



Report and Recommendation of the President to the Board of Directors

Project Number: 45041-002
February 2015

Proposed Loan and Administration of Loan and Grant Lao People's Democratic Republic: Vientiane Sustainable Urban Transport Project

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CURRENCY EQUIVALENTS

(as of 28 January 2015)

Currency unit	–	kip (KN)
KN1.00	=	\$0.000123
\$1.00	=	KN8,117.50

ABBREVIATIONS

ADB	–	Asian Development Bank
BRT	–	bus rapid transit
EMP	–	environmental management plan
IEE	–	initial environmental examination
km	–	kilometer
Lao PDR	–	Lao People's Democratic Republic
MPWT	–	Ministry of Public Works and Transport
NMT	–	nonmotorized transport
OFID	–	OPEC Fund for International Development
PCU	–	project coordination unit
SDR	–	special drawing right
SUTMA	–	sustainable urban transport management agency
TA	–	technical assistance
VCSBC	–	Vientiane Capital State Bus Company

NOTE

In this report, "\$" refers to US dollars.

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PROJECT AT A GLANCE

1. Basic Data		Project Number: 45041-002	
Project Name	Vientiane Sustainable Urban Transport Project	Department /Division	SERD/SETC
Country Borrower	Lao People's Democratic Republic Lao People's Democratic Republic	Executing Agency	Ministry of Public Works and Transport
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Transport	Urban public transport		35.00
		Total	35.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Mitigation (\$ million)	6.00
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns Urban environmental improvement	CO ₂ reduction (tons per annum)	25,000
		Climate Change impact on the Project	Low
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Institutional development Organizational development	Effective gender mainstreaming (EGM)	✓
Knowledge solutions (KNS)	Knowledge sharing activities		
Partnerships (PAR)	Implementation International finance institutions (IFI) Official cofinancing Private Sector		
Private sector development (PSD)	Promotion of private sector investment		
5. Poverty Targeting		Location Impact	
Project directly targets poverty	No	Urban	High
6. Risk Categorization:	Complex		
7. Safeguard Categorization	Environment: B Involuntary Resettlement: B Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		35.00	
Sovereign Project loan: Asian Development Fund		35.00	
Cofinancing		50.15	
European Investment Bank		20.00	
Asian Investment Facility		6.90	
Global Environment Facility		1.84	
OPEC Fund for International Development		15.00	
Private Sector		6.41	
Counterpart		14.55	
Government		14.55	
Total		99.70	
9. Effective Development Cooperation			
Use of country procurement systems		No	
Use of country public financial management systems		No	

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed loan, (ii) proposed administration of a loan to be provided by the OPEC Fund for International Development (OFID), and (iii) proposed administration of a grant to be provided by the Global Environment Facility, all to the Lao People's Democratic Republic (Lao PDR) for the Vientiane Sustainable Urban Transport Project.¹

2. The project will improve the quality of life in Vientiane by improving access and mobility. The project will do this by establishing a sustainable urban transport management agency (SUTMA), a high-quality public bus transport system, a parking management system, and a national electronic vehicle registration system, and by improving traffic management and accessibility for pedestrians and nonmotorized transport (NMT). The project promotes gender mainstreaming, greenhouse gas reduction, and public-private partnership.

II. THE PROJECT

A. Rationale

3. Vientiane, the capital of the Lao PDR has an estimated population of about 750,000. The principal urbanized areas have an estimated population of 500,000. The central core of the city has a mixture of government, educational, religious, and commercial institutions, as well as residential areas, and is also the tourism center, with many hotels and historical and cultural attractions.² Many of the roads in Vientiane are narrow, and many of the intersections operate in an inefficient manner. The total number of private vehicles registered in Vientiane increased at an average annual growth rate of 17% during 2000–2009, and has increased at a growth rate of more than 10% since then, placing Vientiane on an unsustainable transport development path, as the city is starting to experience congestion, increased incidence of road accidents, and deteriorating local air quality. The expanding use of private vehicles is also increasing greenhouse gas emissions. Motorcycles are the primary mode of transport, accounting for 67.0% of daily trips, while public transport only accounts for an estimated 0.6% of daily trips.³ Public transport in Vientiane is largely provided by privately operated vehicles, particularly *tuk-tuks* (motorized tricycles). While Vientiane Capital State Bus Company (VCSBC) provides service from the central bus station in the core area to other points in Vientiane, there is no bus service linking points within the core area. VCSBC lacks (i) staff with sufficient skills, (ii) competition, (iii) incentives to improve efficiency, and (iv) capital. There is no parking management system in Vientiane, with no charge for on-street parking and little enforcement of parking regulations.

4. The project supports the objectives of the Lao PDR's sustainable development strategies, including the Strategic Framework for National Sustainable Development Strategy and the National Rio+20 Report.⁴ The National Rio+20 Report specifies the government's long-term sustainable transport strategy and action plan. The project will support achievement of a

¹ The design and monitoring framework is in Appendix 1.

² The core area comprises about a 1.6 square km section located along a 2.5 km stretch of the Mekong river.

³ ADB. 2011. *Technical Assistance to the Lao People's Democratic Republic for Vientiane Sustainable Urban Transport Project*. Manila (TA 7964-LAO).

⁴ Government of the Lao PDR, Ministry of Planning and Investment, and Water Resources and Environment Administration. 2008. *Strategic Framework for National Sustainable Development Strategy*. Lao PDR; Government of the Lao PDR, Ministry of Natural Resources and Environment. 2012. *National Rio+20 Report for Lao PDR*. Vientiane.

number of the strategy's goals, including promoting (i) travel without the use of motorized vehicles; (ii) public transport in urban areas; and (iii) bus rapid transit (BRT) in Vientiane.

5. The project supports the strategic priorities of the Asian Development Bank (ADB) for 2014–2020 stipulated in ADB's Midterm Review of Strategy 2020 by improving the enabling environment for inclusive growth through capacity building, increasing assistance for sustainable transport, mobilizing private sector investment, facilitating access to global and regional funds, and contributing to ADB's cofinancing target.⁵ The project is consistent with ADB's country partnership strategy, 2012–2016 for the Lao PDR, which has as its overarching objective inclusive and sustainable economic growth and poverty reduction, with a focus on improved urban services to meet the challenges of the rapid urbanization agenda.⁶ The project is supported by ADB's Sustainable Transport Initiative and is included in ADB's Lao PDR Transport Sector Assessment, Strategy, and Road Map.⁷

6. The project design incorporates lessons from other public transport projects and innovations in public transport.⁸ The Lanzhou Sustainable Urban Transport Project demonstrated the benefits of innovations in BRT design and development, including the use of direct services, flexible station layout, and NMT integration.⁹ ADB's experience in capacity building in public transport through provision of BRT training courses will facilitate the establishment of SUTMA. ADB's participation in the preparation of the updated BRT Planning Guide will facilitate the use of best practices in developing the BRT system in Vientiane.¹⁰

7. The project has a number of special features. Cofinancing will be provided from five sources through loans, grants, and private-sector investment. The parking and vehicle registration systems will be financed and operated by the private sector; while operations of the buses, fare system and control center, and other functions will be tendered out to private service providers. The project will utilize advanced technology and innovative practices, particularly for the BRT system, traffic control center, and parking and vehicle registration system. The project will reduce emissions of greenhouse gases and is classified as effective gender mainstreaming.

B. Impact and Outcome

8. The project's impact will be an environmentally sustainable and pedestrian-friendly transport system developed in Vientiane. The project outcome will be improved urban transport operations and capacity in Vientiane.

C. Outputs

9. Output 1: A sustainable transport management agency for Vientiane established.

The agency will manage operations of systems and facilities to be developed under the project as well as other sustainable transport operations in the future. Its primary functions will be (i) managing the private sector firms providing services for BRT operations, the parking and vehicle registration system, and system management functions; (ii) ensuring that services provided are of high quality; (iii) managing daily operations of the public transport system; (iv)

⁵ ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

⁶ ADB. 2011. *Country Partnership Strategy: Lao People's Democratic Republic, 2012–2016*. Manila.

⁷ ADB. 2010. *Sustainable Transport Initiative: Operational Plan*. Manila; ADB. 2012. *Lao People's Democratic Republic Transport Sector Assessment, Strategy, and Road Map*. Manila.

⁸ Development Coordination (accessible from the list of linked documents in Appendix 2).

⁹ ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Lanzhou Sustainable Urban Transport Project*. Manila (Loan 2601-PRC).

¹⁰ L. Wright and W. Hook, eds. *Bus Rapid Transit Planning Guide* (fourth edition). New York: Institute for Transportation and Development Policy.

planning for and implementing future development of the system; and (v) communicating with the public and other key stakeholders.

10. **Output 2: High-quality bus services and bus rapid transit established and operating in Vientiane.** The project will develop 11.5 kilometers (km) of BRT corridors in the center of Vientiane dedicated to BRT services and NMT, including 24 enclosed stations, which will be serviced by 96 new BRT buses meeting a minimum Euro IV emissions standard, which encompasses use of cleaner fuel and advanced propulsion and exhaust system technology. The new BRT buses will serve a network of 84.0 km of routes covering much of the city. Operation of the BRT buses will be tendered out to private operators. The project will also establish a state-of-the-art BRT and traffic management control center and an electronic fare system with pre-board fare collection. The new public transport system will be fully integrated with the existing services of VCSBC in order to maximize the coverage of the network. VCSBC's existing buses, most of which were financed by the Japan International Cooperation Agency, will continue to operate. The combined network, to be served by BRT and VCSBC buses, will have a total length of 137.5 km.

11. **Output 3: Traffic management in the core area of Vientiane improved.** The project will introduce measures to improve traffic management so that traffic moves more efficiently in the core area of Vientiane. These will include installing or upgrading traffic signals at 21 key intersections, providing new road markings and signage, and establishing a central traffic control center (joint control center with the BRT system [para. 10]) using the latest technology.

12. **Output 4: Paid parking system and national vehicle registration system established.** A new on-street paid parking system for Vientiane's core area will be established that uses electronic meter technology. The new parking system will provide 2,100 on-street parking spaces for cars and 1,800 spaces for motorcycles. Also, a national electronic vehicle registration system will be established that facilitates enforcement of parking regulations. Both the parking and electronic vehicle registration systems will be implemented by private firms.

13. **Output 5: Accessibility for pedestrians and other nonmotorized transport in the core area of Vientiane improved.** The project will improve pedestrian facilities near BRT station areas by installing signalized pedestrian crossings, street lighting, pavement upgrades, and universal accessibility measures. In addition, the project will finance capacity building for *tuk-tuk* drivers and demonstration of modern electric-assist vehicles as a possible replacement for existing highly polluting vehicles.

D. Investment and Financing Plans

14. The project is estimated to cost \$99.70 million (Table 1). Civil works comprise 27.7% of project costs, buses and other equipment comprise 26.1%, consulting services comprise 8.5%, contingencies comprise 18.6%, and other items comprise 19.1%.

Table 1: Project Investment Plan
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Output 1: A sustainable transport management agency for Vientiane established	8.99
2. Output 2: High-quality bus services and bus rapid transit established and operating in Vientiane	51.99
3. Output 3: Traffic management in the core area of Vientiane improved	3.05
4. Output 4: Paid parking system and national vehicle registration system established	7.05
5. Output 5: Accessibility for pedestrians and nonmotorized transport in the core area of Vientiane improved	7.38

Item	Amount ^a
Subtotal (A)	78.46
B. Contingencies ^c	18.58
C. Financing Charges During Implementation ^d	2.66
Total (A+B+C)	99.70

^a Includes taxes and duties of \$7.13 million to be financed from government sources through tax exemption.

^b In mid-2014 prices.

^c Physical contingencies computed at 10% for base costs. Price contingencies (i) are 5.0% in 2015 and 2016, 4.5% in 2017, and 4.0% per annum thereafter for local costs; (ii) are 1.1% in 2015 and 1.4% per annum thereafter for foreign costs; and (iii) provide for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^d Includes interest and service charges. Interest during construction has been computed at 1.0% per annum for the Asian Development Bank loan, and at indicative rates for the European Investment Bank loan and the OPEC Fund for International Development loan.

Source: Asian Development Bank estimates.

15. The government has requested a loan in various currencies equivalent to SDR 23,474,000 from ADB's Special Funds resources to help finance the project, including interest during construction on the ADB loan.¹¹ The loan will have a 32-year term, including a grace period of 8 years, an interest rate 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 loan agreement. The government has also requested OFID to finance civil works with a loan of \$15 million, to be partially administered by ADB. The government has requested a loan of \$20 million equivalent in parallel cofinancing from the European Investment Bank to finance primarily the BRT buses. The government has requested a grant of 5 million euros (\$6.9 million equivalent) in parallel cofinancing from the European Union's Asian Investment Facility. The grant will finance the project implementation and detailed design consultants. The government has requested a grant of \$1.84 million from the Global Environment Facility. This grant will finance civil works and equipment to facilitate NMT and will be administered by ADB. Eligible expenditures for the OFID and GEF cofinancing will be financed on the basis of ratios specified for all expenditure categories. Private sector investment estimated at \$6.41 million will finance the parking system and the electronic vehicle registration system. The government will contribute \$14.55 million, of which taxes comprise \$7.13 million. The financing plan is in Table 2.

Table 2: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Special Funds resources (loan)	35.00	35.11
OPEC Fund for International Development (loan)	15.00	15.04
European Investment Bank (loan)	20.00	20.06
Asian Investment Facility (grant)	6.90	6.92
Global Environment Facility (grant)	1.84	1.85
Private Sector Investment	6.41	6.43
Government	14.55	14.59
Total	99.70	100.00

Source: Asian Development Bank.

E. Implementation Arrangements

16. The executing agency for implementation of the project will be the Ministry of Public Works and Transport (MPWT). A steering committee to be chaired by a vice minister of the MPWT will be established and will comprise officials from the MPWT, Vientiane mayor's office,

¹¹ ADB and ADB-administered funds may finance local transport and insurance costs related to project expenditures.

Ministry of Finance, Ministry of Natural Resources and Environment, and Ministry of Planning and Investment. A project coordination unit (PCU) will be established in MPWT's Department of Transport to implement the project. The PCU director and some PCU staff will be from the Department of Transport, with other staff coming from the mayor's office. A new SUTMA will be established to manage operations of systems and facilities to be developed under the project. The SUTMA will focus exclusively on transport in Vientiane to ensure that it is given sufficient priority. The primary functions of the SUTMA will be management, quality assurance, future development, and public communications (para. 9). It is expected that the entity will manage about \$17 million of revenue per year, primarily from the bus services and parking system. Discussions among key stakeholders on the optimal organizational structure of the SUTMA and institutional location began during project preparation. The discussions will continue during project implementation and will be facilitated by project-financed consultants. The project will provide an advisor to the SUTMA and financial support during its first 2 years of operation.

17. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual.¹² Physical completion of the project will be by 30 June 2020, and all loans and grants will close by 31 December 2020. A maintenance period to cover the final 3 years of the 5-year maintenance period included in the contracts for the buses, fare system, control center equipment, and BRT stations will extend to 30 September 2023. All expenses during the maintenance period will be financed by the government. Since the project is financed from Asian Development Fund resources with ADB-administered cofinancing, universal procurement will apply to all contract packages financed under the project.¹³

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	June 2015–June 2020		
Estimated completion date	Physical completion: 30 June 2020 Loan closing: 31 December 2020 Maintenance period: 30 September 2023 ^a		
Management			
(i) Oversight body	Steering Committee Vice Minister of MPWT (chair) Officials from MPWT, Vientiane mayor's office, Ministry of Finance, Ministry of Natural Resources and Environment, and Ministry of Planning and Investment (members)		
(ii) Executing agency	MPWT		
(iii) Key implementing agencies	Department of Transport (MPWT)		
(iv) Implementation unit	PCU, 8 staff		
Procurement	International competitive bidding	5 contracts	\$ 59.61 million
	National competitive bidding	1 contract	\$ 0.46 million
Consulting services	QCBS (90:10)	490 person-months	\$ 7.38 million
	LCS	30 person-months	\$ 0.14 million
	Individual	116 person-months	\$ 1.08 million
Advance contracting	Consulting services for (i) project planning, management, detailed design, and supervision; and (ii) international urban transport advisor		
Disbursement	The loan and grant proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed upon between the government and ADB		

ADB = Asian Development Bank, LCS = least cost selection, MPWT = Ministry of Public Works and Transport, PCU = project coordination unit, QCBS = quality- and cost-based selection.

^a All expenses during the maintenance period will be financed by the government.

Source: Asian Development Bank.

¹² Project Administration Manual (accessible from the list of linked documents in Appendix 2).

¹³ ADB. 2013. *Blanket Waiver of Member Country Procurement Eligibility Restrictions in Cases of Cofinancing for Operations Financed from Asian Development Fund Resources*. Manila.

III. DUE DILIGENCE

A. Technical

18. The project's technical viability has been confirmed through the project preparatory technical assistance (TA) and other supporting TA projects (footnote 3). The institutional structure of the SUTMA, which will operate the public transport system, is based on successful BRT and sustainable transport models currently in operation. The quality of the system will be enhanced by maximizing the use of private sector contracts for system operations, which will be overseen by SUTMA. The BRT system planning utilized global positioning system-based mapping, analysis of existing services to determine current demand, surveys and inventory of existing services to determine current service capacity, and surveys of the proposed BRT corridor. Based on the results, an optimized routing and network plan was developed. Ridership will comprise more than 11,000 passenger boardings during the peak hour.

19. For the traffic management component, detailed analysis of traffic conditions was carried out that included traffic counts, surveys, and traffic signal efficiency analysis. As a result of this analysis, the component will include new traffic signalization for several uncontrolled intersections, upgrading of other signals, and the creation of a new centralized traffic control center. The design of the parking system is based on multiple parking surveys in the core area of the city and a full analysis of parking supply and demand, including the duration of parking. The use of electronic metering technology in conjunction with the parking tariff system will ensure parking efficiency and optimization of resources. To improve accessibility for pedestrians and other NMT, pedestrian movements in the core area were analyzed. The project will focus on access points to the BRT stations as well as pedestrian safety priorities. The improvement of operating conditions and profitability for existing *tuk-tuk* operators has also been targeted through provision of modern vehicles and customer service training.

20. Public-private partnership structures will be utilized extensively to maximize the leveraging of additional financial resources and to improve the quality of the services delivered. Overall quality control and system management will be the responsibility of the SUTMA, which will manage private sector contracts awarded to the bus operating company, the fare system and control center company, a financial clearinghouse company, and a quality control company that will perform monitoring and evaluation responsibilities. In addition, a public-private partnership model for the parking management, parking enforcement, and electronic vehicle registration components will directly finance those components. The project implementation consultants will assist in the design of the public-private partnership structures. This model of public sector management and private sector service delivery has been proven as a best practice model for the leading BRT and parking management systems worldwide.¹⁴

B. Economic and Financial

21. **Economic.** Four main benefits were identified and estimated for inclusion in the project's economic viability assessment: (i) reduced vehicle operating costs except those related to the parking component; (ii) reduced travel, waiting, and walking time for bus passengers; (iii) reduced costs of injuries and fatalities due to improved road safety; and (iv) reduced time spent searching for parking places and associated reduced vehicle operating costs. The assessment covered 6 years of project implementation and 20 years of operations. The economic internal

¹⁴ Institute for Transportation & Development Policy. 2007. *Bus Rapid Transit Planning Guide*. New York; ADB. 2011. *Parking Policy in Asian Cities*. Manila.

rate of return is 17.0%, and the net present value (discounting at 12.0%) is \$27.23 million. Sensitivity analysis shows that the economic internal rate of return is 13.9% in the case of total benefits being reduced by 20.0%, and 14.5% in the case of total costs being increased by 20.0%. The combined effect of the benefit reduction of 15.0% and the cost increase 15.0% leaves the economic internal rate of return at 12.9%, which is still above the threshold rate.¹⁵

22. **Financial.** The project is financially sustainable, but will require a capital subsidy for replacement of the buses and operating systems and a temporary operating subsidy. To assess the financial sustainability, financial statements covering 15 years following project completion were prepared. Recurrent annual and periodic project ongoing costs, which comprise those of the BRT and NMT subprojects and the SUTMA operation and staff costs, and revenues from the bus system and the parking subproject concession fee were estimated.¹⁶ An analysis was conducted to determine the extent to which bus fare revenue covers the bus system operating cost under alternative scenarios of (i) the current fare, (ii) the revenue-maximizing fare, and (iii) a higher fare level. For reasons of elasticity of demand, increasing the fare to maximize revenue resulted in little improvement in cost recovery and a significant reduction in passengers, while a higher fare lost more passengers and worsened cost recovery. Utilizing the current bus fare in the projected financial statements, the public transport system will require (i) a capital grant to meet the full replacement costs of the BRT buses, fare system, and combined BRT and traffic control systems, and (ii) a temporary operating subsidy of an expected total of \$3.7 million equivalent during the first 4 years of operations. These will not be provided under the project. The government has agreed, through a loan covenant, to ensure that the SUTMA has all necessary resources to operate the bus system effectively. The combined bus fare and parking concession revenue equaled or exceeded the BRT subproject operating cost except during 2021-2022.

C. Governance

23. Assessments of the MPWT's financial management and procurement capacity and of the PCU confirmed that project implementation arrangements, which follow previous ADB transport sector projects in the Lao PDR, are appropriate. The risk ratings of the project's financial management arrangements are substantial for overall inherent risk and moderate for overall control risk. The executing agency, the MPWT, has extensive experience in managing ADB-funded and other externally funded projects and has sufficient capacity to undertake international and national competitive bidding for civil works packages. The MPWT will use a project financial management system, including internal control procedures currently being used for ADB-financed road projects. A grievance redress mechanism will be established for the project, following the successful examples of ADB-financed road projects in the Lao PDR.¹⁷ Short-term assistance will be provided for strengthening the capacity of the executing and implementing agencies and PCU in governance and public financial management through a \$200,000 subcomponent of an ADB regional TA.¹⁸ A private firm will be hired for external auditing of the project accounts. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government, including the MPWT and the mayor's office.

¹⁵ Economic Analysis (accessible from the list of linked documents in Appendix 2).

¹⁶ Financial Analysis (accessible from the list of linked documents in Appendix 2).

¹⁷ ADB. 2007. *Proposed Asian Development Fund Grant to the Lao People's Democratic Republic for the Northern Greater Mekong Subregion Transport Network Improvement Project*. Manila (Grant 0082-REG); ADB. 2010. *Proposed Asian Development Fund Grant to the Lao People's Democratic Republic for the Second Northern Greater Mekong Subregion Transport Network Improvement Project*. Manila (Grant 0234-REG).

¹⁸ ADB. 2011. *Technical Assistance for Support for Implementation of the Second Governance and Anticorruption Action Plan (GACAP II)*. Manila (TA 6445-REG).

The specific policy requirements and supplementary measures are described in the project administration manual (footnote 12).

D. Poverty and Social

24. A draft stakeholder communication strategy utilizing a full range of communication and marketing approaches to raise public awareness of the project and its benefits, and encourage the widespread use of the BRT system, has been prepared.¹⁹ Under the strategy, additional consultations will be conducted with key stakeholders, particularly the poor and other vulnerable groups, to ensure their meaningful participation in the project.

25. The project is classified as effective gender mainstreaming. The key gender issues addressed by the project include appropriate physical design that meets women's needs, affordability, safety, and security of female passengers to promote greater use of the BRT by women. The project also provides an opportunity to change the traditional gender composition of the transport workforce by promoting women's employment in the BRT system and providing training. The project's gender action plan ensures that (i) 30% of employees of SUTMA will be women; (ii) the BRT system includes gender-specific design features such as priority seating for women and the elderly, adequate lighting, and security cameras in bus stations; (iii) 30% of jobs generated in the BRT system are filled by women; (iv) ticketing and fare pricing include measures to increase affordability and access; (v) pedestrian-friendly traffic management and traffic calming measures are implemented on the BRT routes; (vi) baseline sex-disaggregated data and gender analytical information are collected for preparatory surveys, feasibility studies, and assessments prior to the start of construction; and (vii) gender indicators are included in the project monitoring and evaluation system, and disaggregated data are reported.²⁰

E. Safeguards

1. Environment

26. The project is category B for environment, and an initial environmental examination (IEE) has been prepared based on ADB's Safeguard Policy Statement (2009).²¹ The IEE has been disclosed on ADB's website. The project does not involve major civil works. Adverse impacts such as elevated noise levels, dust emissions, traffic disturbances, and other construction-related impacts will be experienced in the vicinity of the project sites. These impacts, however, are considered minor, being short term and localized in nature. The parking and traffic management systems will involve works of a minor nature with negligible environmental impacts. During operation, the overall environmental impact of the project will be beneficial. The project will contribute to reduced traffic congestion, improved conditions for walking and cycling, improved community livability, and better air quality. The project will reduce emissions of greenhouse gases by shifting transport demand from private vehicles to buses. Potential adverse impacts from operation of the bus depot and bus staging areas are considered insignificant and can be addressed through good design and implementation of mitigation measures specified in the environmental management plan (EMP) included in the IEE.²² The EMP includes environmental mitigation measures for all project phases, and monitoring requirements and responsibilities for EMP implementation. The EMP will be incorporated in the

¹⁹ Draft Stakeholder Communication Strategy (accessible from the list of linked documents in Appendix 2).

²⁰ Gender Action Plan (accessible from the list of linked documents in Appendix 2).

²¹ Initial Environmental Examination (accessible from the list of linked documents in Appendix 2).

²² Such impacts pertain to noise, vehicle emissions, wastewater from washing, waste oil from maintenance works, leaks and spills of hazardous substances, traffic congestion due to entry and exit of buses, and safety concerns.

civil works contract documents. Public consultations have been conducted for the project, and a grievance redress mechanism will be developed to facilitate resolution of project-related environmental impacts.

2. Resettlement and Indigenous Peoples

27. The project is categorized as B for involuntary resettlement and C for indigenous peoples in accordance with ADB's Safeguard Policy Statement. All affected land and structures identified are owned by government organizations. The proposed stations for the BRT system will only require clearance of small strips of government right-of-way land and public parks. Structures affected are roadside pavements and curbsides, streetlights, electricity poles, sewage intakes, and tree and garden fences. For the proposed bus staging areas, the project will acquire the entire compound (with three office buildings) owned by the Institute of Mass Media and Culture (about 2,700 square meters) and a portion of land with no structures (about 1,500 square meters) owned by the Vientiane Department of Education and Sports. The area for the depot (about 1.7 hectares) is vacant land and is owned by the MPWT. No previous land acquisition occurred in anticipation of ADB financing. Due diligence has been conducted to confirm that the depot site to be used by the project is not used by any person (i) who may be economically displaced, (ii) whose structures have been or will be demolished, and/or (iii) who will be restricted from using the specified area. All affected organizations have been consulted, and key information in the resettlement plan such as project entitlements, grievance redress, institutional arrangements, schedule, and cost estimates have been discussed and disclosed during the preparation of the resettlement plan.²³

F. Risks and Mitigating Measures

28. The overall assessment is that there is a medium level of project risk that can be mitigated. The integrated benefits and impacts are expected to outweigh the costs. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.²⁴

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
The SUTMA has insufficient capacity to ensure sustainability of project operations.	The project will finance 16 months of the operations of the quality control company to assist in monitoring operators of the bus and parking components.
Limited capacity in the PCU in implementation of urban transport projects results in delayed project implementation and slow disbursement.	The project will finance international urban transport advisors with extensive experience in public transport operations. The PIC will assist the PCU in procurement, implementation, and disbursements.
Inadequate maintenance undermines the sustainability of the investments in the buses and the fare system.	The contracts for the buses and the fare system will include maintenance by the manufacturer for the first 5 years of operations and training in maintenance.
Potential corruption in procurement due to lack of management personnel in the PCU with procurement and financial management experience on ADB-financed projects.	Procurement and financial management experts will assist the PCU during implementation. Procurement and implementation progress will be disclosed publicly.
Government counterpart funds are not provided as required.	Government financing consists largely of taxes and provision of government-owned land.

²³ Resettlement Plan (accessible from the list of linked documents in Appendix 2).

²⁴ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

Risks	Mitigating Measures
The existing bus service provider objects to new public transport services.	The existing bus service provider will continue to provide services on the overall network.
Lack of private sector interest in PPP components	The PPP components will be designed to achieve sufficient returns to attract private sector interest.

ADB = Asian Development Bank, MPWT = Ministry of Public Works and Transport, PCU = project coordination unit, PIC = project implementation consultants, PPP = public-private partnership, SUTMA = sustainable urban transport management agency.

Source: Asian Development Bank.

IV. ASSURANCES AND CONDITIONS

29. The government and MPWT have assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the project administration manual and loan documents.

30. The government and MPWT have agreed with ADB on certain covenants for the project, which are set forth in the loan and grant agreements. The ADB loan and all cofinancing for the project will be subject to cross-effectiveness condition.

V. RECOMMENDATION

31. 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 SDR 23,474,000 to the Lao People's Democratic Republic for the Vientiane 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 loan agreement presented to the Board;
- (ii) the administration by ADB of the loan not exceeding the equivalent of \$15,000,000 to the Lao People's Democratic Republic for the Vientiane Sustainable Urban Transport Project to be provided by the OPEC Fund for International Development; and
- (iii) the administration by ADB of the grant not exceeding the equivalent of \$1,840,000 to the Lao People's Democratic Republic for the Vientiane Sustainable Urban Transport Project, to be provided by the Global Environment Facility on such terms and conditions as are substantially in accordance with those set forth in the draft grant agreement presented to the Board.

Takehiko Nakao
President

16 February 2015

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact			
An environmentally sustainable and pedestrian-friendly transport system developed in Vientiane	<p>By 2025 Increase in modal share of public transport to 6.0% (2013 baseline: 0.6%)</p> <p>Reduction in emissions of greenhouse gases (carbon dioxide, methane, nitrous oxide, and certain halocarbons) of 25,000 metric tons per year from 2020 onwards.</p>	<p>Government statistics and project-developed monitoring mechanisms</p> <p>Air quality data from monitoring stations</p>	<p>Assumption Government establishes a monitoring system of transport-related emissions and accidents in support of the national environmentally sustainable transport strategy</p> <p>Risk Insufficient capacity of SUTMA to ensure sustainability of project operations</p>
Outcome			
Improved urban transport operations and capacity in Vientiane	<p>By 2020 120 public buses operating a 137 km total network in Vientiane^a</p> <p>Ridership of public bus services reaches 48,000 per day (2013 baseline: 4,000)</p>	<p>Reports from SUTMA</p> <p>Reports from bus service provider</p>	<p>Assumption Effective cooperation among national and local government units</p>
Outputs			
1. A SUTMA for Vientiane established	<p>Agency organizational arrangements approved by 2017</p> <p>Agency established and staff working, with 30% of staff being female by 2018</p>	<p>Implementation and monitoring consultants' reports</p>	<p>Risk Unavailability of personnel with appropriate qualifications</p>
2. High-quality bus services and BRT established and operating in Vientiane	<p>96 buses procured and delivered by 2019</p> <p>11.5 km of dedicated BRT bus route infrastructure, including 24 BRT stations, operational by 2019</p> <p>Control center and fare system operating by 2019</p> <p>Women comprise 30% of BRT operations and maintenance staff by 2019</p> <p>Bus maintenance facility operational by 2019</p>	<p>Vientiane DPWT reports</p>	<p>Assumption Government and existing public transport entities will support pilot public transport project</p> <p>Risk Objections to new public transport services from existing service provider</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
3. Traffic management in the core area of Vientiane improved	7 new traffic signals at key intersections in core area operational and existing signals at 14 intersections upgraded by 2019 Road markings and signs installed by 2019	Vientiane DPWT reports	Assumption Government is committed to enforcing traffic regulations
4. Paid parking system and national vehicle registration system established	On-street paid parking scheme, using electronic meter technology, operational in core area of Vientiane by 2019 Parking spaces allocated to pregnant women and people with disabilities by 2019 National electronic vehicle registration system operational by 2016	SUTMA reports	Assumptions Government is committed to enforcing parking regulations Sufficient interest from private sector firms
5. Accessibility for pedestrians and other NMT in the core area of Vientiane improved	Pedestrian access at 24 BRT stations upgraded by 2019 Universal access for wheelchair-bound and visually impaired people provided at 24 BRT stations by 2019	SUTMA reports	
Activities with Milestones		Inputs	
1. A SUTMA for Vientiane established <ul style="list-style-type: none"> 1.1 Mobilize the first international urban transport advisor by June 2015 and the second by November 2017 1.2 Government approves organizational arrangements of the new SUTMA by December 2017 1.3 Government recruits and appoints staff to SUTMA by September 2018 1.4 Award quality control contract by March 2019 2. High-quality bus services and BRT established and operating in Vientiane <ul style="list-style-type: none"> 2.1 Mobilize detailed design and project supervision consultants by June 2015 		Loan ADB: \$35 million OFID: \$15 million EIB: \$20 million Grant AIF: \$6.9 million GEF: \$1.84 million Private Sector: \$6.41 million Government: \$14.55 million	

Activities with Milestones	Inputs
<ul style="list-style-type: none"> 2.2 Complete detailed design by June 2016 2.3 Complete land acquisition and resettlement by December 2016 2.4 Award civil works contracts by March 2017 and complete BRT civil works by May 2019 2.5 Award BRT vehicles supply and maintenance contract by December 2017 and complete delivery by May 2019 2.6 Award fare system and control center contract by December 2017 and complete delivery by March 2019 2.7 Conduct training on BRT operations and maintenance by during September 2018–June 2019 2.8 BRT services begins operating by October 2019 3. Traffic management in the core area of Vientiane improved <ul style="list-style-type: none"> 3.1 Complete installation of new traffic signals by March 2019 3.2 Complete installation of new traffic signs and road markings by May 2019 4. Paid parking system and national vehicle registration system established <ul style="list-style-type: none"> 4.1 Award private sector contract for electronic vehicle registration system by June 2016 4.2 Government approves new parking regulations by June 2017 4.3 Award private sector contract for parking system by June 2018 4.4 Full system testing of parking system by July 2019 5. Accessibility for pedestrians and other NMT in the core area of Vientiane improved <ul style="list-style-type: none"> 5.1 Award NMT vehicles contract by April 2017 and complete delivery by March 2018 5.2 Complete pedestrian facilities and NMT infrastructure by May 2019 	

ADB = Asian Development Bank, BRT = bus rapid transit, DPWT = Department of Public Works and Transport, EIB = European Investment Bank, AIF = Asian Investment Facility, GEF = Global Environment Facility, km = kilometer, NMT = nonmotorized transport, OFID = OPEC Fund for International Development, SUTMA = sustainable urban transport management agency.

Source: Asian Development Bank.

^a Of the total 120 buses projected for the network, 96 of these buses will be financed by the project. The remaining 24 buses will be provided by the existing bus company.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=45041-002-3>

1. Loan Agreement
2. Grant Agreement
3. Sector Assessment (Summary): Urban Transport
4. Project Administration Manual
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 Action Plan
12. Initial Environmental Examination
13. Resettlement Plan
14. Risk Assessment and Risk Management Plan

Supplementary Documents

15. Project Description
16. Private Sector Participation
17. Project Financial Sustainability
18. Draft Stakeholder Communication Strategy