



# Report and Recommendation of the President to the Board of Directors

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Project Number: 44058  
June 2010

## Proposed Loan, Grant, and Administration of Grant Nepal: Kathmandu Sustainable Urban Transport Project

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 22 June 2010)

Currency Unit – Nepalese rupee/s (NRe/NRs)

NRe1.00 = \$0.0136  
\$1.00 = NRs73.42

## ABBREVIATIONS

ADB	–	Asian Development Bank
BLR	–	Bishnumati Link Road
CO <sub>2</sub>	–	carbon dioxide
CPS	–	country partnership strategy
DOR	–	Department of Roads
DOTM	–	Department of Transport Management
EMP	–	environmental management plan
FNNT	–	Federation of Nepalese National Transport Entrepreneurs
GEF	–	Global Environmental Facility
GHG	–	greenhouse gas
HLPPC	–	high-level policy coordination committee
IEE	–	initial environmental examination
km	–	kilometer
KMC	–	Kathmandu Metropolitan City
mg/m <sup>3</sup>	–	milligram per cubic meter
MOE	–	Ministry of Environment
MPPW	–	Ministry of Physical Planning and Works
MTPD	–	Metropolitan Traffic Police Division
O&M	–	operation and maintenance
PAM	–	Project Administration Manual
PIU	–	project implementation unit
PM <sub>10</sub>	–	particulate matter
PMCO	–	project management and coordination office
PPP	–	public–private partnership
PSC	–	project steering committee
SUT	–	sustainable urban transport
TA	–	technical assistance
TDF	–	Town Development Fund
TSP	–	total suspended particulates
UTS	–	urban transport system

## NOTES

- (i) The fiscal year (FY) of the Government of Nepal ends on 15 July. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2010 ends on 15 July 2010.
- (ii) In this report, "\$" refers to US dollars.

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## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed loan, (ii) a proposed Asian Development Fund grant, and (iii) proposed administration of a grant to be provided by the Global Environmental Facility (GEF), all to Nepal for the Kathmandu Sustainable Urban Transport Project.

2. The project<sup>1</sup> will improve the quality of urban life in the capital city of Nepal by delivering a more efficient, safe, and sustainable urban transport system (UTS),<sup>2</sup> favoring local economic growth and addressing climate change and air pollution mitigation. The UTS will be enhanced by focusing on (i) a plan to rationalize and upgrade the existing public transport network, tested through the implementation of pilot routes provided with electric vehicles; (ii) traffic management works and measures that will enable heritage routes in the city center to be pedestrianized and improve general walkability (general walking conditions); and (iii) improvement of air quality monitoring. The project aims to integrate these components holistically. The environment for development work has greatly improved since 2006, when the decade-long conflict ended. The experience of the Asian Development Bank (ADB) has shown that active community participation can insulate development work from a country's wider challenges and thus bring about effective service delivery. Consultations were undertaken with various stakeholders, including the Kathmandu Metropolitan City (KMC), relevant central government ministries and departments, public transport operators, and residents associations. The project design and implementation arrangements have fully taken into account the current political context in Nepal,<sup>3</sup> with the implementation expected to proceed amid the ongoing peace process.

## II. THE PROJECT

### A. Rationale

3. **Congestion, urban mobility, and economic growth.** Kathmandu valley is severely constrained in developing efficient urban infrastructure, notably its UTS. Population growth,<sup>4</sup> urban sprawl, and increasing motorization rates<sup>5</sup> are compounding congestion, pedestrian and vehicular conflict, environmental degradation, road accidents, and poor public transport operation and services. These issues restrict the ability of the valley to function efficiently, which has serious ramifications on continued economic growth and development. Traffic congestion in Kathmandu has become serious—cross-city journeys are measured in hours, not minutes; roads are saturated, and one incident at a junction has implications throughout the entire road network. Traffic is frequently at a standstill, with significant costs in terms of lost time, missed appointments, needless wastage of fuel, pollution, and journeys that did not take place.<sup>6</sup>

4. **Road network and safety.** Road density in Kathmandu is average, at 54 kilometers (km) per 100 km<sup>2</sup>. However, main roads are often narrow, clogged with parked cars and buses waiting for passengers. Bad driving contributes to the chaos. It is estimated to cost about \$190 million to acquire land to widen 15 km of narrow sections of the main road network by

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<sup>1</sup> The project was prepared through a regional project preparatory technical assistance (TA): ADB. 2009. *Preparing the Implementation of Asian City Transport—Promoting Sustainable Urban Transport in Asia Project*. Manila. The total TA amount was \$2.8 million, financed under the Climate Change Fund, with \$0.82 million allocated for Kathmandu. The consultants commenced their work in October 2009 and submitted a draft final report on 12 March 2010.

<sup>2</sup> The UTS refers to the specific characteristics of people transportation (transport modes, traffic management, level of organization, etc.); and the resulting issues (congestion and pollution).

<sup>3</sup> On 28 May 2010, the Constituent Assembly extended its term for one year to draft the new constitution.

<sup>4</sup> At current rates, the valley population may double in 10 years, from 2 million to 4 million.

<sup>5</sup> Registered vehicles in Kathmandu increased by 84% from 2001 to 2006. There are now about 450,000 vehicles, 74% of which are motorcycles. With easy credit terms, vehicle ownership continues to increase (13% in 2009), especially for cars, as motorcyclists switch to cheap cars.

<sup>6</sup> Road congestion costs Asian economies an estimated 2%–5% of gross domestic product every year.

10 meters (m), and the benefit of such massive expenditure is questionable. If vehicle ownership continues to increase at current rates, the capacity of widened roads would soon be exceeded. Selective improvements may be justified to remove bottlenecks or provide alternative routes, but continuously expanding the urban road network is neither a sustainable solution nor an equitable one, since road space is increasingly saturated by private vehicles, benefiting only a small portion of the population (17% of Kathmandu valley households) and not the urban poor. Pedestrians use narrow, badly paved sidewalks; have difficulty crossing roads; are obliged to give way to vehicles, even in the historic city center; and have their safety impaired. The valley registered 2,765 road accidents during 2008–2009, often involving pedestrians or cyclists. In Kathmandu alone, 95 people died and 156 were injured from October 2009 to March 2010.<sup>7</sup>

5. **Public transport.** With the termination of government-operated services,<sup>8</sup> public transport is now exclusively provided by the private sector through individual operators using various vehicles that are often poorly assigned to routes. Buses are overcrowded and are a poor substitute to private vehicles. Services need to be improved and made affordable for the poor, as well as accessible to the elderly, the disabled, women, and children.

6. **Air pollution and climate change.** Increasing dependence on private modes of transport and related consumption of imported fossil fuels will (i) have adverse impacts on local air quality, (ii) place a strain on the country's energy supply, and (iii) result in rapid increases in greenhouse gas (GHG) emissions. The transport sector is the biggest producer of carbon dioxide (CO<sub>2</sub>) emissions in Nepal, and 386,000 metric tons of CO<sub>2</sub> were released in Kathmandu valley in 2009. With an increase in vehicles, this is expected to rise dramatically (two to three times) in the next 10 years, together with particulate matter (PM<sub>10</sub>) and total suspended particulates (TSP), which have become a serious public health concern. Readings from roadside monitoring stations<sup>9</sup> indicate particle levels of PM<sub>10</sub> at 200 milligrams per cubic meter (mg/m<sup>3</sup>), 67% in excess of the 120 mg/m<sup>3</sup> national standard, and far exceeding World Health Organization standards (50 mg/m<sup>3</sup>). The main cause is vehicle emissions—less than 1% of all registered vehicles in Kathmandu valley produce low emissions. Therefore, making the UTS more efficient will create numerous benefits such as reduced local air pollution and CO<sub>2</sub> emission.

7. **Link with country partnership strategy and national priorities.** The project is included and in line with the Asian Development Bank (ADB) country partnership strategy (CPS) for Nepal,<sup>10</sup> which is centered on four pillars—inclusive economic growth, inclusive social development, governance and capacity building, and environmental sustainability. It is consistent with the government's National Urban Policy, notably with one of its priorities—the improvement of quality of life of urban inhabitants through the creation of a clean, safe, and developed urban environment. It strongly supports the inclusion of sustainable urban transport (SUT) as a priority in the government's next Three-Year Interim Plan, FY2010–FY2012. The project design reflects lessons from previous projects:<sup>11</sup> (i) involving stakeholders in project design from an early stage; and (ii) providing capacity development support, especially financial management and technical capacity, from an early stage of project implementation.

<sup>7</sup> Metropolitan Traffic Police Division (MTPD) statistics.

<sup>8</sup> The trolleybus ceased operations in 2008 and the state bus company Sahja Yatayat was declared bankrupt in 2007. Summary Sector Assessment: Urban Transport Sector (Appendix 2, para. 5, footnote 2).

<sup>9</sup> Air quality was monitored in seven stations over 5 years (2003–2007). The stations are now out of operation but will be repaired in the coming months within the new action plan of the Ministry of Environment. The project proposes to support this plan, notably by providing the repaired stations with solar-powered backup systems.

<sup>10</sup> ADB. 2009. *Country Partnership Strategy: Nepal, 2010–2012*. Manila.

<sup>11</sup> ADB. 2002. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Kingdom of Nepal for the Urban and Environmental Improvement Project*. Manila.

8. **Development coordination.** The project is part of a coordinated effort among development partners, including the ADB, the World Bank, the Japan International Cooperation Agency, and the public–private partnership (PPP) team of the United Nations Development Program.<sup>12</sup>

9. **Project approach.** Kathmandu is the first of seven pilot cities studied under two ADB regional TA projects<sup>13</sup> to produce an operational project on SUT. This shows the government’s strong determination to tackle this issue. The key urban mobility requirements in Kathmandu valley lie in the need for a strategic vision of the UTS. Throughout the project preparatory TA, ADB supported the formulation of an SUT vision for Kathmandu valley. The project is an important step toward endorsement of this vision by the government and the KMC. The vision aims at (i) encouraging people to travel by public transport or on foot; (ii) discouraging the use of private motorized vehicles, particularly from entering the city center; (iii) improving movement of all modes; (iv) enhancing air quality; and (v) improving transport equity.

10. The project is in line with the Sustainable Transport Initiative.<sup>14</sup> This is a pilot project, demonstrating and undertaking a set of necessary actions leading toward the vision, and setting up the basis of a future sector policy. The project seeks a long-term partnership with the government in the urban transport sector, and includes an important capacity building component, as well as further studies focused on public transport, which could set the stage for a future project, and possibly for a multitranche financing facility in the sector.

11. The project follows a pragmatic approach, starting reform of the whole UTS through concrete pilot actions integrating all UTS components. The proposed creation of a new public transport division in the Department of Transport Management (DOTM) is an opportunity to rethink the overall institutional organization of the UTS in Kathmandu valley, and is paving the way for progressive setup of a unique urban transport authority. The proposed mechanism to finance the pilot bus routes through a fund managed by the Town Development Fund (TDF) could be the forerunner of a future sustainable urban transport fund to ensure long-term viability and secure adequate finances to support continued improvements to the UTS in Kathmandu valley. The grant and loan proceeds put in the fund would then be seed money, possibly complemented later by proceeds such as fuel tax, parking fines, or carbon credits.

## **B. Impact and Outcome**

12. The expected impact of the project will be a more efficient and sustainable UTS in Kathmandu valley, favoring local economic growth and addressing climate change and air pollution mitigation. The expected outcome of the project will be improved public transport and walkability, favoring a modal shift from private vehicles and improving traffic conditions.

## **C. Outputs**

13. The project proposes to address urban transport requirements and achieve the SUT vision through four outputs (linked with the vision statements in para. 9) and related activities.

14. Component 1 activities will (i) improve and upgrade public transport management, facilities, and operations; and (ii) strengthen the capacity of and empower the currently weak

<sup>12</sup> Development coordination (Appendix 2) provides more details.

<sup>13</sup> ADB. 2007. *Technical Assistance for Sustainable Urban Transport*. Manila (TA 6350-REG). The other TA (R-PPTA 7243) and the linked TA for Kathmandu, developed by the Regional Sustainable Infrastructure Division (RSID) in 2009, are cited in footnote 1.

<sup>14</sup> ADB. 2010. *Sustainable Transport Initiative Operational Plan—Staff Working Paper*. Manila: ADB. This document which seeks a new paradigm for SUT, was developed within ADB in 2009. It focuses on developing “UTS that are accessible, safe, environmentally-friendly, and affordable.”

DOTM.<sup>15</sup> The project proposes to provide the public sector with the incentives needed to reinvest in public transport and be in a position to negotiate the system's upgrade with the private sector. Activities will include (i) a capacity development program and a restructuration plan for the DOTM; (ii) a method and a reorganization plan for the public transport network; (iii) the start of the public transport reform process through the implementation of two pilot bus routes; (iv) the promotion of public transport fleet renewal on the pilot routes with electric or low-emission vehicles by setting up a financing mechanism with the TDF; and (v) an assessment report and preliminary design of the reintroduction of modernized trolleybus services as a mass transit system on major arterials of the city, with operations undertaken by the private sector.

15. Component 2 activities will improve traffic management.<sup>16</sup> This is the UTS component most likely to have a short-term positive influence on traffic congestion. The project proposes to link traffic management and transport demand management by facilitating traffic flow around the city center and restricting it in the city center (pedestrianization under the project, road pricing at a later stage). Activities will include (i) improvement of 10 junctions in the city center, and four along Bishnumati Link Road (BLR) to complete it (including the construction of two bridges), and allowing it to be a transit corridor, reducing congestion in the city center; (ii) provision of equipment to the Metropolitan Traffic Police Division (MTPD);<sup>17</sup> (iii) a capacity development program to ensure good operation and maintenance (O&M) of the equipment by the MTPD, and enforcement of traffic regulations; and (iv) an awareness campaign for improved driving behavior, environmental and safety aspects of transport, and promotion of public transport.

16. Component 3 activities will improve walkability in the city center. Kathmandu was recently labeled one of the least walkable cities in Asia by the Clean Air Initiative in Asia.<sup>18</sup> Activities will include (i) pedestrianization of heritage routes in the city center; (ii) improvement of sidewalks in the city center; (iii) upgrade of two existing pedestrian bridges, and construction of two new ones across Bishnumati River; (iv) improvement of the interchange facility and public space on Kanti Path; and (v) PPP advisory support to the KMC for redevelopment of the old bus park and construction of parking lots in the city center.

17. Component 4 activities will enhance the monitoring of air quality, by assisting the Ministry of Environment (MOE) to implement its air quality monitoring action plan, 2010–2013. Support will be provided through (i) the provision of solar power backup systems for the existing seven stations, following their repair and restart by the MOE; (ii) the provision of two new mobile monitoring stations; (iii) equipment for emissions and mechanical testing (two sets each for the DOTM and the MTPD); and (iv) an awareness campaign about risks associated with vehicle emissions, together with air quality data dissemination in the media and on display boards.

#### **D. Investment and Financing Plans**

18. The project is estimated to cost \$30.42 million, including taxes and duties of about \$3.8 million to be financed by the government. The total cost includes physical and price contingencies, and interest charge during implementation. Detailed cost estimates by expenditure category, and detailed cost estimates by financier are in the Project Administration Manual (PAM) (Appendix 2). The investment plan is summarized in Table 1.

<sup>15</sup> Assessment and Mechanism to Set up Pilot Bus Routes and Kick-Start the Public Transport Reform Process and Summary Sector Assessment: Urban Transport Sector (Appendix 2).

<sup>16</sup> Summary Sector Assessment: Urban Transport Sector (Appendix 2) details outputs 2, 3 and 4.

<sup>17</sup> Including eight sets of new traffic signals, a flatbed truck with mounted crane, 21 radio handsets, and 21 pole-mounted swivel closed circuit television (CCTV) cameras at main junctions, linked to a control center.

<sup>18</sup> Clean Air Network Nepal, Clean Energy Nepal, and Clean Air Initiative for Asian Cities. February 2010. *Walkability in Asian Cities. Assessment of Pedestrian Infrastructure & Services in Four Areas of Kathmandu City*. Kathmandu.

**Table 1: Project Investment Plan (\$ million)**

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Public transport improvement	7.69
2. Traffic management improvement	12.27
3. Walkability and pedestrianization	4.99
4. Air quality monitoring improvement	0.34
5. Project management and capacity building	2.12
<b>Subtotal (A)</b>	<b>27.41</b>
<b>B. Contingencies<sup>c</sup></b>	<b>2.92</b>
<b>C. Financing Charges During Implementation<sup>d</sup></b>	<b>0.09</b>
<b>Total (A+B+C)</b>	<b>30.42</b>

<sup>a</sup> Includes taxes and duties of \$3.8 million to be financed from government resources.

<sup>b</sup> In mid-2010 prices.

<sup>c</sup> Physical contingencies computed at 10% for civil works and equipment. Price contingencies computed at 0.0%–1.5% on foreign exchange costs and 5.0%–8.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Interest during construction for the Asian Development Bank loan has been computed at the rate of 1.0%.

Source: Asian Development Bank estimates

19. The government has requested a loan in various currencies equivalent to SDR6.886 million, and a grant not exceeding \$10 million, from ADB's Special Funds resources, to help finance the project (Table 2). The loan will have a 32-year term, including a grace period of 8 years, an interest charge of 1.0% per annum during the grace period and 1.5% per annum thereafter, and such other terms and conditions set forth in the draft financing agreement.

20. ADB's total financing of \$20 million, or 66% of the total project cost, will be used to finance (i) part of the civil works; (ii) equipment; (iii) consulting services; (iv) part of the implementation of the pilot bus routes; (v) part of the recurrent costs; (vi) training and capacity building; (vii) awareness campaigns; and (viii) interest charges during implementation. Government and KMC financing of \$7.9 million, or 26% of the total project cost, will be used for land acquisition and resettlement, taxes and duties, part of project management, and part of the civil works.

21. The GEF grant cofinancing of \$2.52 million, or about 8% of the total project cost, will be used to finance part of the public transport component, related to climate change and air pollution mitigation measures e.g. loan to purchase electric, or other low emission vehicles in replacement of diesel minibuses on the pilot bus routes, and a feasibility study for the reintroduction of trolleybuses. ADB typically seeks approval from its Board of Directors for the administration of grant funds from co-financers only when cofinancing commitments are in place. In the case of the proposed GEF grant funding, the submission of the GEF Endorsement Document is planned in July 2010. To facilitate project implementation, the Board is requested to approve administration of the proposed grant, in an amount not exceeding \$2.8 million (including the 10% ADB administration fee), which is expected to be confirmed subsequent to Board approval. Approval of the GEF grant will be reported to the Board by standard reporting procedures. If GEF does not approve grant financing, the portion to be financed by GEF grant will not be financed under the project. Alternatively, the government may make arrangements, satisfactory to ADB, to cover the funding shortfall. The financing plan is in Table 2.

**Table 2: Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank	20.00	65.75
Loan	10.00	32.87
Grant	10.00	32.87
Global Environmental Facility <sup>a</sup>	2.52	8.28
Government	7.90	25.97
<b>Total</b>	<b>30.42</b>	<b>100.00</b>

<sup>a</sup> To be administered by the Asian Development Bank.

Source: Asian Development Bank estimates.

## E. Implementation Arrangements

22. The government recently established permanent committees to provide policy direction and interagency coordination for transport in Kathmandu valley: the high-level policy coordination committee (HLPCC) and the implementation committee. The HLPCC will develop and provide policy guidance and high-level interministerial coordination; and recommend key policy decisions on valley transport issues, including the project. It will meet every 2 months.

23. The implementation committee will review, guide, and monitor overall project implementation; assist in interagency coordination; and resolve project implementation issues. It will meet at least once every month to discuss project progress. The committee ensures that HLPCC policy directions are implemented, and reports to the HLPCC. The implementation committee is chaired by the director general of the DOTM.

24. For the purpose of the project, the implementation committee will function as the project steering committee (PSC). In carrying out this function, it will be chaired by the secretary of the MPPW, and the joint secretary of the MPPW will be the secretary of the PSC.

25. The MPPW will be the executing agency, responsible for overall project execution and coordination. A project management and coordination office (PMCO) will be established in the MPPW. The PMCO will be headed by a full-time project director selected from first class officers of the government, and will be responsible for managing all PMCO activities. The project director will be assisted by a deputy project director, an engineer, an accounts officer, and a social development officer. The PMCO will be responsible for (i) preparing the overall project implementation plan and detailed work program; (ii) reviewing and approving designs of subprojects and equipment specifications submitted by implementing agencies; (iii) providing overall guidance and assistance to implementing agencies on procurement and engaging consultants; (iv) carrying out procurement of large equipment on behalf of and under the technical supervision of implementing agencies, notably the MTPD and MOE; (v) recruiting the project management and capacity building consultants; (vi) preparing and consolidating project progress and completion reports; and (vii) ensuring compliance with ADB's Safeguard Policy Statement (2009) and financing agreement covenants.

26. The PMCO will also function as the secretariat of the implementation committee to assist in (i) carrying out administration of the secretariat, such as preparing meeting agendas and minutes; and (ii) following up on all decisions for action with, and updates from, implementing agencies and all concerned parties.

27. The Department of Roads (DOR), DOTM, KMC, MOE, and MTPD will be the implementing agencies. Each will be responsible for implementing project outputs under their authority. A project implementation unit (PIU) headed by a full-time project manager will be established in each agency.

28. All procurement to be financed under an ADB loan will be carried out in line with ADB's Procurement Guidelines (2010, as amended from time to time). Consultants will be recruited in line with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time).

29. Implementation arrangements are summarized in Table 3 and detailed in the PAM (Appendix 2).

**Table 3: Implementation Arrangements**

Aspects	Arrangements
Implementation period	July 2010 to December 2014
Estimated project completion date	31 December 2014

Aspects	Arrangements		
Project management			
(i) Oversight body	<p>High-level policy coordination committee</p> <p>Co-chairs: Members of the National Planning Commission responsible for infrastructure and transport management sectors</p> <p>Members: secretary, MPPW; secretary, MOLTM; secretary, Ministry of Local Development; secretary, MOE; secretary, MOH; representative, Ministry of Finance; chief executive officer, KMC; chief, MTPD; director general, DOR.</p> <p>Secretary: director general, DOTM.</p> <p>Implementation committee/Project steering committee</p> <p>Chair: secretary, MPPW</p> <p>Members: section head, KMC; chief of Kathmandu Division, DOR; superintendent, MTPD; member secretary, Kathmandu Valley Town Development Committee; project director, PMCO; director general and director, DOTM; representative, FNNTTE; executive director, TDF.</p> <p>Secretary: joint secretary, MPPW</p> <p>Secretariat: project management and coordination office</p>		
(ii) Executing agency	MPPW		
(iii) Key implementing agencies	DOR, DOTM, KMC, MOE, MTPD		
(iv) Project implementation units	DOR, DOTM, KMC, MOE, MTPD (total 5)		
Procurement	International competitive bidding	4 contracts	Above \$1,000,000 for works, above \$500,000 for goods
	National competitive bidding	5 contracts	\$1,000,000 or less for works, \$500,000 or less for goods
	Shopping	5 contracts	\$100,000 or less
Consulting services	Quality- and cost-based selection; Single source selection	466 person-months	\$4.4 million in total
Retroactive financing and/or advance contracting	Advance contracting is proposed for the recruitment of project management and capacity building consultants, and design and supervision consultants.		
Disbursement	The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2007, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, DOR = Department of Roads, DOTM = Department of Transport Management, FNNTTE = Federation of Nepalese National Transport Entrepreneurs, KMC = Kathmandu Metropolitan City, MOE = Ministry of Environment, MOH = Ministry of Home, MOLTM = Ministry of Labor and Transport Management, MPPW = Ministry of Physical Planning and Works, MTPD = Metropolitan Traffic Police Division, PMCO = project management and coordination office, TDF = Town Development Fund.

Source: Asian Development Bank estimates.

### III. DUE DILIGENCE

#### A. Technical

30. Technical viability is confirmed for improvement of the junctions.<sup>19</sup> Priority areas have been carefully selected to save costs while maintaining most benefits. Beyond implementation, the implementing agencies must ensure the sustainability of project facilities by allocating sufficient budget for O&M. For civil works, a portion of the DOR and KMC O&M budget (at least 2% of the respective project facilities construction cost per year) will be earmarked for O&M. To guarantee proper O&M for equipment provided through the project, (i) the MTPD equipment O&M cost will be built into the contract with the supplier, and a portion of the MTPD O&M budget will be earmarked to 5% of the annual equipment cost; and (ii) the MOE will subcontract O&M of the repaired air quality monitoring stations to the private sector—a corresponding budget has been requested as part of the MOE Air quality Monitoring Action Plan, 2010–2013.

<sup>19</sup> For the proposed improvement of the four junctions along the BLR, pre-feasibility studies have been undertaken by the City Development Initiative for Asia. 2009. *Completion of the Bishnumati Link Road*. Manila.

31. The charging of the electric vehicles to be operated on the pilot bus routes will be at risk because of frequent load shedding and weak power supply. If this risk worsens, the replacement of electric vehicles by other low emission vehicles will be considered. The project will also equip the renovated air quality monitoring stations with solar power backup systems.

## **B. Economic and Financial**

32. The project will contribute to improved public transport and traffic management, resulting in less congestion, accidents, noise pollution, and GHG emissions. It will have a significant impact on the environment and public health. Economic analysis has been conducted, measuring the reduction in vehicle operating costs. The project has been found to be economically viable, with economic internal rates of return of 13.2%–20.6%, higher than the economic opportunity cost of capital. A financial internal rate of return assessment was only undertaken for the pilot bus routes component, as no other component will generate revenue. A conservative estimate of the financial internal rate of return for the pilot routes is positive at 7.41%, which is higher than the weighted average cost of capital of 2.27%.<sup>20</sup>

## **C. Governance**

33. Assessments of financial management indicated that practices in the MPPW and implementing agencies are generally sound, except for the DOTM and KMC whose financial management capacities have been assessed as weak (including lack of experience with projects funded by donors and development partners). Assessment of the financial condition of the implementing agencies has shown that they are financially sustainable, except for KMC, which the PMCO consultants will assist to strengthen its revenue generation capacity. A governance risk assessment for the urban sector was undertaken with regard to public financial management, procurement, and corruption as part of preparing a new CPS for Nepal in 2009. Financial management risks of the implementing agencies will be mitigated through improvement of the financial system and capacity development under the project (PMCO). The project intends to maximize transparency, including procurement and financing matters, to reduce risks at central levels through the development and operation of a project website. ADB's Anticorruption Policy (1998, as amended to date) was explained to the government. The specific policy requirements and measures are described in the PAM.

## **D. Poverty and Social**

34. The project will benefit the poor and women through improvements to public transport, and is classified "effective gender mainstreaming." Consideration will be given to such issues as the design and construction of suitable bus stops for the elderly and the disabled (safe boarding and exiting), longer service hours, and the introduction of women-only buses. The poor will be the main beneficiaries, as they are the main users of public transport. The project will also improve pedestrian movement and traffic safety, benefiting the poor whose major modes of transport are walking and cycling.

## **E. Safeguards**

35. **Environmental safeguards.** The project is classified category B in accordance with ADB's Safeguard Policy Statement. The MPPW and the implementing agencies have prepared an initial environmental examination (IEE) for subprojects as part of the feasibility study, including the environmental management plan (EMP). An environmental assessment and review framework has been prepared for the pilot routes subproject. The IEE found that the planned subprojects, such as junction improvements along the BLR, would only have small and localized adverse impacts on the environment that can be mitigated. Mitigation measures and

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<sup>20</sup> Financial Analysis (Appendix 2).

monitoring plans have been proposed in the EMP, to be implemented by the implementing agencies with the help of the design and supervision consultants, and monitored by the PMCO.

36. **Social safeguards.** The project is category B for involuntary resettlement and category C for indigenous peoples, in accordance with ADB's Safeguard Policy Statement. Land acquisition and involuntary resettlement impacts are confined to junction improvements along the BLR, and such impacts have been minimized through careful design. A resettlement plan has been prepared for this subcomponent to ensure compliance with government and ADB policy requirements. The PMCO will ensure that the DOR, the implementing agency for this subcomponent, will update the resettlement plan during detailed design, and implement the final resettlement plan. Under the two pilot routes subproject, the project will construct four small bus terminals, whose locations on the outskirts of Kathmandu have not yet been determined. A resettlement framework has been prepared in the unlikely case land acquisition is identified during implementation and all steps required by ADB's resettlement policy will be followed, as described in the PAM, before construction activities may proceed. The project will not trigger indigenous peoples safeguards listed in the Safeguard Policy Statement.

## F. Risks and Mitigating Measures

37. Major risks and mitigating measures are summarized in Table 4. Risks can be mitigated to a manageable level, and intended benefits of the project are expected to outweigh the costs.

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
Political instability, causing frequent strikes and blocking all motorized traffic, and thus affecting and delaying project implementation	ADB will continue close dialogue with the government to ensure that the development and reform process will not be derailed and keep its momentum despite political challenges.
Lack of resources and capacity in the DOTM to implement and manage the project, and subsequently to manage the new public transport system, build consensus among stakeholders, and be able to regulate them	Project management and capacity building consultants will work closely with the DOTM throughout the project. The DOTM has agreed to increase its staff capacity. This will be done during the first year of the project by setting up a PIU whose staff will be trained. A capacity development program and a restructuring plan are built into the project design.
Non cooperation from the FNNTTE and private bus operators	Close consultations have been held with the FNNTTE during the project preparatory TA. An FNNTTE representative will be a permanent invitee of the PSC to instill ownership of the project and provide input throughout the reform process proposed by the project. In addition, various incentives, such as equipped terminals and loans and grants to purchase and maintain electric vehicles on the pilot routes, will be provided to the FNNTTE and the private operators.
New franchised private bus operators' cooperative defaulting on the loans provided to purchase electric buses for pilot routes	Loans to purchase electric vehicles will be channeled through the TDF, which has extensive experience in financing municipalities in Nepal, and will adequately assess the repayment capacity of the public transport cooperatives.
Continued lack of coordination and clarity on the roles and responsibilities of the MPPW and the implementing agencies, since the implementing agencies are not under the direct authority of the MPPW.	The HLPCC and the implementation committee have both been formed as permanent entities, and will provide direction and guidance for coordination during the project and beyond. The implementation committee will function concurrently as the PSC. The PMCO will also function as the implementation committee/PSC secretariat to ensure that the MPPW and implementing agencies carry out decisions taken by the implementation committee, and that reporting is adequate.
Frequent transfer of staff in the PIUs and PMCO	The government has provided assurance that key PMCO and PIU staff will be assigned during the project.

ADB = Asian Development Bank, DOTM = Department of Traffic Management, FNNTTE = Federation of Nepalese National Transport Entrepreneurs, HLPCC = high-level policy and coordination committee, MPPW = Ministry of Physical Planning and Works, PIU = project implementing unit, PMCO = project management and coordination office, PSC = project steering committee, TA = technical assistance, TDF = Town Development Fund.

Source: Asian Development Bank assessment.

#### IV. ASSURANCES AND CONDITIONS

38. The government has assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption, safeguards, procurement, gender, consulting services, and disbursement as described in the PAM and loan documents.

39. The government has agreed with ADB on certain covenants for the project, which are set forth in the loan agreement and project agreement.

40. **Conditions for loan and grant effectiveness.** Prior to loan effectiveness, the project agreement between ADB and KMC will have been duly executed and delivered on behalf of KMC and all conditions precedent to their effectiveness (other than conditions requiring the effectiveness of the financing agreement) will have been fulfilled.

41. **Conditions for grant disbursement.** Prior to the disbursement of GEF and ADB grants for the pilot bus routes to be provided through the TDF, the government will ensure that:

- (i) within 9 months after loan effectiveness, the DOTM prepares a plan to strengthen and restructure the DOTM, and within 12 months after the effective date, the Ministry of Labor and Transport Management and the DOTM will implement the recommendations made under the plan;
- (ii) within 12 months after loan effectiveness, the DOTM prepares and finalizes a reorganization plan of the public transport network, and a feasibility study on the pilot bus routes, and implements the pilot bus routes;
- (iii) within 12 months after loan effectiveness or upon satisfaction of (i) and (ii) above, the DOTM has signed an agreement with the TDF for the provision of loans and grants to private bus operators, and the agreement have been declared effective; and
- (iv) the TDF draft loan and grant agreements for the provision of loans and/or grants to the private bus operator under the pilot bus routes will have been provided to ADB for review and endorsement.

#### V. RECOMMENDATION

42. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve:

- (i) the loan in various currencies equivalent to SDR6,886,000 to Nepal for the Kathmandu Sustainable Urban Transport Project from ADB's Special Funds resources with an interest charge at the rate of 1.0% per annum during the grace period and 1.5% per annum thereafter; for a term of 32 years, including a grace period of 8 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft financing and project agreements presented to the Board;
- (ii) the grant not exceeding \$10,000,000 to Nepal, from ADB's Special Funds resources, for the Kathmandu Sustainable Urban Transport Project, on terms and conditions that are substantially in accordance with those set forth in the draft financing and project agreements presented to the Board; and
- (iii) in the event the Global Environment Facility approves grant financing not exceeding the equivalent of \$2,800,000 (inclusive of a 10% ADB administration fee) to Nepal for the Kathmandu Sustainable Urban Transport Project, the administration by ADB of such grant in accordance with the proposal set out in paragraph 21 of this Report.

Haruhiko Kuroda  
President

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/ Indicators with Baseline	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> Sustainable and efficient UTS for Kathmandu valley, favoring local economic growth, and addressing climate change and air pollution mitigation</p>	<p>By 2018 : Per capita income of Kathmandu valley residents increased by 10%</p> <p>CO<sub>2</sub> emissions and other air pollutants in Kathmandu valley decreased by 20% (vs. baseline)</p>	<p>National statistics</p> <p>Air quality monitoring stations data</p>	<p><b>Assumptions</b> Stable political environment</p> <p>UTS is the primary driver of air pollution</p>
<p><b>Outcome</b> In Kathmandu, public transport services and walkability are improved, favoring a modal shift from private vehicles and improving traffic conditions.</p>	<p>By 2015 : Kathmandu valley reaches group of the 50 most walkable cities in Asia</p> <p>Increase of ridership in pilot routes by 20%</p> <p>More than 50% of interviewed users are satisfied with pilot route services (coverage, frequency, comfort, etc.)</p> <p>Traffic congestion is reduced (average speed and travel time)</p> <p>Technical design standards for public spaces and public transport facilities under the project are friendly to the elderly, the disabled, children, and women</p> <p>Traffic accidents are reduced by 20%</p>	<p>Clean Air Initiative in Asia walkability index</p> <p>DOTM and FNTE statistics and data</p> <p>Pilot route users and public perception of urban transport services survey</p> <p>MTPD data</p>	<p><b>Assumption</b> Government endorses the UTS vision developed by the project</p> <p><b>Risk</b> Frequent strikes causing project delays</p>
<p><b>Outputs</b> 1. Public transport is improved and upgraded, and capacity of DOTM is strengthened</p>	<p>By 2015 : DOTM is restructured (new public transport branch created by 2012)</p> <p>The plan to rationalize public transport is developed by DOTM, and assesses the needs of public transport users (including the elderly, the disabled, children, and women) in the selection of routing, fares, and service hours.</p> <p>The plan is tested through the implementation of two pilot routes, with features friendly to the elderly, the disabled, children, and women.</p> <p>Cooperatives are formed and franchised to operate the pilot routes.</p>	<p>New act and organizational chart of DOTM</p> <p>Project progress reports</p> <p>Pilot routes users, and public perception of urban transport services survey</p> <p>Franchise agreements between DOTM and newly formed public transport operators' cooperatives</p>	<p><b>Assumptions</b> Cooperation from FNTE</p> <p>Strong leadership and commitment for change and reform in DOTM</p> <p>Continued political support for the reform process</p> <p><b>Risk</b> Protest and opposition to the plan by the private operators</p>

Design Summary	Performance Targets/ Indicators with Baseline	Data Sources/ Reporting Mechanisms	Assumptions and Risks
	<p>The fund to finance electric vehicles is established and managed by the TDF.</p> <p>155 electric buses are purchased through the fund and are operated on the pilot routes.</p> <p>A preliminary design report on the reintroduction of trolleybus services is completed.</p> <p>Training of executing and implementing agency staff on pro-poor and gender aspects in urban transport is carried out.</p>	TDF annual reports	
2. Traffic management is improved	<p>By 2015 :</p> <p>14 junctions along the BLR and in the city center are improved, including 2 new bridges</p> <p>21 CCTVs with a control center, 8 traffic lights, and 21 police handsets are procured, installed, and operational</p> <p>A capacity development plan for MTPD is prepared and training is conducted (including modules on gender-related aspects of urban transport).</p> <p>An awareness campaign is developed to improve safe driving behavior, road safety, and broadcasted through various media platforms</p>	<p>Project progress and midterm review reports</p> <p>MTPD data</p> <p>Pilot route users and public perception of urban transport services survey</p>	<p><b>Assumptions</b> Smooth project implementation Cooperation from MTPD</p> <p><b>Risk</b> O&amp;M of the equipment provided is not properly organized and financed.</p>
3. Walkability in the city center is improved	<p>By 2015 :</p> <p>8 km of heritage routes are pedestrianized</p> <p>15 km of safe sidewalks are improved</p> <p>2 pedestrian bridges are upgraded and 2 new are built</p> <p>PPP advisory and transaction support is provided to KMC for parking projects and redevelopment of the old bus park</p> <p>Participatory consultation with the urban poor is carried out regarding site selection for urban infrastructure (33% target for women's participation)</p>	<p>Project progress and review reports</p> <p>KMC annual reports</p> <p>Pilot route users and public perception of urban transport services survey</p>	<p><b>Assumption</b> Community mobilization is efficient and businesses and inhabitants concerned by the pedestrianization agree with the project</p> <p><b>Risk</b> Resistance to pedestrianization of heritage routes</p>



Activities with Milestones	Inputs
<p><b>4. Output 3: Improved Walkability</b>            4.1 Heritage and city center routes are pedestrianized and sidewalks are built by Q2 2013.            4.2 4 pedestrian bridges are upgraded/built by Q3 2013.            4.3 KMC's PPP projects for parking and redevelopment of the old bus park are completed by Q4 2013.</p> <p><b>5. Output 4: Improved Air Quality</b>            5.1 Existing stations with solar-powered backup systems and the new mobile stations are operational by Q4 2011.            5.2 Equipment for emissions testing is procured and is operational by Q1 2012.            5.3 Awareness campaign with data dissemination is launched and emission standards for vehicles are revised by Q2 2012.</p>	<p>TDF (loans/grants for purchase of electric buses and equipment) 2.0</p> <p>Preliminary design study for trolleybuses 0.52</p>

ADB = Asian Development Bank, BLR = Bishnumati Link Road, CO<sub>2</sub> = carbon dioxide, CCTV = closed circuit television, DOTM = Department of Transport Management, DSC = design and supervision consultant, FNNTTE = Federation of Nepalese National Transport Entrepreneurs, GEF = Global Environmental Facility, GHG = greenhouse gas, KMC = Kathmandu Metropolitan City, MOE = Ministry of Environment, MTPD = Metropolitan Traffic Police Division, O&M = Operation and Maintenance, PIU = project implementation unit, PMCO = project management and coordination office, PPP = public-private partnership, Q = quarter, TDF = Town Development Fund, UTS = urban transport system.

Source: Asian Development Bank estimates.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=44058-01-3>

1. Agreements
  - Financing Agreement
  - Project Agreement
  - Grant Agreement
2. Summary Sector Assessment: Urban Transport Sector
3. Project Administration Manual
4. Project Classification Summary
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Financial Analysis
8. Economic Analysis
9. Country Economic Indicators
10. Summary Poverty Reduction and Social Strategy
11. Gender Equality and Social Inclusion Action Plan
12. Environmental Assessment and Measures
  - Environmental Assessment and Review Framework
  - Initial Environmental Examination
13. Involuntary Resettlement Assessment and Measures
  - Resettlement Framework
  - Resettlement Plan
14. Risk Assessment and Risk Management Plan
15. Others
  - Assessment and Mechanism to Set Up Pilot Bus Routes
  - Peace Filter for Project Design and Implementation of Projects
  - Disaster and Climate Change Risks Screening Tool