major urban centers has created large demand for transportation, which has been met mainly by rapid expansion of private vehicle fleets. Only Ha Noi has a bus system serving a reasonable portion of demand. Private vehicles provide an abnormally high proportion (80%–90%) of total trips, the vast majority being by motorcycle. There is significant potential for the number of cars to increase, as many more families will purchase cars when household incomes rise. The current road network is becoming severely congested at peak times, and the increase in private car ownership will only exacerbate this problem as road expansion space is limited. Improving the efficiency of the transport sector will bolster regional and international competitiveness, reduce logistics costs, and mitigate urban congestion and environmental and social degradation.

b. Challenges and Relevance to Development

3. Transport is a key sector to sustain Viet Nam's socioeconomic growth. As an input to Viet Nam's next socioeconomic development plan, the Ministry of Transport submitted the Five-Year Plan, 2011–2015 in October 2009,¹ which identified the core sector problems as (i) incomplete and disintegrated institutional systems and development plans, (ii) unsatisfactory quality and capacity of transport service, (iii) insufficient quality and quantity of transport infrastructure in both urban and rural areas, (iv) insufficient state budget and other financial sources, and (v) the complicated state of the global economy.

4. Urban transport in Viet Nam is at an early stage of development and is effectively on an unsustainable path that will hinder long-term growth. Private vehicles, especially motorcycles, dominate transportation, but road infrastructure is reaching saturation point. The public transport system consists of a badly integrated bus network that cannot compete with private transport modes. Traffic planning is weak and traffic management systems are unable to control city traffic. Strong growth has brought heavy congestion along major routes and inner city areas, which creates a poor urban environment. Importantly, the policy and regulatory measures necessary to discourage private transport modes cannot be implemented until a viable public mass transport system exists for city residents and suburban commuters.

¹ Transport Minister of Viet Nam. 2009. Transmittal Letter of No.7011/BGTVT-KHDT of 7 October 2009, Five-Year Plan 2011–2015. Hanoi.

5. **Enhanced transport efficiency.** Efficient urban transport can be achieved only through synergy in road and urban transit networks. While setting a target of 15%–20% of land for urban transport, the actual availability of land is insufficient in existing urban areas and land prices are high. Most roads are narrow; only 10%–15% of them are wider than 12 meters, which is suitable for buses; 50%–60% are 7–12 meters wide, which is suitable only for cars and minibuses; and the remaining 30%–40% of roads are less than 7 meters wide, which is really suitable only for motorcycles.

6. Demand for urban public transit will be met through (i) mass rapid transit (MRT) or metro lines along major urban corridors, with some to be extended in the future to regional growth centers; and (ii) significant expansion of the bus network, including bus rapid transit lines.² To ensure growth in urban transit ridership, it is proposed that (i) all modes of urban transit will be integrated, with common terminals or multimodal transfer points; (ii) bus and rail schedules will be coordinated; and (iii) there will be common standards for operations, safety and emergency services, and maintenance, including of ticketing systems. Such improvements are essential to urban transit systems but need extensive coordination to be effective.

7. **Institutional, organizational, and financial development.** Planning, designing, constructing, commissioning, operating, and maintaining a modern urban transit system is highly complex, requiring expertise and knowledge gained from experience of similar systems, but this is lacking in Viet Nam. The city Department of Transport has responsibility for coordinating transport planning and will coordinate with other departments that manage the road network. The institutions that plan, develop, and operate urban transit are not well-integrated under city people's committees. There are separate agencies for bus management and bus operations and new agencies created for metro systems and line departments for road investment and traffic management. There is no agency responsible for the overall urban transit system, so a hierarchy of operational management for each urban transit mode needs to be achieved through a public transport authority (PTA).

8. The investment costs to achieve urban transport master plan targets are large, with wide financial gaps. For Ha Noi, the total investment will be about \$12.7 billion, of which \$6.8 billion (54%) will be for roads, \$5.4 billion (43%) for urban transit, and \$0.4 billion (3%) for others. In HCMC, the corresponding amounts are \$11.2 billion (51%) for roads, \$9.8 billion (42%) for urban transit, and \$1.1 billion (7%) for others. These costs are too large to be borne by the cities alone and will require substantive external financing provided by the national government, official development assistance, or the private sector through bonds, debt, or other financing methods.

9. The emphasis on separating policy, regulatory, and operator roles is particularly noteworthy, but a multimodal orientation is still lacking. This results in imbalances and integration problems between subsectors, as well as in poor and inadequate coordination with investments and programs in other sectors.

10. **Traffic safety and social sustainability.** Social sustainability in urban transport is derived from a modal shift from private vehicles to public transport, which has numerous indirect social benefits to public transport users and the general population. These include improved safety, reduced congestion, shorter commuting times, pedestrian-friendly environments, and indirect economic opportunities, which combine to create an improved urban environment and a better quality of life. In developing an urban transit network, traffic and passenger safety is a

² Mass rapid transit and metro are different terms to describe a heavy urban rail system.

core issue to be addressed by a central PTA, which would be responsible for all urban transit safety. Poorly managed urban transit in Viet Nam's major cities would significantly affect the urban environment and social conditions. A key advantage of a shift from private to public modes is that it strengthens social sustainability in urban areas.

11. **Mainstreaming climate change mitigation and adaptation.** Mainstreaming climate change mitigation and adaptation is needed as Viet Nam is highly vulnerable to climate change, and the benefits of investing in adaptation and mitigation outweigh the costs. The introduction of a well-integrated urban transit system that encourages a modal shift from private vehicles to public transport will support climate change mitigation in urban areas by reducing carbon emissions. Urban transport master plans propose a modal shift of 30%–40%, which, when combined with natural growth of the city, would result in significant savings in greenhouse gas emissions. For urban transit development, systematic approaches are proposed for climate change adaptation, with metro and other structures designed to withstand flooding by raising entrances to stations and installing high pumping capacity.

2. Government's Sector Strategy

12. The Government's Socioeconomic Development Plan for 2011–2015 emphasizes environmental protection and improving the business environment, stressing the need for more effective management of the transport sector. Four core objectives are (i) enhancing subregional transport efficiency; (ii) institutional, organizational, and financial development in transport; (iii) traffic safety and social sustainability; and (iv) mainstreaming climate change mitigation and adaptation.

13. An improved urban transit network is vital to meet growing travel demand. A well-integrated, high-capacity public urban transport system is essential to meet the demands of a growing urban metropolis. Both Ha Noi and HCMC have established urban transport master plans with the prime objective of expanding present road and public transit network capacity to meet future demand from passengers and for the movement of goods and provision of services. The approved urban transport master plans for Ha Noi³ and HCMC⁴ aim to raise the urban transit share from the current 3%–14% to 22%–26% by 2015 and to 45%–50% by 2020, and propose major investments to achieve this. The plans envisage building series of radial and ring roads and cross-river bridges, developing urban transit systems, strengthening traffic management, and improving pedestrian facilities. The purpose of the urban transport master plans is to improve transport efficiency in the cities, with sound hierarchical road networks, more efficient urban transit networks, and encouragement for private vehicle users to switch to public transit.

14. Establishing a PTA is proposed by expanding and separating units in the Transport Management and Operation Center in Ha Noi and establishing a new agency in HCMC. Each form of establishment suits the current capacity and organizational situation, but changing organizational structures will be challenging in the prevailing operating cultures. Better coordination should result from the PTA, but the need exists to introduce more efficient and effective urban transit operations, including increasing private sector involvement in operation and maintenance.

³ Japan International Cooperation Agency. 2007. *The Comprehensive Urban Development Programme in Hanoi Capital City (HAIDEP)*. Tokyo; Hanoi People's Committee.

⁴ Japan International Cooperation Agency. 2004. *The Study on Urban Transport Master Plan and Feasibility Study in Ho Chi Minh Metropolitan Area (HOUTRANS)*. Ho Chi Minh City; ALMEC.

3. ADB Sector Experience and Assistance Program

15. The Asian Development Bank (ADB) has limited investment experience in urban transport in Viet Nam, with the first loan in December 2010, but is now the second largest external financier. However, from its involvement with project preparatory technical assistance (TA) since 2007, ADB has worked with the government to ensure that proposed infrastructure investments utilize a comprehensive multimodal and integrated approach. This approach will be developed for Ha Noi metro line 3 through extensive TA and by mobilizing significant global climate change funds for implementing non-MRT components.

16. ADB previous and ongoing experience⁵ in major infrastructure projects in Viet Nam has indicated weaknesses that occur because of insufficient efforts exerted on institutional strengthening, weak government ownership of advisory TA projects, lengthy project preparation process, weak capacity building analysis at both national and provincial levels, and inadequate ADB staff resources. The differences between ADB and government rates for compensation have created difficulties for the government and confusion for some recipients. This issue has been addressed on a project-by-project basis, but a substantive countrywide agreement is needed to ensure that guidelines agreed to by ADB and the government are uniformly applied in ADB project areas.

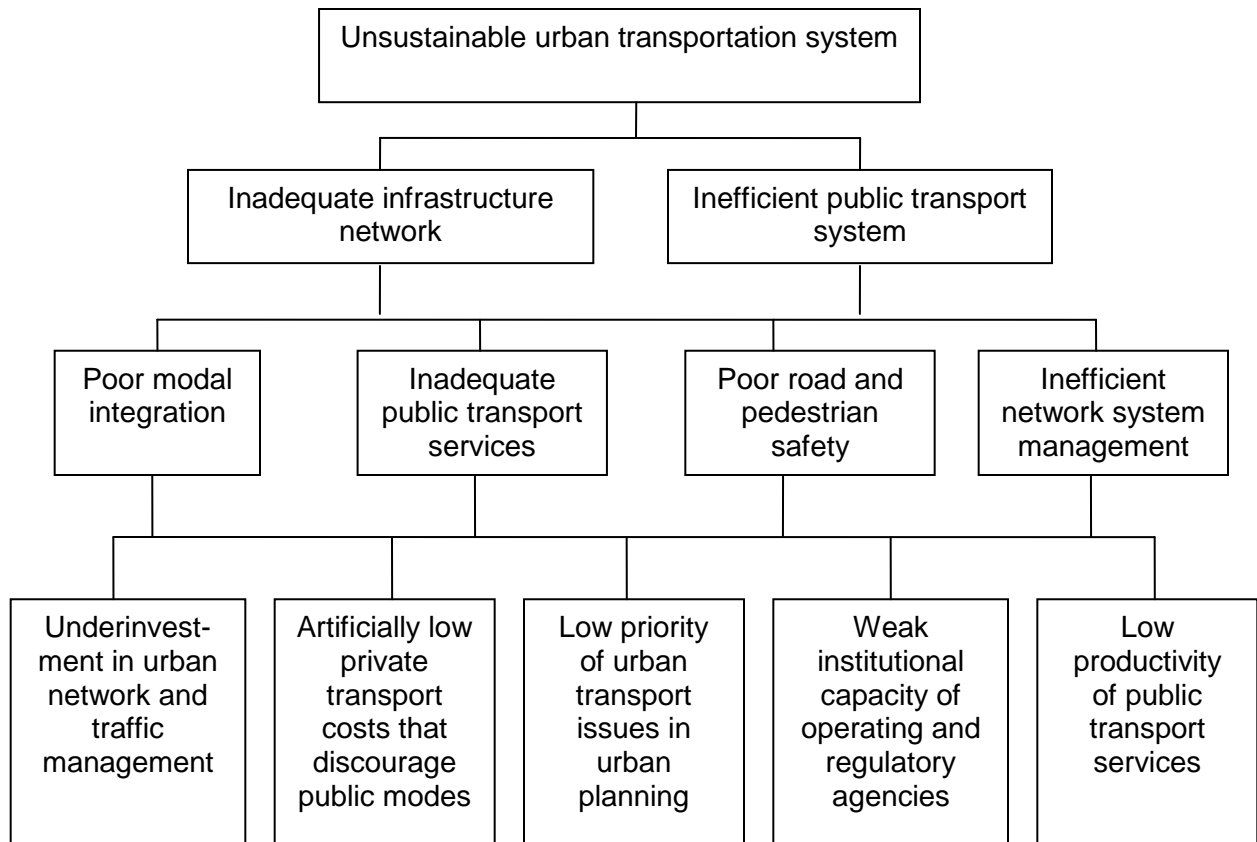
17. ADB assistance will work with larger programs in the subsector and other development partners. The World Bank has completed or is implementing a number of initiatives that are complementary to ADB's core urban transport issues. The Ha Noi Urban Transport Development Project will establish a PTA in Ha Noi by 2016. Working with the Japan International Cooperation Agency on the HCMC City Urban Railway Construction Project (Line 1), the Hanoi Special Assistance for Project Implementation of Metro Line 2 study will address overall metro system operations and maintenance and ticketing issues.

18. ADB's investments in urban transport are expected to enhance transport efficiency in urban transport networks, which will be realized primarily in terms of reduced travel time and cost. Additionally, improved urban transport subsector efficiency will be the result of higher transport capacity and improved reliability and connectivity. Expected outputs of these interventions include (i) TA to build capacity, strengthen implementation and operation and maintenance, and achieve climate change mitigation and adaptation in the development of urban transport; and (ii) project preparatory TA for metro and sustainable urban transport projects.

19. In planned and ongoing ADB interventions in transport for 2014–2017, urban transport is to take one of the largest shares of funds (40%). Interventions will construct 20 kilometers of urban rail metro and associated urban transport infrastructure works intended to enhance the integration of all modes.

⁵ ADB. 2009. *Sector assistance program evaluation for Viet Nam*. Manila.

Problem Tree for Urban Transport



Sector Results Framework (Urban Transport, 2010–2015)

Country Sector Outcome		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
Improved efficiencies in the transport of goods and people	Passenger share of public transit in Ha Noi and HCMC increases to 14% by 2020 from a 2010 baseline of 3%–14%	Urban transport networks are improved. Public transport services are improved in quality, reliability, and extent.	Establishment of 80 km of rail MRT in HCMC and Ha Noi by 2020, from a 2010 baseline of none Establishment of public transport authorities in HCMC and Ha Noi by 2015 Traffic accident fatalities reduced by 20% by 2015 from a 2007 baseline of 12,800 in HCMC and Ha Noi	(i) Planned key activity areas: Urban transit (35% of ADB transport funds) (ii) Projects in the pipeline with estimated amounts Urban sustainable transport project (\$50 million) Ha Noi Line 3 extension (\$1.3 billion) HCMC Integrated Public Transport Investment Program (\$2.9 billion) (iii) Ongoing projects with approved amounts Ha Noi Line 3 (\$1.1 billion) HCMC MRT Line 2 (\$1.35 billion) HCMC urban sustainable transport project (\$65 million)	(i) Planned key activity areas: MRT construction Urban transport integration (ii) Pipeline projects 100 km of bus routes, including 20 km of bus rapid transit Public transport facilities (iii) Ongoing projects 20 km of MRT lines to be constructed

ADB = Asian Development Bank, HCMC = Ho Chi Minh City, km = kilometer, MRT = mass rapid transit.

Source: ADB estimates.