SECTOR ASSESSMENT (SUMMARY): URBAN TRANSPORT

Sector Road Map

1. Sector Performance, Problems, and Opportunities

a. Context

1. Investment in the transport sector in Viet Nam in 2009 reached 4.5% of the gross domestic product (GDP), but in 2014 was around 2.8% of GDP[1]. The government's Five-Year Socio-Economic Development Plan, 2011–2015 identifies transport development as key to sustaining socioeconomic development.[2] It places greater emphasis on (i) overall protection of the environment, (ii) improvement of the business environment, and (iii) the need for more effective management of the transport sector.

2. Strong growth in major urban centers has resulted in large demand for transport, which has been met mainly by rapid expansion of private vehicle fleets. According to the national census conducted in 2009, the greater urban areas of Ha Noi and Ho Chi Minh City (HCMC) have 13.6 million residents, almost 8 million of whom are employed.[3] These two urban areas generate about 20 million passenger trips per day, and therefore, require substantial urban transit services to meet the demand, whereas, of the other cities in Viet Nam, only Can Tho and Haiphong have reached the one million residents mark and lower volume transit services will still be adequate. Only Ha Noi has a bus system, which has been serving a reasonable portion of the demand since 2000. However, in 2015 still about 94% of the passenger trips in Ha Noi and elsewhere in the country is carried out by motorbikes.[4] Currently, there are about 37 million registered motorbikes in Viet Nam nationwide.[5] The number of cars is likely to increase as household incomes rise and families are able to purchase their own vehicles. The road network is already becoming severely congested during peak traffic periods. Given the limited space in urban areas for expanding the road systems, this problem will worsen as private car ownership grows.

3. An improved urban transit network is vital to meet the growing travel demand. Both Ha Noi and HCMC have prepared urban transport master plans to expand the present road and public transit network capacity. In accordance with the master plans the government will (i) provide mass rapid transit (MRT) rail lines along major urban corridors, with further plans to expand some of these lines in the future to regional growth centers; and (ii) significantly expanding the bus network and establishing rapid transit bus lines. The government targets increasing the overall urban transit share in Ha Noi and HCMC from the current 13% to about 45% by 2020, but so far implementation has been slow.

b. Challenges and Relevance to Development

4. The development of urban transport in Viet Nam is at an early stage but on a path that is unsustainable and will hinder long-term growth. Private vehicles (especially motorcycles)

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[1] In 2014, GDP was $186.0 billion according to the World Bank, and transport investment was VND 110,977 billion according to data provided by MOT (equal to $5.25 billion at exchange rate $1 = D21,140 on 31 Dec 14)

[2] Government of Viet Nam. 2011*. Resolution No. 10/2011/QH13. 8 November*. *National Assembly approval of 2011–2015 Socio-Economic Development Plan*. Ha Noi.

[3] General Statistics Office. 2009. *Census.*

[4] http://bloggiaothong.vn/wap/tin-tuc/nguoi-tham-gia-giao-thong-phai-tu-thay-doi-hanh-vi-1184.html

[5] Asia Climate Journal web site, October 9, 2014

dominate transport, and road infrastructure is reaching saturation point. The public transport system consists of badly integrated bus networks that cannot compete with private transport vehicle use. Traffic planning is weak, and current traffic management systems are unable to control city traffic. Strong economic growth has brought heavy congestion to major routes and inner city areas, creating a poor urban environment. The policy and regulatory measures necessary to discourage private transport traffic cannot be implemented until a viable public mass transport system exists for city residents and suburban commuters.

5. **Enhanced transport efficiency.** Efficient urban transport can be achieved only through coordinated and integrated management of the overall urban transport network. All modes of urban transit should be integrated through the use of common terminals or multimodal transfer points. Bus and rail schedules should be coordinated and common standards for ticketing, operations, safety and emergency services, and maintenance should be established. However, making these essential improvements to urban transit systems will require extensive coordination between the central and local government agencies. Sustainable financial support from the government and external funding agencies, as well as better engagement of the private sector is needed. The Japan International Cooperation Agency (JICA)[6] has prepared the studies for the master plans for urban and transport development in HCMC in 2004 and Ha Noi in 2007. The approved master plans target increasing the overall urban transit share in Ha Noi and HCMC from the current estimated 14% to about 45% by 2020, by developing efficient suburban and urban bus and rail networks to encourage private vehicle users to switch to public transit. The urban rail share of the overall urban transit is expected to rise from 0% to about 5% by 2020, and to about 15%–20% by 2030. The urban transport master plans also envisage a series of radial and ring roads, more cross-river bridges, urban transit development, traffic management strengthening, and pedestrian facility improvements.[7] [8]

6. **Institutional, organizational, and financial development.** Planning, designing, constructing, commissioning, operating, and maintaining a modern urban transit system is highly complex. It requires expertise and knowledge gained from experience with other similar systems, but this is lacking in Viet Nam. The transport department of each city is responsible for coordinating transport planning and activities with other departments that manage the road network. The institutions that plan, develop, and operate urban transit under the city governments are not well-integrated. For example in Ha Noi, there is no one agency currently responsible for the overall urban transit system. Pending the establishment of a permanent public transport authority a public transport center (PTC) has been established under the Department of Transport of Ha Noi city. The Ha Noi People's Committee – the city government - is currently upgrading the PTC to cover all modes of public transport and fare, including future metros. This is expected to somewhat improve the current capacity and organizational situation, but necessary changes to organizational structures will be challenging in the prevailing operating cultures. There is need to introduce more efficient and effective urban transit operations, including an increase in private sector participation in operation and maintenance.

7. The investment costs to achieve the government's urban transport master plan targets are significant with large financing gaps. For Ha Noi, the total investment cost for urban transit is

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[6] ADB. 2011. *Partnership Brief – Cofinancing with Japan. (*Japan International Cooperation Agency (JICA) was established in 2003 and was merged with the Japan Bank for International Cooperation (JBIC) in 2008).

[7] Government of Viet Nam. 2008. *Decision 90/2008/QD-TTg of the Prime Minister of the Government of Viet Nam, approving the Transport Development Master Plan for Ha Noi towards 2020.* Ha Noi.

[8] Government of Viet Nam. 2007. *Decision 101/2007/QD-TTg of the Prime Minister of the Government of Viet Nam, approving the Communications and Transport Development Master Plan for Ho Chi Minh City towards 2020 and with a vision from 2020 onward*. Ha Noi.

about $7.9 billion, of which $5.9 billion has been committed for the ongoing construction of four MRT lines in 2010–2020, and $1.2 billion is planned for the Ha Noi Metro Line 3 extension in 2018–2023. For HCMC, about $6.0 billion has been committed for three MRT lines in 2013–2023. Three additional MRT lines in Ha Noi and four in HCMC are under consideration. The costs of the MRT lines are too large to be borne by the cities alone and will require support from the national government and development partners, or private sector.

8. **Traffic safety and social sustainability.** Increasing private vehicle ownership and traffic volumes were accompanied by rising numbers of traffic accidents in the past decades. However, government efforts to improve traffic safety have now reduced the number of fatalities from 11,000–12,000 fatalities per year during 2001–2010[9] to below 9,000 in 2014.[10] Traffic accidents disproportionately affect the poor and vulnerable users such as pedestrians and motorcyclists. More than half of traffic fatalities involve persons who are less than 30 years of age. The urban transport sector can help make cities more socially sustainable through a modal shift from the use of private vehicles to public transit. The numerous social benefits of such a shift to public transport users and the general population include better transport safety, less congestion, shorter commuting times, a more pedestrian-friendly environment, and indirect economic opportunities. Together, these improve the urban environment and create a better quality of life.

9. **Mainstreaming climate change mitigation and adaptation**. High rates of economic growth in Viet Nam have led to growing energy demands and increased greenhouse gas (GHG) emissions. Passenger traffic has grown 9.7% annually in 2005–2014[11] and is expected to more than triple by 2030[12]. According to global estimates, transport accounts for about 30% of the world's total carbon dioxide emissions from fossil fuel combustion[13]. The Asian Development Bank's (ADB) Safeguard Policy Statement places emphasis on promotion of GHG reduction and requires quantifying and monitoring direct and indirect GHG emissions in projects that are expected to generate significant GHG emissions[14]. A well-integrated urban transit system that encourages a shift from private vehicle to public transport will support climate change mitigation in urban areas by encouraging the use of lower carbon emission transport modes. The Ha Noi urban transport master plans target a modal shift of 30%–40%, which, when combined with the natural growth of the city, would significantly reduce total GHG emissions. The MRT and other structures will also be designed to adapt to climate change effects such as flooding by having raised entrances to MRT stations and higher pumping capacity to discharge flood water.

2. Government's Sector Strategy

10. In March 2009, the Prime Minister approved the Transport Development Strategy up to 2020 with a Vision toward 2030 (Transport Strategy 2020).[15] To implement the strategy, seven parallel areas were identified by the Prime Minister, around which specific solutions and policies were to be formulated. Among these seven areas safe and convenient mass transit systems, initially in Ha Noi and HCMC, will be developed to reduce urban traffic congestion. The

[9] http://bjdonline.org/wp-content/uploads/2013/03/Road-safety-in-Viet-Nam.pdf
[10] Viet Nam National Traffic Safety Committee. 2015. (Source: http://vietnamnews.vn/society/265189/traffic-death-toll-reduction-a-success-to-build-on-deputy-pm.html)
[11] Statistical Handbook of Vietnam. 2014. Statistical Publishing House. Passenger traffic increased from 57,695,7 to 132,116,2 million person km, equal to a compound annual growth rate of 9.7%
[12] JICA. 2007. *The Comprehensive Urban Development Programme in Hanoi Capital City*. Ha Noi.
[13] OECD Report. 2008.
[14] ADB. 2009. *Safeguards Policy Statement*. Manila.
[15] Government of Viet Nam. 2009. *Decision No. 35/QD-TTg. 3 March. Approval of Adjustments to Viet Nam Transport Development Strategy up to 2010 with a Vision toward 2030.* Ha Noi.

government has designated MOT to implement Transport Strategy 2020. In 2015, the Prime Minister approved updates to Viet Nam's railway master plan for the development and modernization of the railway network. The updated master plan recognizes that the railways in Viet Nam have deteriorated and that significant investment is needed. The updated master plan targets urban passenger transport to provide a share of 4%–5% of passenger transport in Ha Noi and HCMC by 2020, rising in 2030 to 15%–20% of the urban passengers.[16]

3. ADB Sector Experience and Assistance Program

11. ADB has limited investment experience in urban transport in Viet Nam. It made its first loan in the subsector in December 2010. Since it undertook project preparatory technical assistance (TA) in 2007[17], ADB has worked with the government to ensure that proposed infrastructure investments adopt a comprehensive, integrated, multimodal approach. This approach will be developed for the Ha Noi metro line 3 through extensive TA and by mobilizing significant global climate change funds for implementing non-MRT components.[18]

12. Lessons from past and ongoing projects indicate that project preparation and implementation should be improved to support timely achievement of project outcomes. Project start-up delays can be reduced by streamlining procedures and regulations required for loan effectiveness, applying advance actions and retroactive financing, and approving detailed design and procurement. Efforts are also needed to minimize procurement inefficiencies that are often caused by inadequate packaging of contracts, substandard bidding documents, unclear eligibility criteria, and cases of underbidding. Land acquisition and resettlement activities are often delayed because of unavailability of counterpart funding, ill-defined implementation responsibilities, and inadequate implementation capacity. The execution of contracts has proved problematic because of resettlement implementation delays, and contractor cash flow and performance problems. Delayed project implementation, coupled with high rates of domestic inflation, has directly contributed to significant cost overruns. An essential part of the solution to these issues lies in strengthening the institutional capacity of executing and implementing agencies for better management of consultants, contractors, and safeguard compliance monitoring. ADB is improving project readiness and project implementation performance in Viet Nam's transport sector by (i) delivering policy, advisory, and capacity building support; and (ii) closely coordinating with counterparts in project identification, design, and implementation.

13. ADB's active cooperation with development partners in the urban transport sector in Viet Nam is significant, including cofinancing with Agence Française de Développement (AFD), Direction Générale du Trésor (DGT) of France, and the European Investment Bank (EIB) on Ha Noi Metro Line 3; and the EIB and Kreditanstalt fur Wiederaufbau (KfW) on Ho Chi Minh City Mass Rapid Transit Line 2.

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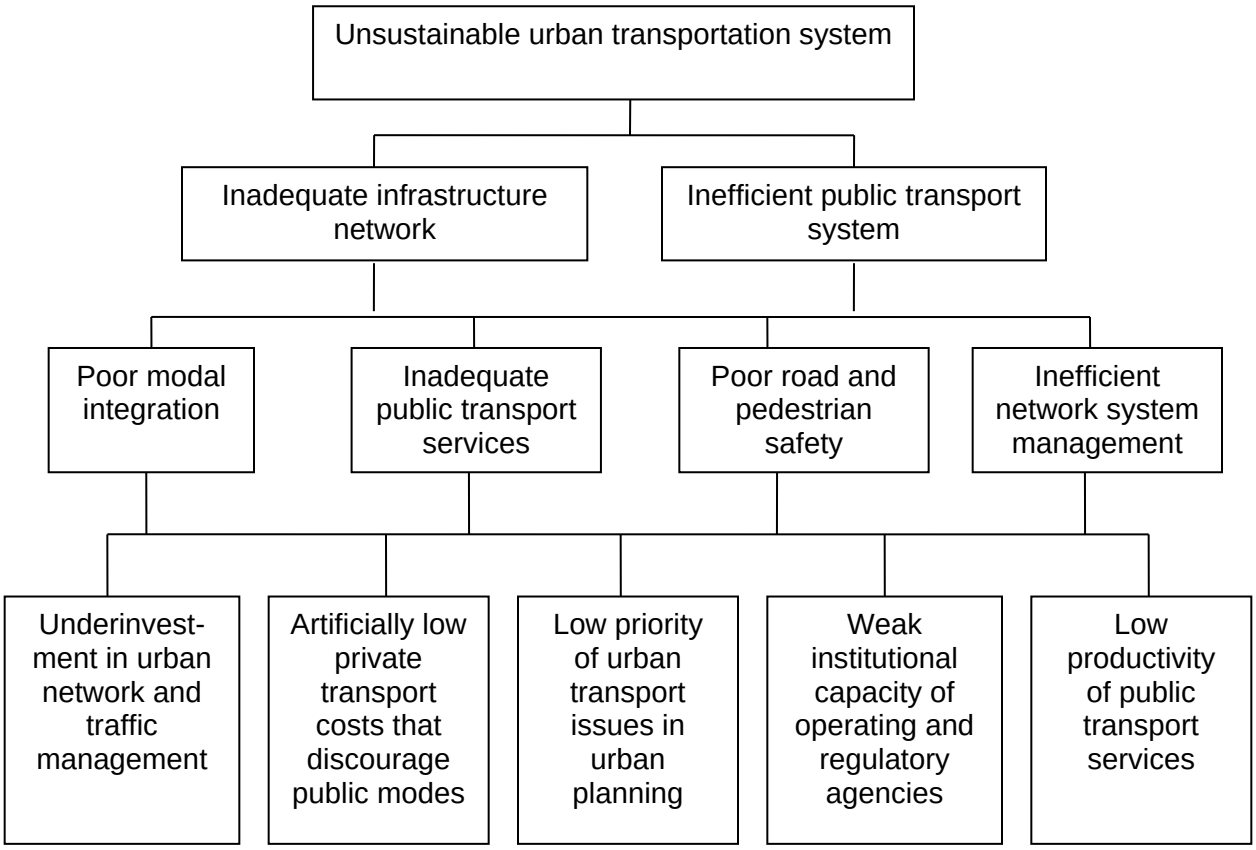
[16] Government of Viet Nam. 2015. *Decision 1469/QD-TTG dated 24 August 2015 of the Prime Minister of the Government of Viet Nam, approving revised master plan for the railway transport in Viet Nam towards 2020 and vision till 2030.* Ha Noi.

[17] ADB. 2006. *Technical Assistance to the Socialist Republic of Viet Nam for Preparing the Ha Noi Metro Rail System Project.* Manila.

[18] ADB. 2011. *Technical Assistance to the Socialist Republic of Viet Nam for Strengthening Sustainable Urban Transport for Ha Noi Metro Line 3 Project.* Manila; ADB. 2013. *Technical Assistance to the Socialist Republic of Viet Nam for Ha Noi Metro Rail Extension Project (Line No. 3: Ha Noi Railway Station – Hoang Mai section).* Manila; ADB. 2014. ADB. 2005. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Administration of Loan to the Socialist Republic of Viet Nam: Strengthening Sustainable Urban Transport for Ha Noi Metro Line 3 Project.* 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	Share of public urban transit in Ha Noi increases to 45% by 2020 from the 2010 baseline of 14%. Share of public urban transit in HCMC increases to 45% by 2020 from the 2010 baseline of 14%. Urban rail share of the overall urban transit is expected to rise from the 2010 baseline of 0% to about 5% by 2020, and to about 15% - 20% by 2030.	Urban transport networks improved Quality, reliability, and extent of public transport services improved	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 in HCMC and Ha Noi reduced by 20% by 2015 from a 2007 baseline of 12,800	**(i) Planned key activity areas:** Urban transit (35% of transport funds) **(ii) Projects in the pipeline with estimated amounts** Ha Noi Metro Rail System Project (Line 3: Nhon-Ha Noi Station Section), Additional Financing ($114.8 million, including $50 million cofinanced by CTF) Ha Noi Metro Rail Extension Project (Line 3: Ha Noi Railway Station to Hoang Mai Section) ($1.3 billion, JICA and KfW have shown interest in cofinancing) HCMC Integrated Public Transport Investment Program (MFF composed of 3 phases at $6.3 billion, co-financing opportunities are being sought) **(iii) Ongoing projects with approved amounts** Ha Noi Metro Rail System Project Line 3 (Nhon- Ha Noi Station section($1.37 billion, co-financed with AFD, DGT, EIB and government); Ho Chi Minh City Mass Rapid Transit Line 2 ($1.37 billion co-financed with KfW, EIB and government); Strengthening Sustainable Urban Transport for Ha Noi Metro Line 3 Project ($58.95 million co-financed with CTF and Government); Sustainable Urban Transport for Ho Chi Minh City Mass Rapid Transit Line 2 Project ($65 million co-financed by CTF and Government)	**(i) Planned key activity areas:** MRT construction Urban transport integration **(ii) Pipeline projects** 100 km of bus routes, including 20 km of rapid bus transit route, constructed Public transport facilities **(iii) Ongoing projects** 20 km of MRT lines be constructed

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