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Lao People's Democratic Republic

Urban Development Sector Assessment, Strategy, and Road Map



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Urban Development Sector Assessment, Strategy, and Road Map

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Currency Equivalents

(as of August 2012)

Currency Unit	=	Kip (KN)
KN1.00	=	\$0.0001248
\$1.00	=	KN8,013

Abbreviations

ADB	-	Asian Development Bank
ASR	-	assessment, strategy, and road map
CSP	-	country strategy and program
DHUP	-	Department of Housing and Urban Planning
DPWT	-	Department of Public Works and Transport
GMS	-	Greater Mekong Subregion
JICA	-	Japan International Cooperation Agency
Lao PDR	-	Lao People's Democratic Republic
MPWT	-	Ministry of Public Works and Transport
NLMA	-	National Land Management Authority
NORAD	-	Norwegian Agency for Development Cooperation
NSEDP	-	national socio-economic development plan
PACSA	-	Public and Civil Service Authority
PLMA	-	provincial land management agency
PNP	-	provincial nam papa
PTI	-	Public Works and Transport Institute
TA	-	technical assistance
UDAA	-	urban development administration authority
WASA	-	Water Supply Authority

NOTE:

The Ministry of Transport and Public Works took over the responsibility for the urban development sector from the Ministry of Communication, Transport, Post and Construction after the government's reorganization in October 2007.

Acknowledgments

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1. This sector assessment, strategy, and road map (ASR) documents current assessment and strategic investment priorities of the Government of the Lao People's Democratic Republic (Lao PDR) and the Asian Development Bank (ADB) in urban development in the Lao PDR. It highlights sector performance, priority development constraints, government plans and strategy, past ADB support and experience, other development partner support, and future ADB support strategy. The ASR is part of the ADB country partnership strategy (CPS) for the Lao PDR and will be updated as strategic developments and program changes are needed. It will help provide sector background information for investment and technical assistance.

2. Over the last 2 decades, considerable investments have been made in urban areas in the Lao PDR by the government itself and through the assistance of development partners. These have resulted in significant improvements to urban environments and living conditions in many small, medium, and large urban centers. Nevertheless, further improvements are required, both to keep pace with urban expansion and to build on previous investments. ADB has been particularly prominent in urban development in the Lao PDR and intends to continue supporting this sector.

Sector Assessment, Context, and Strategic Issues

A. Overall Sector Context

3. In terms of its population distribution, the Lao PDR is a predominantly rural country. Current estimates suggest that around 25% of its population live in urban areas.¹ To date, these urban areas have mostly not experienced the range of problems associated with urbanization in other parts of Asia. They are relatively small (only 10 urban centers each with a population of over 20,000) with low development densities. The Statement of the Environment Report 2001 reported that “[s]ince the towns are still small, population densities are low, private car ownership is minimal, and industrial activity is only emerging in a few of the largest towns, the ambient effects of urban activities are minor and localized.”² But the situation has changed over the last decade or so. In 1998, agriculture accounted for over 53% of national gross domestic product. By 2008, it had declined to second place at 35%, behind the services sector at 37%. During the same period, industry increased from 22% to 28%, including the reemergence of agricultural processing, such as coffee and tea.³

4. The core sector problem is that urbanization is taking place with minimal coordination, inadequate infrastructure, and insufficient regard for environmental impacts. The results include disorganized growth, inefficient land use, damage and loss of natural resources, and inadequate access to urban services. The problems can be attributed to poor urban management, little strategic spatial planning, poor connectivity between urban planning and environmental management, and insufficient investment in infrastructure and community services. The sector problem analysis and objectives tree are provided in Appendix 1.

5. Urban areas are the focal points for linkages between rural areas and wider economic markets. The growing services sector and the processing of agricultural products take place mostly in urban areas. Although urban areas account for only about 25% of the population, household consumption and expenditure amounts to 50% of the national total.⁴ Lao PDR towns have well-established links with the rural areas surrounding them. These are forged through close economic and social interactions. Towns can also play a key role in providing access to national and regional markets. In a developing economy, such as that in the Lao PDR, the towns are just beginning to take on this second role. For the rural areas to benefit from the towns’ expanding economies, better understanding of local and subregional linkages will be needed. Improvement of urban areas is central to balanced regional socio-economic development and poverty alleviation.

¹ The figure from the 2005 census is approximately 27%, but this includes some villages that satisfy “urban” criteria although they are not part of an urban area.

² United Nations Environment Programme. 2001. *Lao PDR: State of the Environment 2001*. Bangkok.

³ World Bank. 2009. *Lao PDR at a Glance*. Vientiane.

⁴ National Statistical Center. 2008. *Lao Expenditure and Consumption Survey 2007/8*. Vientiane.

6. ADB supported the establishment of a subregional framework for a small town development strategy, but the proposed coherent strategy for urban centers has not been realized. Existing poverty reduction strategies include the improvement of road infrastructure to assist people in rural areas in getting their agricultural products to market. The strategies also mention development of special industrial and other zones. Yet markets and special zones require the infrastructure and resources of urban centers to function efficiently, and concomitant support for these has been lacking. Most small towns are predominantly market towns. If they are to develop, they will have to grow beyond their traditional roles, but not all of them can grow into major economic centers. The small town development strategy demonstrated that the development characteristics of the towns are strongly defined by their location as are their economic prospects. A strategy for the development of the towns and their hinterlands must recognize these regional and subregional differences. Strategies must take account of the strengths and weaknesses of particular locations. The characteristics and roles of the towns are summarized in Appendix 2, Table A2.5.

7. There is an established administrative hierarchy of urban areas in the Lao PDR. Below the national capital Vientiane, there are 16 provincial capitals; next are the 106 district towns. The lowest level of administration is the village, some of which are individual settlements, while others are parts of larger urban areas. By the mid-1990s, four of the provincial capitals had grown significantly larger than other towns, were operating as de facto regional centers, and were labeled “secondary towns”: Luang Prabang, Pakse, Savannakhet, and Thakhek.⁵ Despite their increased importance, they remain officially at the same rank as other smaller (some much smaller) provincial capitals. This could change in the near future if plans to create municipalities come to fruition. The population ranges of the urban centers are as follows.

Urban Center	Population
Vientiane (National Capital)	320,000 (main 4 urban districts) 570,000 (9 districts in Vientiane Prefecture—'Greater Vientiane')
Secondary towns (4)	38,000–82,000
Other provincial capitals (12)	6,000–38,000
District towns (106)	500–15,000*

* Census data show an urban population of one district (Phonhong in Vientiane Province) as 27,000. However, this is misleading because it is the combined population of several small settlements.

8. Estimated urban populations of all provincial and district towns in the Lao PDR are shown in Appendix 2, Table A2.1. It should be noted that these are entirely based on amalgamations of urban villages (the lowest enumeration unit) according to the national census definition. This is, therefore, only a guide to the actual sizes of the urban areas (as explained below). Examination of urban issues in the Lao PDR is somewhat hindered by the absence of reliable and consistent data specifically for the urban areas. Historical trends (and extrapolated projections) are also problematic due to frequent division and amalgamation of villages. Most urban areas are not separate entities in terms of administration or census enumeration. The national census employs a definition of urban villages based on satisfying a few of several criteria, but this leads to anomalous results. The situation was addressed with the preparation of the Lao Urban Data Book in 2003 with ADB support. The Department of Housing and Urban Planning (DHUP) of the Ministry of Public Works and Transport (MPWT) has drafted a national urban strategy incorporating data tables from this data book. However, the tables have not been updated with census data and are still

⁵ The name Savannakhet is something of a misnomer for the urban area of this secondary town, located in Savannakhet Province. Although popularly known by this name (*Savanh*, a common shortening used by Lao people), this has never been the official name for the town. Outside Vientiane, all urban areas in the Lao PDR are synonymous with the district in which they are located. Until recently, the district's name was Khantabouly, and this was what appeared on official records. Since the 2005 census, the district (and therefore town) name was formally changed to Kaysone Phomvihane, and this is the name used in this report (unless already embedded in documents, tables, etc., from other sources).

projections from 1999. There is a need for an up-to-date database for urban areas, including a review and revision of their geographic extent. As a minimum, this should incorporate figures from the 2005 census, but additional data are now available from a variety of sources and should be collated.

9. There has been an ongoing program of infrastructure investment in urban areas undertaken by the government since the early 1990s, notably with ADB as its major international partner. The focus for this program has been on Vientiane, the four secondary towns, and other provincial capitals. As a consequence, the urban environment in these towns has improved considerably. However, these investments have been on a priority basis rather than being comprehensive, and there remain widespread deficiencies in urban services in parts of these towns and in other emerging urban centers.

B. Core Sector Issues, Causes, and Effects

1. Growth of Urban Areas

10. Comparison of the 2005 national census with that of 1995 shows that more people are living in areas defined as “urban,” 27% in 2005 compared with 17% in 1995. The extent to which this is due to migration is unclear. A significant proportion of this change is due to a combination of natural population growth and more areas being defined as “urban.” According to the National Statistics Center, in 2005, 92% of people over 10 years old were living in the district in which they were born. Nevertheless, there is evidence of urban migration, particularly to Vientiane. The census records the movement of over 70,000 people to the capital in the 10-year intercensal period. No other provincial migration rates show any significant movement to the urban areas. The current national urban population is around 1.5 million and is expected to reach over 2.0 million by 2020.

11. The Greater Mekong Subregion (GMS) program has created opportunities for economic development in the Lao PDR. Two flagship programs, the North–South Economic Corridor and the East–West Economic Corridor, have induced growth of border towns through road improvements, cross-border trade agreements, and increased commercial activity. The continued and potentially rapid growth of border towns and other urban areas within these corridors necessitates action to strengthen these towns in both their physical infrastructure and urban management capacities. In these favorable locations, the corridor and border towns have the potential to maximize the returns on investments in infrastructure and development.

2. Urban Governance and Decentralization

12. Decentralization of government functions was formally initiated in 2000 with the Prime Minister’s Instruction 01/PM of 11 March 2000. The stated objectives of this were that (i) provincial governments would be strategic development units; (ii) district governments, budgetary and planning units; and (iii) village councils, implementing units. This was followed by the passing of the Local Administration Law in 2003. This law sets out the rights and duties of provincial, district, municipal, and village authorities. It thereby establishes the framework for local decision making and, to some extent, local budgeting. However, there has been little effective decentralization in practice. The summary of legislation for decentralization is provided in Appendix 3.

13. The United Nations Development Programme Governance and Public Administration Reform Project has supported the Public and Civil Service Authority (PACSA) in working toward the creation of municipal authorities. This follows the government’s commitment to pursue the establishment of municipal authorities, initially in Vientiane and Luang Prabang and later in other provincial capitals. To date, however, little progress has been made, for a variety of reasons. These include terminology

and status. The law uses the Lao word *thesaban* for municipality. But under the old regimes (pre-1975), *thesabans* were responsible only for solid waste collection. The cities want a name with connotations of higher authority. The law also places municipalities at the same level as district authorities, which would not provide for a clear urban hierarchy. PACSA is now undertaking a review and amendment of the law. It is understood that Vientiane and Luang Prabang will be the first municipalities, although a strong case is also being made for Pakse.

14. Urban development administration authorities (UDAAs) were established in Vientiane and in the four secondary towns between 1997 and 1999. The main task initially for all of them was the management and implementation of ADB-financed urban infrastructure projects, and these projects provided technical and management support to the UDAAs for the duration of the projects. ADB also supported institutional strengthening and capacity building of the UDAAs through technical assistance. Additional decrees and instructions were subsequently issued to strengthen UDAAs. These include Prime Ministerial Decree 141/PM of May 2000, which further defined the organizational structure and operational responsibilities of UDAAs. This instruction confirmed that UDAAs (i) have a status equal to a division of provincial government, (ii) are financially independent and able to generate their revenues, (iii) may use this generated income for urban development and administration, and (iv) are required to prepare and submit annual budget plans for approval (similar to other divisions of the province or prefecture). Using the same model, UDAAs were subsequently established in the remaining provincial capitals and in one district town, Vangvieng, concurrently with the implementation of the ADB-financed project for these towns.

15. The institutional and policy reforms initiated by the government with ADB assistance to develop the financial independence of UDAAs and eventually establish municipal governments have proved difficult to implement. Assumptions were overly optimistic about the capacities of local governments and the support that could be expected from the district governments. Roles and responsibilities of UDAAs and line agencies, particularly from the provincial departments of public works and transport (DPWTs), were not clearly understood locally. UDAAs have thus been unable to function as efficient local government units due to inadequate qualified technical, financial, and administrative staff and heavy reliance on budget support from the central government. Poor public service employment terms, conditions, and engagement practices have compounded these problems, especially for the employment of contractual workers.

16. Water in urban areas is supplied by provincial *nam papas* (PNPs), with oversight by the Water Supply Authority (WASA). PNPs provide water for about 69% of the urban population in Vientiane and the four secondary towns, and about 39% of the urban population in the smaller towns. However, water is not provided only by PNPs. Other sources of water are private vendors and own means (wells, river, and other surface water). PNPs, as well as the Nam Papa Vientiane, in charge of water supply in Vientiane, were the product of dividing the responsibilities of Nam Papa Lao, which was previously responsible for water supply for the entire country. From late 1999, each PNP has become an autonomous state-owned enterprise under the Department of Communication, Transport, Post and Construction. WASA was established to assist the Ministry of Communication, Transport, Post and Construction in technical issues in the water supply sector and to manage and monitor the implementation of sector policies. The government's long-term vision is to gradually develop WASA as an effective water sector regulator. Decision No. 37/PM provided for formation of a regulatory committee to oversee and direct WASA's operations.

17. The current situation in urban administration is cause for concern. The financial and human resources of the UDAAs to maintain even existing drains and provide solid waste services need to be enhanced, while responsibilities for service delivery in urban areas need to be clarified. There is an urgent need for a review of the structure and role of the institutions charged with urban management and to look at the charges for urban services that will ensure operation and maintenance costs are met and that equitable service is delivered. A key issue is that the role of UDAAs is not clearly defined under the Local Administration Law (2003).

18. As the government becomes more decentralized and participatory, a wider spectrum of society, including the private sector and communities, will need to be involved in decision making. Municipalities, UDAAAs, and district government capacities to facilitate and coordinate collaboration and participation of societal stakeholders in urban planning, development, and management will need to be strengthened.

3. Urban Planning

19. Effective urban planning is important in creating balanced local and regional development. It can help stem rural–urban migration; avoid overloading local government management capacity and urban services and infrastructure; and forestall overcrowding, pollution, rising poverty, and environmental degradation. Balanced urban development is also important to avert the economic decline of smaller towns and their agricultural hinterlands. Such decline will eventually have severe socio-economic implications for the country, accentuating many of the already apparent regional disparities and amplifying the difficulty of successful implementation of equitable regional development.

20. While legislation exists for the preparation and implementation of urban plans, the planning system has not been successful in guiding and managing development according to the plans. This is primarily for two reasons: (i) the master plans that have been prepared have proved to be ineffective tools for controlling development and particularly weak in maintaining zoned open spaces, and (ii) poor enforcement. This has been due to a combination of lack of qualified planning and enforcement staff, low levels of support and coordination in government, and minimal public awareness.

21. Another factor is the lack of ownership of the plans. Master plans are still produced centrally by MPWT through its DHUP and Public Works and Transport Institute (PTI) in Vientiane. Although PTI is now embracing planning procedures in line with international best practices, the shortage of trained planning personnel outside Vientiane is an obstacle to effective local plan generation and ownership.

22. Most master plans were prepared following the provisions of Decree No. 209 in 1996. This decree set out a planning system, which was a simplified version of the zones and regulations developed under a United Nations Development Programme project in 1989. Although the zoning system was streamlined, problems remain in relation to the high number of zone types and the marginal differences among some of them. In recent years, PTI has been strengthened, and its staff have been involved in projects and training courses that contribute to the institute's increasing technical competence. However, the planning system is still based on master plans that tend to be traditional physical plans and do not reflect the international trend toward more flexible planning. Broad strategic planning is rarely undertaken prior to master plan formulation, and feasibility studies are not part of the planning process. The plans pay little attention to problem solving or situation analysis and are not subject to economic or financial prioritization.

23. Overlapping and unclear responsibilities hinder the planning process. Development control is shared between the UDAAAs and DPWT. Within the UDAA area, applications for developments on sites of 200 square meters or smaller are processed by the UDAA. All other applications are dealt with by DPWT. However, this system is not universal. According to a decision taken by the district governor in Pakse, all building applications there are now under the remit of DPWT. Local responsibilities for forward planning or plan making are also overlapping. Both DPWT (through its DHUP section) and UDAA have duties for urban planning and management. In practice, the only plans prepared are master plans, and these are produced in Vientiane. There is little connection between the planners and those coordinating development on the ground.

24. Another overriding issue for urban and regional planning is the division between spatial planning and economic planning. All strategic economic and development planning is undertaken by or for the Ministry of Planning and Investment, while all spatial planning is undertaken by MPWT.

Urban plans, infrastructure plans, and urban sector strategies all come within their domain. The problem lies in the fact that these two sets of outputs rarely come together. The institutional structure is based on provincial and district administrations operating alongside line ministries. The principal agencies involved in urban management are shown in Appendix 4.

4. Urban Environmental Management

25. In its review of the environment in 2006, the World Bank reported that the quality of both surface and groundwater was declining.⁶ It pointed out that the generation of solid waste in urban areas in the Lao PDR was on the rise and posed an emerging threat to the quality of surface and groundwater and that expanding urban populations, combined with poor collection and largely inadequate disposal facilities, were compounding the level of pollution. Current urban air pollution in the Lao PDR is at a safe level. However, air quality is expected to worsen if adequate mitigation measures are not taken immediately, especially in Vientiane, where the number of vehicles has been growing annually at almost 10% during the past decade.

26. By international standards, the urban areas in the Lao PDR are small and relatively low density. Development pressures are mounting however, and there are already signs that the system is not coping. These include encroachment into wetlands (particularly in Vientiane), subdivision development with inadequate access, and increasing traffic congestion.

27. Under recent legislation and reorganization, protection of the environment is the responsibility of the Water Resources and Environment Agency and its provincial water resources and environment offices. A key issue for the future of urban environments will be the coordination and interaction between these offices and the bodies charged with planning and managing the urban areas. While uncertainty continues over which body that will be, the coordination of environmental issues will remain a gray area.

28. During the last decade, clearly initial legislation did not provide the necessary tools to protect and manage the environment, which has come under increasing pressure particularly from resource exploitation, major infrastructure schemes, and urban expansion. Therefore, the law and regulations have been reviewed.

29. The attention being given to environmental issues is welcomed. To some extent, however, many in the government still view the environment as a separate sector to be dealt with by environmental specialists. There is a need for greater integration of environmental issues into the decision-making process of all sectors, particularly urban planning and development control. To enable this, it is necessary to raise awareness of the high-level government officials. The formal training and on-the-job experience provided by development partners have targeted relatively junior professionals. Senior civil servants and politicians have not had the benefit of such training.

5. Land Management

30. The National Land Management Authority (NLMA) and provincial land management agencies (PLMAs) were established in 2006 as implementing agencies under the Land Law approved in 2003. The NLMA and PLMAs are charged with a mandate covering various aspects of land management and planning. Many of their responsibilities relate to land ownership, land registration, land transactions, and disputes. However, they are also responsible for issues related to land use, such as (i) land surveys, land

⁶ World Bank. 2006. *Lao PDR Environment Monitor*. Vientiane.

classification, and land-use planning at the local, regional, and national levels; and (ii) coordination with concerned sectors and local administrations to plan the use of land, protect and develop land, classify land, assess the quality of land, define land areas for certain uses, and monitor such land use. There appear to be significant overlaps in the responsibilities of the NLMA, PLMAs, MPWT, and DPWT in relation to urban planning and land use.

6. Climate Change

31. With advancing urbanization, effects of pollution and climate change are beginning to surface as a result of overcrowding in some areas. The government is linking an aggressive environmental policy to efforts to make Lao PDR cities not only competitive but also greener and more livable.

32. Urbanization and the concentration of population, economic activities, and energy demand have greatly increased levels of waste and pollution. The major sources of greenhouse gas emissions are landfills, wastewater, buildings, road construction, and industrial discharge. Most cities lack adequate waste management systems for both solid and liquid wastes. Without the application of proper technology and waste management practices, both solid and liquid wastes are potential sources of methane gas.

33. According to a recent climate change study, the Lao PDR will be most affected by the frequency and intensity of torrential rains and storm surges.⁷ The Mekong River Delta is already experiencing prolonged droughts and floods due to increased variability of rainfall. The government is increasingly aware of the wide range of effects of climate change and is taking action both nationally and globally. However, implementation of mainstream climate change adaptation measures is hampered by the (i) weak capacity and skills of policy makers, (ii) inadequate understanding of the implications and cross-sector links of climate change, and (iii) lack of policy coherence and consistency between adaptation and development goals. Implementation capacity is also shackled by inefficient regulatory frameworks and institutional barriers shared by most countries, including (i) fragmentation, (ii) weak coordination among agencies responsible for development planning, (iii) limited communication and information dissemination among stakeholders, and (iv) lack of suitable incentives and adequate resources to support climate change adaptation measures. Inadequate capacity to integrate local stakeholders in policy development and implementation contributes to communication barriers.

34. The Lao PDR has the potential to reduce emissions from its principal urban areas by incorporating low-carbon concepts in city master plans. Greenhouse gas emissions can be reduced by appropriately designed waste management systems, including segregation and collection of solid waste and proper design of landfills as well as wastewater treatment processes to capture and use the methane gas generated by these wastes. Emission reduction also can be achieved in urban areas by (i) upgrading the energy efficiency of buildings and urban industries through use of more efficient lighting and electrical appliances; (ii) energy efficiency standards and rating programs; (iii) improved insulation, heat, and power recovery; and (iv) material recycling and substitution. In the near future, carbon capture and storage for cement, power plants, and oil and gas plants may become more commercialized.

⁷ Mekong River Commission. 2009. *Adaptation to Climate Change in the Countries of the Lower Mekong Basin: Regional Synthesis Report*. Vientiane.

7. Employment and Income Opportunities

35. The increase of population has outpaced the growth in new jobs in urban areas. Underemployment and an extensive informal sector are likely to happen with urbanization. Jobs in such sectors as manufacturing, construction, transport, services, tourism, and additional alternatives to traditional farming will need to be created. The government should provide incentives for private sector investment that would generate jobs in urban areas. This can be achieved principally through policy initiatives, but will need to be supported by effective planning and development of urban areas to ensure they include acceptable standards of infrastructure, services, housing, and environmentally friendly living and working conditions. The government also will need to provide accessible education and technical and vocational training institutions to produce an adequate supply of labor that is competent and appropriately skilled.

36. Data on employment in the Lao PDR are not very reliable. Employment rates are rather meaningless due to the high incidence of informal labor. However, estimates of urban population growth over the next 15 years indicate a net increase in urban population of around 1 million. Migration of people from rural to urban areas seeking employment will account for much of the increase.

C. Subsector Issues

1. Water Supply

37. Overall access to safe water supply in urban areas is about 67%, with 45% of urban households having access to piped water. Safe water comes from pipes or protected wells and/or boreholes and may still require treatment prior to distribution due to high salinity or mineral content. However, these figures mask significant differences in coverage among the five largest towns (Vientiane, Kaysone Phomvihane, Pakse, Thakhek, and Luang Prabang), which have a combined piped water supply coverage of just under 70%.⁸

38. Since 1995, about 30 piped water supply systems have been constructed, rehabilitated, or expanded in the larger centers, primarily through external assistance. After completing water supply systems in the larger towns and provincial capitals, the government's focus has shifted to developing systems in the small district towns. A principal aim is to support rural development and greater geographical balance and equity in social infrastructure. Currently, residents in most small settlements rely on shallow wells, ponds, and streams, which are often biologically contaminated.

39. Between 2001 and 2004, the government allocated \$39.6 million for capital investments in the urban water supply sector, an average of about \$9.9 million annually. In 2003, PNPs generated total operating revenues of \$3.6 million from water tariffs and \$4.1 million from other user charges. However, actual cash flows into the sector from these sources are lower because the timely collection of billed revenue is a significant problem for almost all PNPs. Data from PNPs on service areas and consumption for 2008 are given in Appendix 2, Table A2.2.

40. While PNPs have much improved their operations, challenges remain. Many government establishments fail to pay their water bills, although bill collection from households is generally good. Central government application of blanket tariffs and large subsidies for capital investment and operation and maintenance pose disincentives for PNPs to adopt least-cost solutions to water supply system development and good customer service. Due to the limitations of available resources—human, financial,

⁸ Water Supply Division, DHUP, MPWT. 2009. *Service and Consumption of Urban Water Supply 2008*. Vientiane.

and infrastructure—and public services, an incremental approach to development of the water supply sector has been adopted to achieve the government's goal of 80% coverage by 2020.

41. Successful application of cost-recovery tariffs is considered a major factor in achieving the government's water sector goal. After intense policy dialogue in 2007 and 2008, an agreement between the central and provincial governments on water tariffs led to tariffs that cover costs and set the stage for more sustainable water supply delivery systems. Appropriate water tariffs are expected to deter excessive consumption and unneeded and inefficient investment. Under the national water supply tariff policy, WASA is tasked to assist PNPs in establishing tariffs and services at levels compatible with sustainable operation. To become an effective regulatory authority, WASA will need to strengthen the capacity of its human resources, free itself of sector planning and project implementation responsibilities—which duplicate the work of DHUP—and concentrate on its regulatory functions.⁹

2. Sanitation

42. The inadequate coverage of sanitation in urban areas has caused outbreaks of diarrhea and cholera in several areas, resulting in illnesses and deaths. Infection with soil-transmitted intestinal worms among school-age children is more than 50%, as is the infection rate with food-transmitted worms in the overall population. Lack of clean water, inadequate sanitation, and unhygienic practices are the main causes of outbreaks and infections. Town markets, where the poor can sell their products and offer their services as porters and cleaners, typically lack surfacing, sanitation, drainage, and parking areas and have poor hygienic conditions.

43. Although sanitation coverage is apparently high in most of the towns, the quality of the facilities is questionable; this, combined with low hygiene awareness and promotion, limits the impact on health. Household sanitation facilities often vary because of weak sanitation regulations and unclear institutional responsibilities. Little attention is paid to stagnant water or moist ground, which can lead to breeding of mosquitoes or parasites. The coverage of septic tank systems is low in all categories of towns. Existing septic tanks in general are poorly designed and constructed, which results in solids carried over to drains or soakaways, leading to odors, blockages, and overflows. While Vientiane and the four secondary towns have sludge vacuum tankers for emptying septic tanks, only a few provincial and district towns have such tankers, and few, if any, have proper disposal facilities for septic effluents.

44. Individual property owners are responsible for constructing and managing their on-site sanitation systems. On-site sanitation systems are typically in poor condition, with no provision for septic waste collection and treatment. About 76% of urban households have pour-flush latrines, with 80% coverage in the five largest towns and about 69% in the small towns.¹⁰ There are few public toilets in markets and temples, and less than 10% of primary schools have proper latrines. A summary of types of household toilet in urban areas from the 2005 census is shown in Appendix 2, Table A2.3.

45. The government is currently addressing sanitation issues by (i) providing funds for construction of new sanitation facilities to increase the coverage of public and household sanitation systems; (ii) improving drainage networks; (iii) implementing community health and sanitation awareness programs; (iv) requiring provincial governments to introduce modified sanitation regulations with

⁹ Under Decision No. 37/PM, DHUP is responsible for sector development strategies and plans, planning staff training, and studying technical standards of water supply systems. DHUP is tasked with managing an ambitious long-term program of capital investment in urban water supply. However, there is a need to strengthen DHUP, particularly the capacity of staff and resources, to undertake its core functions.

¹⁰ Based on 2007 population estimated from 2005 census data using assumed average annual growth rate of 2.7%.

clearly defined institutional responsibilities; and (v) strengthening the capacity of local agencies and households to manage, operate, and maintain on-site sanitation facilities. All households, businesses, and institutions should be required to have approved sanitation systems before they are permitted to connect to the PNP piped-water supply system. Regulations now stipulate that septic tanks should be properly designed and constructed to discharge effluent properly in areas where adequate drainage systems exist. Local governments are responsible for providing combined drainage systems to convey settled septic effluent from households to treatment facilities or to bodies of water where effluent can be assimilated by the environment.

3. Drainage and Flood Protection

46. Towns vary widely in the quality and coverage of drainage infrastructure, but most have no interconnected drainage networks. The result is frequent flooding after rainstorms. Where it exists, drainage becomes blocked with silt washed from the unpaved roads during the rainy season. Water in roadside drains is polluted by poor on-site sanitation systems.

47. Flooding in urban areas occurs due to accumulation of runoff following heavy rain. Seasonal flooding, particularly in urban areas near the Mekong River, causes significant disruption to livelihoods and damage to property. In most cases, the incidence and severity of flooding as a result of river inundation can be minimized by the construction of flood walls and gates. Flood prevention work to protect residential areas is also a priority in urban areas. The more pressing issue now is riverbank erosion. Loss of land on prime riverbank frontages is threatening a number of towns.

4. Solid Waste Management

48. Solid waste management in most urban areas is inadequate, with limited collection services and poor final disposal. Where services exist, they serve only limited parts of the towns, tending to focus on the more accessible areas and the more profitable customers, such as markets and higher-income households. Waste not collected is generally burned or dumped indiscriminately, which has growing impact on the environment.

49. Over the last decade, solid waste management in urban areas has improved through externally financed projects that have provided vehicles and landfill sites. In 2007, the estimated overall coverage for solid waste collection in urban areas was about 33%. In Vientiane, approximately 50% of households are served, and in the secondary towns and provincial capitals, about 37%. In the remaining urban areas, service is at an average of 30%. However, the average is misleading as it is distorted by a few towns reporting very high coverage rates (e.g., Vangvieng 91% and Kenethao 100%), while many are well below 30% and some lower than 10%. Landfill sites exist in 57 towns. Their quality varies; although they are labeled “sanitary landfills,” in practice they are closer to being just controlled dump sites. They do not necessarily meet international standards for sanitary landfills. Detailed information on solid waste management is in Appendix 2, Table A2.4.

50. Solid waste generation will increase with urbanization. The volume of waste will grow disproportionately as increasing wealth results in greater amounts of disposal goods and packaging. To prevent the degradation of the urban environment from rapid urbanization, all towns require significant investment in solid waste management.

5. Roads and Transport

51. There are approximately 38,000 kilometers of roads in the Lao PDR, around 5,500 kilometers (about 14%) of which are sealed. Urban areas accounted for about 2,000 kilometers of road, of which 33% are sealed. Only the primary and secondary networks within urban areas are sealed. Other urban roads are generally gravel or earth, and are invariably dusty in the dry season and muddy during rainy period. Only about 11% of urban roads have lined drains. Maintenance of urban roads and drainage is irregular and suffers from inadequate funding and ill-defined management arrangements. The poor condition of unsealed tertiary roads in urban areas causes significant access problems that affect other sectors. For example, pot-holed and muddy residential access roads prevent solid waste collection vehicles from serving many parts of the towns that have collection services.

52. Traffic congestion is increasing in Vientiane and in the larger provincial capitals, such as Pakse and Savannakhet. In Vientiane in 2006, 119 fatalities and 3,572 total injuries were recorded, although the absolute number of fatalities and injuries has remained stable in recent years despite significant traffic growth. Congestion and associated tail-pipe emissions and energy use will be exacerbated by rising economic prosperity, urbanization, and vehicle ownership. Addressing urban transport challenges has been identified as a priority by the government.

53. There is potential to secure additional traffic capacity from current roads though improved traffic management, driver behavior, and traffic enforcement. However, new urban roads, developed as a hierarchical network, will also be required to support appropriate urban development and sustain economic growth. This need will be most acute in Vientiane, because of its size and dominant role in the economy. Traffic management and improved urban roads should be incorporated into comprehensive urban development planning so that land-use decisions facilitate rather than hinder integrated transport solutions.

54. There is limited formal urban public transport. With the exception of Vientiane, bus services are inter-urban rather than intra-urban. Currently, the provision of public transport is a responsibility of local governments, but they mostly do not have the resources to meet these commitments. An integrated public transport system will be essential for Vientiane and subsequently for other cities, in which services can be provided by one or more state or private entities.

55. Parking is becoming a significant issue in Vientiane and the other large towns. None of the urban areas has been planned with off-street parking provision. In the last few years, on-street parking has reached capacity in the town centers and is causing congestion and affecting pedestrians. It has also resulted in increasing incidence of sidewalk parking, further inconveniencing pedestrians. A comprehensive parking strategy is urgently needed in Vientiane, coupled with an investigation of opportunities for improving facilities for pedestrians. Despite the evidently increasing parking problem, there is little evidence that developers of new premises are being required to provide adequate parking spaces.

6. Housing

56. According to the national census, in Vientiane in 2005 more than 55% of all housing was constructed of brick or concrete, while about 25% was predominantly wood and 17% bamboo. In all urban areas, the figures were 45% brick or concrete, 36% wood, and 18% bamboo. These compare with total national proportions of 18% brick or concrete, 43% wood, and 36% bamboo. The Lao Expenditure and Consumption Survey in 2002–2003 reported that almost 11% of all households nationwide and just over 13% of all urban households were investing in new housing or making extensions to existing houses. Households invested almost KN1.2 million each year, almost all of which were residential structures. Total investment in construction throughout the country was KN950 million in 2003, equivalent to roughly 5% of all goods and services produced in the country that year.

57. The estimated requirement for housing units in urban areas is 219,000 units during 2003–2020, of which 133,000 are new and upgraded housing units needed to accommodate the urban poor. It was envisaged that the government involvement in the housing sector would be primarily as a facilitator of private sector participation. In this role, the government would be responsible principally for the acquisition and preparation of suitable urban land and provision of infrastructure and services to support low-cost housing development by private entities, including private landowners, developers, and individuals and organizations in the urban poor community. The cost of government involvement in housing in 2005–2020 was estimated at \$240 million.

58. A national housing policy is needed, based on a comprehensive assessment of the housing sector and closely linked to national development goals and objectives. The increasing rate of growth of the country's urban population and number of poor urban households, including vulnerable and disadvantaged groups, ethnic minorities, and female-headed households, can only raise demand for low-cost housing. Failure to fill this demand adequately will result in slum and squatter settlements in major urban centers.

D. Summary of Key Development Issues and Constraints

59. The primary challenges facing urban areas arise from inadequate urban infrastructure and the limited capacity of local governments to provide reliable and affordable urban services. Missing links in the road network, obsolete water supply pipes, flooding and clogged drains, and disposal of untreated waste constrain the productive capacity of urban areas and make them less competitive and livable. Inadequate urban infrastructure and poor management of urban services also discourage external investment, which is vital for economic development and growth. Infrastructure investments need to be more targeted and based on clearer strategies for urban development. Key needs are (i) a clearer hierarchy and division of responsibilities for urban management, (ii) more flexible and appropriate land-use plans to guide development, (iii) improved data collection and management specifically for urban areas, and (iv) better awareness of urban and environmental issues among key decision makers.

A. Government Strategy, Policy, and Plans

1. National Socio-Economic Development Plan

60. The national socio-economic development plan (NSEDP) provides the framework and agenda for national development and attainment of national goals and objectives. It also establishes national development priorities and budgetary allocations over the coming years. The seventh NSEDP, 2011–2015 was finalized in December 2010. While this includes many targets and policies similar to previous versions, it appears to present some departures from the established formula of poverty reduction through the four traditional sectors of agriculture, forestry, education, and health. As well as setting broad economic and social targets, the plan includes provisions for improving public administration, enhancing regional integration, sustainable use of natural resources, and infrastructure provision. Specific proposals relevant to the urban sector include the following:

- (i) economic development and poverty reduction by (a) reducing poverty to below 19% of total population, (b) reducing gaps between urban and rural areas, (c) considering urban areas as focus points for economic development, and (d) encouraging dispersed populations to group in villages identified as “focal points”;
- (ii) environment improvement by (a) establishing a new land-use system to protect natural resources and ensure sustainable development, (b) protecting environmental quality in towns, (c) setting up management models for a green environment in Vientiane and the four secondary towns, (d) raising awareness of the need for environmental protection, (e) sustainable development of water resources, and (f) complete land management plans at macro and micro levels;
- (iii) improved governance by (a) increasing enforcement and effectiveness of public administration and (b) strengthening the public works and transport sectors to increase their efficiency; and
- (iv) infrastructure development by (a) connecting the North–South and East–West economic corridors, (b) supplying water to 67% of urban populations, (c) increasing the proportion of the population with access to clean water to 80%, (d) increasing the proportion of the population with access to latrines to 60%, (e) constructing main roads in districts and rural roads that connect with priority areas, and (f) securing the country from losses due to natural disasters.

61. Previous NSEDPs have been largely silent on urban issues. As drivers of economic growth, urban areas make a major contribution to the country’s overarching goal of eradicating poverty. However, this is primarily an indirect impact that has been somewhat overlooked in national strategies. The seventh NSEDP indicates that more notice is being taken of the potential role of urban areas. Yet, it falls short of presenting a coherent strategy for the urban sector, and many of the provisions remain vague in this sector.

2. National Urban Sector Strategy

62. DHUP and MPWT has recently completed a draft of a national urban sector strategy. The strategy sets out a range of objectives, policies, and programs, covering much the same ground as the DHUP and MPWT 5-year plans. Its original aim was to set a multisector urban agenda. As such, it was intended to be a reference document for planners and decision makers in a wide range of government and other agencies. The draft strategy focuses mostly on activities covered by MPWT, particularly on proposals for technical improvements in urban management. It also includes suggestions for establishing cross-sector committees for urban development and management at national and provincial levels.

63. The objectives of the strategy are to (i) develop all urban areas from the capital city to village clusters to reduce the development gap between urban and rural areas step by step; (ii) strengthen the capacity of urban management authorities; (iii) create favorable conditions for civil society and the private sector to participate actively in urban planning, management, and sustainable development; and (iv) preserve and expand cultural and national heritage resources through appropriate urban development and environmental protection. The priority programs of the strategy include (i) capacity development in urban planning and development authorities; (ii) improvement of the legal and regulatory framework for the urban sector; (iii) preparation of a national urban water supply development plan; (iv) preparation of a national urban wastewater and solid waste management strategy; (v) preparation of a national urban transport strategy; (vi) preparation of a national housing development strategy; and (vii) preparation and revision of plans for urban areas, districts, and provinces. The selected proposals under the draft strategy are to (i) develop Luang Prabang, Luang Namtha, Kaysone Phomvihane, and Pakse as regional centers; and (ii) develop towns along regional corridors and at border points.

3. Infrastructure Plans and Strategies

64. **Water supply.** The government's guiding strategy is the water sector investment plan (2005–2020). The plan represents a balanced, stepwise approach to water supply development in the country. Its aims are to support accelerated economic growth and equitable development, and to generate budget revenues through investment in district centers as well as border towns, corridor towns, and emerging centers. It also stimulates economic development in the small towns and continuing investments in water supply systems of Vientiane, the four secondary towns, and provincial capitals to keep pace with increasing demand. Future investment requirements to meet the water supply needs of urban population growth by 2020 are estimated at about \$267 million, including \$103 million for small towns. The priority in this plan is 18 small towns—12 in the northern region and 6 in the central region.

65. **Sanitation.** The government aims to increase septic tank usage to 70% of all households by 2020. This will require (i) stronger sanitation regulations and enforcement; (ii) additional capital investment in septic systems, combined drainage systems, and sludge tankers; (iii) upgrading pit latrines to septic systems in medium- and high-density areas; and (iv) improving and expanding combined drainage systems in medium- and high-density areas to receive settled effluent from septic tanks. Sewage systems for the central areas of larger towns will need to be constructed to enable dry-weather interceptors at outfalls of combined drainage systems to convey wastewater to downstream discharge points or to wastewater treatment plants.

66. **Drainage and flood protection.** Flooding and drainage issues are dealt with on a town-by-town basis, and there is no established national strategy for tackling the problems. A more systematic approach and prioritization are needed, not least in the light of potential climate change impacts.

67. **Solid waste management.** The government has a solid waste strategy involving incremental improvements in solid waste collection and disposal facilities in all categories of towns. Basic equipment

will be procured for collection and transport of solid waste from markets, commercial premises, industrial sites, institutions, and high-density residential areas, with involvement of the private sector where appropriate. Tariffs will be applied to recover at least the cost of operation, maintenance, and equipment replacement. Solid waste services will be gradually expanded to cover medium-density areas of the towns; additional equipment will be procured and sanitary landfills will be developed using appropriate technology. The target is that by 2020, 70%–85% of general solid waste and 100% of medical waste of the district centers will be collected and disposed of in controlled landfills using appropriate technology.

68. **Roads and transport.** The government aims to increase the overall coverage of sealed roads in urban areas to 46% by 2020, ranging between 35% and 55% for the various categories of towns, and the coverage of lined drains from 11% to 47%. To ensure that investment is efficient and maximizes benefits, highest development priority will be given to roads in commercial and high-density areas and to roads leading to markets, schools, hospitals, and other public facilities. Private investment in transport infrastructure and services is needed but will require less restrictive and better management of transport industry regulation as well as a more attractive investment climate.

4. Other Policies and Plans

69. **Climate change.** The government has shown a strong commitment to addressing climate change by ratifying the United Nations Framework Convention on Climate Change in 1995 and the Kyoto Protocol in 2003. Consequently, the government established the National Climate Change Office, the National Steering Committee on Climate Change, and eight working groups in 2008. In May 2009, it published the National Adaptation Program of Action, which identified water, agriculture and forestry, and public health as high-priority, at-risk sectors due to climate change.¹¹ It is preparing a national strategic action plan for climate change. This action plan focuses on eight areas: (i) building awareness, (ii) strengthening policies and institutional capacity, (iii) mainstreaming climate change, (iv) expanding the knowledge base, (v) building adaptive capacity, (vi) enhancing ecosystem resilience, (vii) promoting comprehensive disaster management, and (viii) mitigating climate change.

70. **Focal points.** The government has, for some time, advocated a policy of focal point development. This is aimed at consolidating villages and encouraging residents of remote villages, particularly in mountainous areas, to relocate to focal points in more accessible locations. While this policy will affect the distribution of settlements, the focal points are not expected to be of significant size; they will be closer in scale to large villages than small towns. In the near term, focal points are not likely to fall within the remit of an urban strategy.

5. Strategy Implications

71. Steady urbanization and the need to sustain economic growth imply increased demand for urban infrastructure. An operational strategy for development of urban infrastructure will thus be vital for realization of the government's vision for national development. To be effective, the strategy must be based on assessment of the status of urban infrastructure, analysis of current trends and key issues, evaluation of existing and required institutional and human resource capacity, projections of demand for urban infrastructure, estimation of the resources that will need to be mobilized, and identification of the potential sources of financial resources.

¹¹ Water Resources and Environment Administration. 2009. *National Adaptation Programme of Action to Climate Change*. Vientiane.

72. To meet future demand for urban infrastructure and minimize gaps in its provision, the strategy must aim for urban infrastructure services that are demand-driven, responsive to demonstrated needs, and delivered with greater efficiency than at present. The strategy should provide a framework for the development of urban infrastructure and a guide for public and private sector investments. Recommendations on policy, institutional, and organizational changes needed for effective delivery of public services should also be provided, and measures for strengthening the institutional capacity of local governments should be incorporated. Measures for mobilizing resources and support for urban infrastructure development from public, private, and societal sources should be included, and effective indicators for monitoring strategy performance should be identified.

B. Development Partner Support in Urban Development

73. The bulk of official development assistance to the Lao PDR has been outside urban areas, in rural development and inter-urban infrastructure, such as roads and power supply. ADB has been the primary development partner to the government in urban development. ADB, Agencé Française de Développement (AFD), and Japan International Cooperation Agency (JICA) have provided assistance for water supply system improvement through PNPs and Nam Papa Vientiane, while JICA and the Norwegian Agency for Development Cooperation (NORAD) have provided assistance in solid waste management. ADB and NORAD have assisted in strengthening the sector regulatory functions of WASA since its establishment in 1999 by (i) helping with preparation of key financial, technical, and accounting guidelines; (ii) facilitating private sector water supply initiatives; and (iii) supporting evaluation of the technical and financial performance of all PNPs in the country. Currently, ADB is assisting the strengthening of WASA capacity in sector planning; policy formulation; and water utility management, regulation, and enforcement. AFD and JICA have set up a training center in Vientiane to strengthen the capacities of PNPs in utility operation and management. The United Nations Development Programme is supporting the decentralization process through its governance and public administration reform project, which is working on a number of fronts, including the National Assembly and the legal sector. However, the key areas are in local administration organization and financial management and procedures. Pilot projects are dealing with participatory planning at village level and the implementation of the *khum ban* (village clusters) approach.

C. ADB Sector Support Program and Experience

1. ADB Support to the Urban Sector

74. ADB has been contributing to the urban sector in the Lao PDR since 1973 when it commissioned a water supply project in Vientiane. Its present role as the agency leading multisector urban interventions throughout the country commenced in 1993 with the Vientiane Integrated Urban Development Project. Since then, ADB loans and grants have supported urban development and water supply in Vientiane, secondary towns, and provincial capitals. ADB has also provided technical assistance programs supporting the establishment and capacity building of the UDAs. For assistance in developing a legal framework and strategies, ADB supported preparation of a draft of the Local Administration Law and the Urban Sector Strategy. ADB-financed loans, technical assistance projects, and grants to the urban development sector are listed in Appendix 5.

2. Lessons Learned

75. According to the country assistance program evaluation, ADB assistance to the urban development sector was considered relevant to its country strategy objectives as it provided essential

investments in physical infrastructure and basic social services.¹² In terms of the relevance of project design, ADB assistance was evaluated as generally appropriate. The exception was the sanitation (septic waste management) component due to lack of adequate demand from and consultation with the target beneficiaries. The slow pace of institutional change has somewhat undermined the initial success of the UDAAAs. The evaluation stated that this reflects weak governance and judicial system and inadequate government ownership and commitment to facilitate the reform procedures. Overall, the evaluation rated ADB assistance to the urban development sector relevant.

76. Major lessons from the completed ADB-financed projects in urban development include (i) civic participation positively affects urban governance; (ii) participatory and demand-driven development activities enhanced the sense of local ownership; (iii) capacity building requires proper planning and up-front implementation as it is a long-term effort; (iv) institutional and policy reform should be based on realistic assessment of timing, resource requirements, and political will; and (v) weak performance in project financial cost recovery threatens sustainability, while project social and economic benefits are exceptionally high.

D. Implications

77. Active community participation and decentralized decision making are keys to enhancing ownership and capacity strengthening of communities and local government agencies. This approach could be replicated and expanded in demand-driven development activities in future urban development projects. Decentralization and urban governance are essential to sound urban development that is a basis for balanced regional socio-economic development and poverty reduction. These issues could be supported by strong policy dialogue between the government and ADB backed by technical assistance programs and investments. Regarding institutional and policy reform, the pressing issue for the government is to clarify the roles of provincial government, particularly DPWT, UDAA, district governments, and proposed municipalities. The government plans to pilot the concept of “municipality” in selected towns rather than immediately establishing five full-fledged urban municipalities. This is likely to defer the good potential of institutional outcomes. The scheme of UDAA revenue generation centered on user charges and local levies may not be fully effective or efficient. It is recommended that this revenue model be reviewed, together with an investigation of alternatives.

E. ADB Sector Forward Strategy

78. The ADB urban development sector strategy for the Lao PDR will aim to support the country's environmentally sustainable economic growth and integration into the broader GMS. This framework is consistent with and supportive of the ADB long-term strategic framework, 2008–2020 (Strategy 2020). Of the five core areas of ADB operations identified in Strategy 2020, infrastructure, environment, and regional cooperation and integration are the three areas directly relevant to addressing the urban challenges in the Lao PDR.

79. The strategic thrust of ADB urban operations in the Lao PDR will follow the GMS strategy to transform transport corridors into full-fledged economic corridors. The overarching objective of the ADB's CPS for Lao PDR, 2012–2016 is inclusive and sustainable economic growth and poverty reduction. While inclusive growth focuses on rural areas, the CPS recognizes the challenges of rapid urbanization and emphasizes that the urban centers that can sustainably support stronger rural-urban linkages will be addressed through improved urban services and municipal infrastructure. The CPS focuses on four

¹² ADB. 2006. *Lao PDR Country Assistance Program Evaluation*. Manila.

core sectors: (i) education, (ii) agriculture and natural resources, (iii) water supply and other municipal infrastructure and services, and (iv) energy.

80. The water supply and sanitation sector ASR confirmed that ADB will continue its support in the urban water supply and sanitation sector. Although ADB's water supply and sanitation projects include support to individual households, a more fundamental and broad range support is required to mitigate negative effects of improper or lack of wastewater management in urban areas. ADB operations should facilitate private sector participation and have strong focus on capacity building of public and private operators and subnational governments; development of a gender-sensitive sanitation strategy; and involvement of women as key stakeholders in planning, capacity development, implementation, and operation and maintenance related to community and household sanitation infrastructure.

81. Integrated urban and transport development was one of the four core strategic pillars identified under the transport sector ASR. There is a growing need to develop traffic planning and management in the context of comprehensive urban development. Initial assessments will need to be carried out to identify the scale of urban road development needs, economic justification, and implementation arrangements. There is potential for formal public transport to be introduced in Vientiane. ADB can assist in developing appropriate policies and bring its experience of public-private partnerships in the public transport operations to secure positive outcomes for both public transport users and the government.

82. The vision for the urban sector is livable, inclusive, competitive, and sustainable cities and urban centers within a vibrant urban economy by 2020. This involves building institutions that are resourceful, responsive, and capable. They should be able to embrace change and support the participation of the private sector and civil society in promoting sustainable, equitable, and inclusive development. The linkages between the ADB strategy and national sector and GMS strategies are shown in Appendix 6.

83. ADB will adopt cross-cutting themes to (i) tackle the rapid growth of the urban population, (ii) remove constraints to economic growth in urban areas, (iii) increase local development financing, (iv) strengthen spatial planning and land management, (v) improve enforcement and city management, (vi) expand private sector participation in urban infrastructure provision, and (v) adapt to climate change. Support will be given to solving the causes of the problems that contribute to the deficiencies in the sector—the poorly planned and managed and under-serviced urban environments.

84. The proposed ADB forward strategy focuses on providing three areas of support:

- (i) strengthening urban, regional, and environmental planning and management;
- (ii) planning and development of corridor towns; and
- (iii) infrastructure investments in other priority urban areas.

Support Area 1: Strengthening Urban, Regional, and Environmental Planning and Management

85. **Areas need to be strengthened.** There are a number of key aspects of urban planning and management that urgently require attention and support. These include

- (i) **Strategic spatial planning.** At present, there is minimal strategic spatial planning. The growth of urban centers needs to be planned within strategic national and regional frameworks. The urban strategy being prepared by DHUP will need further development to take it from a wish list to a clear plan of action. Elements of strategic spatial planning should be incorporated into national and provincial socio-economic plans.

- (ii) **More responsive and flexible urban plans.** Current master plans are insufficient as tools for managing the growth of urban areas in a market-driven economy. Plans need to be more dynamic, responsive to local needs, and flexible to adapt to changing circumstances.
 - (iii) **Planning for climate change.** The issue of climate change and the mitigation of its impacts need to be incorporated into both strategic and local spatial planning. At the national level, the degree of vulnerability of different urban centers to climate change should be built into strategic plans and regional development scenarios. In urban areas, the implications of potential impacts should be key criteria in the planning process and in the prioritization of infrastructure investments.
 - (iv) **Stakeholder participation in plan making.** Participatory planning is now firmly established as the norm in many countries, but there is little coordinated community-led planning taking place in the Lao PDR today. There are precedents from previous projects, and efforts should be made to build on the good examples. Stakeholder involvement is essential to ensure ownership and support of plans, and participatory planning is a fundamental tool in addressing the needs of the urban poor.
 - (v) **Prioritization of plans and infrastructure investments.** Currently, the selection of items to be included in the government's investment programs is undertaken through the annual and 5-year cycles of ministerial, provincial, and national plans. The prioritization of projects is not particularly transparent and lacking a consistent methodology. There is scope for assistance in improving the prioritization process to optimize the use of limited resources.
 - (vi) **Enforcement of planning controls.** Plans are pointless if they are not followed. Weak local capacity and a lack of commitment to established plans have resulted in much development taking place contrary to approved land-use zoning. The government needs help in establishing stronger planning enforcement.
 - (vii) **Private sector participation.** Private sector participation in urban development has been limited in the Lao PDR. There are potential roles for the private sector in urban infrastructure provision and municipal service delivery. To promote private sector participation, it is necessary to improve the legal framework for financial risk management, capacity in project management, and transparency and accountability mechanisms.
86. To address the above-mentioned key issues, ADB will help the government in the following areas:
- (i) **Consolidation of institutional structure and responsibilities.** The government has been actively reviewing the organization and roles of agencies involved in urban management and infrastructure provision. ADB will support the government in clarifying these roles and carrying out a program to consolidate and strengthen these agencies. To be effective, urban management and the prioritization and implementation of infrastructure investments must be undertaken through a clearly established and unambiguous institutional structure. The resolution of overlapping and ambiguous roles should be a precursor to further ADB investment in urban areas. Key aspects will be establishment of a clear hierarchy of planning authorities, clarification of the roles of DPWT and UDAAAs, and prioritization of the needs of the proposed municipalities. ADB has previously invested significant resources in supporting the emergence of UDAAAs. Their future, along with continued discussions on the establishment of municipalities, has been part of the government's ongoing review. The Local Administration Law is being revised for the changes to the administrative structure, particularly for the creation of municipal authorities, and potentially to clarify the position of UDAAAs. Support from ADB can be through technical assistance to PACSA at the policy and strategic level, or through coordinated assistance to provincial and other local authorities.

- (ii) **Building technical capacities.** Technical and administrative capacities of urban sector institutions are low, inadequate to meet the pressing demands of a rapidly growing urban population, and insufficient to meet the need for coordination and sharing of information throughout the sector. Greater institutional capacities are required to cope with these demands as well as to maximize and internalize the benefits of assistance from development partners and thereby reduce reliance on external assistance.
- (iii) **Improved information and tools.** Planners and other actors in the urban development sector in the Lao PDR have a limited set of tools and information available to assist their work and inform their decisions. Data collection, management, and dissemination can be significantly improved across the whole operation of urban and infrastructure planning. An up-to-date database for the urban areas is needed, including a review and revision of the geographic extent of urban areas. Development decisions affecting the environment are often taken without specific reference to environmental impacts. While the environmental impact assessment procedure is in place for major schemes, many day-to-day decisions and choices are made at several stages in the process—from project concept to implementation—in the absence of informed consideration of the environment. Clearly, experienced environmental advice is not always to hand, but planners and decision makers can be better informed of potential implications at key points in the planning and project development cycles. This can be achieved by the provision of some form of environmental planning guidelines tailored specifically to conditions in the Lao PDR. These guidelines will highlight the potential issues of any type of development, land use, and activity and be aimed at people who are not environmental experts for them to take appropriate action to further evaluate and mitigate adverse impacts.
- (iv) **Raising awareness of urban issues.** Urban sector issues have not been well represented in national policy documents. This is understandable in a predominantly rural country, but it means that few government officials, particularly those at higher levels, have a clear understanding of the urban sector. Over the years, the formal training and on-the-job experience provided by the many urban projects has primarily targeted the lower professional ranks. Senior civil servants and politicians have not had the benefit of such training. As a consequence, those making some of the key decisions affecting the sector do not understand the urban sector, its complexities, and linkages between sectors. High-level awareness raising is clearly needed. As the leading development partner in the sector, ADB is well placed to initiate a process of informing and discussing the issues and options for urban areas in the Lao PDR with senior government officials.

Support Area 2: Planning and Development of Corridor Towns

87. The GMS program has placed considerable emphasis on developing priority transport corridors to link countries and to promote trade, tourism, and investment in the subregion. Investments in roads and bridges have established and strengthened physical linkages throughout the GMS and provided the foundation for more efficient transport of goods and people. The next step is transformation of these transport corridors into full-fledged economic corridors. While border areas are often the most visible places of increased economic activity, towns and cities along the corridors can also attract new investments if the necessary incentives and enabling conditions are in place. Priority for ADB support will be given to the corridor towns that lie along three transport corridors: the North–South Economic Corridor from the People’s Republic of China to Thailand through Botene and Huoixai, East–West Economic Corridor from Viet Nam to Thailand through Dansavanh to Kaysone Phomvihane, and Southern Economic Corridor from Kaysone Phomvihane through Pakse to Cambodia.

88. In this support area, ADB will focus on the following:
- (i) **Local economic development strategy and plans.** The existing economic base will be assessed; core industries and services identified; and development potential, opportunities, and constraints analyzed. Predicted growth in population, traffic, and investment will be taken into account; needed institutional and policy reforms will be identified to ensure sound urban management. Suitable areas for new development of commercial, residential, industrial, and agricultural activities will be identified based on appropriate land use. Environmentally sensitive areas that need protection will be also identified. The plans will help guide future development as well as decisions about what types of activities should be promoted for private sector investment.
 - (ii) **Investment programs for priority infrastructure.** During the planning process, infrastructure constraints and deficiencies will be identified, and a priority investment program prepared. Strategic investments will comprise basic urban infrastructure, such as water supply, sanitation, drainage, solid waste management, public markets, access roads and bridges, and transport terminals. In this context, consideration will be given to leveraging public sector infrastructure investments to attract private sector investments in such areas as industrial parks, agricultural processing zones, and logistics centers. Infrastructure that can be financed through public–private partnerships will be identified.
 - (iii) **Capacity development.** Support will be extended to accelerate programs for strengthening institutional capacity, particularly for project implementation and sustainability development. Local government agencies will require additional institutional and human capacity to manage development and promote investment opportunities to the private sector. Action plans for implementation will be needed to support the investment programs.

Support Area 3: Infrastructure Investments in other Priority Urban Areas

89. Urban areas, including small towns, play a key role in the country's economic development. They can directly help to redress poverty not only through the improvement of poor urban areas but also by supporting economic and human development opportunities in surrounding rural areas. Their development can also reduce migration to larger urban areas, especially Vientiane, thereby fostering more balanced population growth and regional development. Infrastructure deficiencies, limited technical capacities, and poor or no development plans hamper the growth and efficiency of these places. It is important that they continue to receive technical and funding support, and ADB has a primary role to play in this.

90. In this support area, ADB will mainly focus on
- (i) **Updating urban plans.** Many, but not all, urban areas have existing master plans. Many are outdated. Therefore, the first stage in assisting the towns will be a review and revision of current land-use plans and preparation of more flexible development framework plans. The planning process should include extensive stakeholder participation and be used as demonstrations of good practice for application elsewhere.
 - (ii) **Infrastructure investments.** Improving conditions in urban environments will be a key element of support. Access to clean water, sewerage treatment, and effective drainage has been improved in urban areas, but additional investments are required to attain universal coverage and sustainability. In the secondary towns and other provincial capitals where most primary and secondary roads have already been upgraded, the improvement of tertiary access roads is important to facilitate comprehensive urban upgrading, and particularly to provide access for waste collection services. In smaller towns, primary and

secondary infrastructure networks will be the focus. Sewerage and drainage services need to go beyond provision of simple infrastructure, and wastewater management needs to be upgraded. Emphasis will be on upgrading and expanding infrastructure, and improving service delivery, management, and cost recovery. Infrastructure that can be financed through public–private partnerships will be identified. In concert with the participatory planning process, infrastructure planning and provision should be demand-led, involving communities and other stakeholders in the decision-making process.

- (iii) **Technical capacity building.** Project towns will require additional institutional and human capacity to manage development and promote investment opportunities to the private sector. Action plans for implementation will be needed to support the investment programs under ensuing projects.

4. Knowledge Gaps

91. More knowledge and data are required in critical areas to support informed prioritization, planning, and design of future programs as well as their effective implementation. In particular, data across all subsectors are needed specifically for urban areas. This was previously done for the Lao Urban Data Book in 2004, which unfortunately has not been updated. A key task is establishing the limits of urban areas. This will allow a much clearer assessment of urban areas than is possible using the census definition of urban villages.

92. The data required include the location and condition, functioning, and assessed value of existing infrastructure—roads, drains, sanitation, water supply, etc. More quantitative data are required on the sustainable availability, recharge behavior, and quality of groundwater to enable informed decisions on its long-term suitability as a source of water supply for urban and industrial purposes. The volumes and characteristics of solid waste, and the methods of re-use and disposal need to be recorded and documented to facilitate the design of appropriate solid waste management strategies. Traffic data are needed in all major urban areas. The locations and incidence of flooding in urban areas should be noted and recorded during the wet season.

93. The quality and availability of digital mapping also need to be significantly improved. The assessment and planning of urban infrastructure and land use should be undertaken with the use of accurate and updated mapping and cadastral information.

94. Detailed information is required about the nature and extent of capacity-building needs at subnational levels of the government to support their increased role in the planning and delivery of infrastructure programs, particularly in drainage and wastewater management.

IV

Sector Road Map and Results Framework

95. In framing the road map, full account has been taken of the direction and principles set out in the forthcoming CPS for the Lao PDR, 2012–2016. Based on the above, the road map is summarized in the table below.

Urban Development Sector Results Framework

Outcomes Supported by ADB	Targets with Indicators and Baselines	Outputs Supported by ADB	Indicators with Incremental Targets	Constraints to Output Delivery	ADB Interventions to Address Constraints
Transport corridors becoming economic corridors		Infrastructure investments and capacity building in corridor towns		Expenditure needs exceed funds available	Planned Areas: Urban infrastructure planning and provision in corridor towns and other key urban areas
Measures to mitigate negative impact of development in GMS economic corridors		Environmental impact assessments of GMS economic corridors and biodiversity corridors		Inadequate investment planning, prioritization, and programming	Capacity building in urban planning and management
Increased access to clean water	Access to clean drinking water services increased from 50% of the population in 2005 to 75% in 2011 (to be updated for 2015)	Water supply projects in small towns	Urban water supply coverage in main under-served urban centers extended in 2011–2015	Limited capacities in urban and environmental management (particularly outside Vientiane)	Climate change planning and preparedness
Enhanced GOL regulatory and policy-making role; widened scope for private sector, civil society, and community-based organization provision of essential services; and improved public sector financial management	Sector strategies, improved budgeting, planning, and management capabilities established in ministries in which ADB is providing support	Capacity development components in all loans and grants Capacity building to solidify urban development authorities—UDAs and municipalities	Status and future of UDAs confirmed Legislation and program for establishing municipalities in place	Low level of awareness of environmental issues and climate change issues Increasing challenge of climate change	Pipelined Projects: Pakse Urban Environmental Improvement GMS Corridor Town Development Small Towns Water Supply and Sanitation Sector – Phase 2

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Outcomes Supported by ADB	Targets with Indicators and Baselines	Outputs Supported by ADB	Indicators with Incremental Targets	Constraints to Output Delivery	ADB Interventions to Address Constraints
Improved environment and quality of life for residents of urban areas	Urban infrastructure and municipal services developed and operated efficiently in main urban areas	Integrated urban development projects—water and sanitation, drainage and flood protection, transport, disaster risk management	<p>Urban households with piped water increased to 70% by 2015^a</p> <p>Number of urban households with proper sanitation increased to 90% by 2015^b</p> <p>Urban households with regular solid waste collection services increased to 50% by 2015^c</p> <p>Integrated plans and procedures in place in Vientiane, secondary towns, and provincial capitals</p>		<p>Vientiane Sustainable Transport</p> <p>Urban Clean Environment Management</p> <p>Ongoing Projects: Small Towns Water Supply and Sanitation Sector Project</p>
Strengthened urban and regional planning, including incorporation of environmental issues into urban management	Urban and development planning coordination across provinces and districts and with concerned government agencies enhanced	Capacity development extended to provincial and district governments and UDAs to integrate urban management and planning in the preparation and implementation of urban plans	Climate change policies and plans in place for major urban areas		
Improved adaptation to climate change in urban centers	Awareness and preparedness of potential climate change impacts in urban areas increased	Climate proofing urban areas			

ADB = Asian Development Bank, GMS = Greater Mekong Subregion; GOL = Government of the Lao People's Democratic Republic, UDAA = Urban Development Administration Authority.

^a Target rounded up from 67% in national socio-economic development plan.

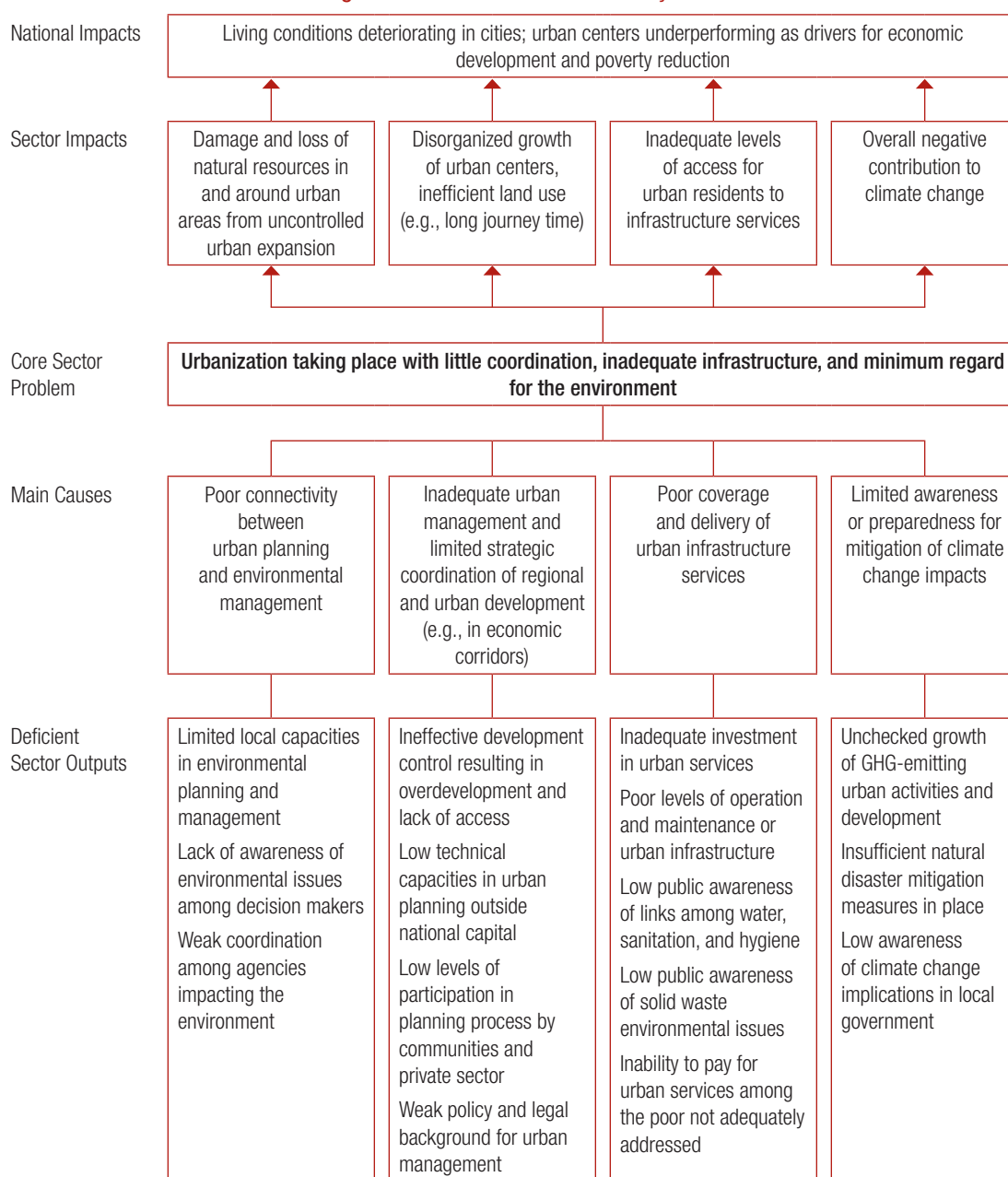
^b Suggested targets, not government-approved figures.

^c Suggested targets, not government-approved figures.

Appendix 1

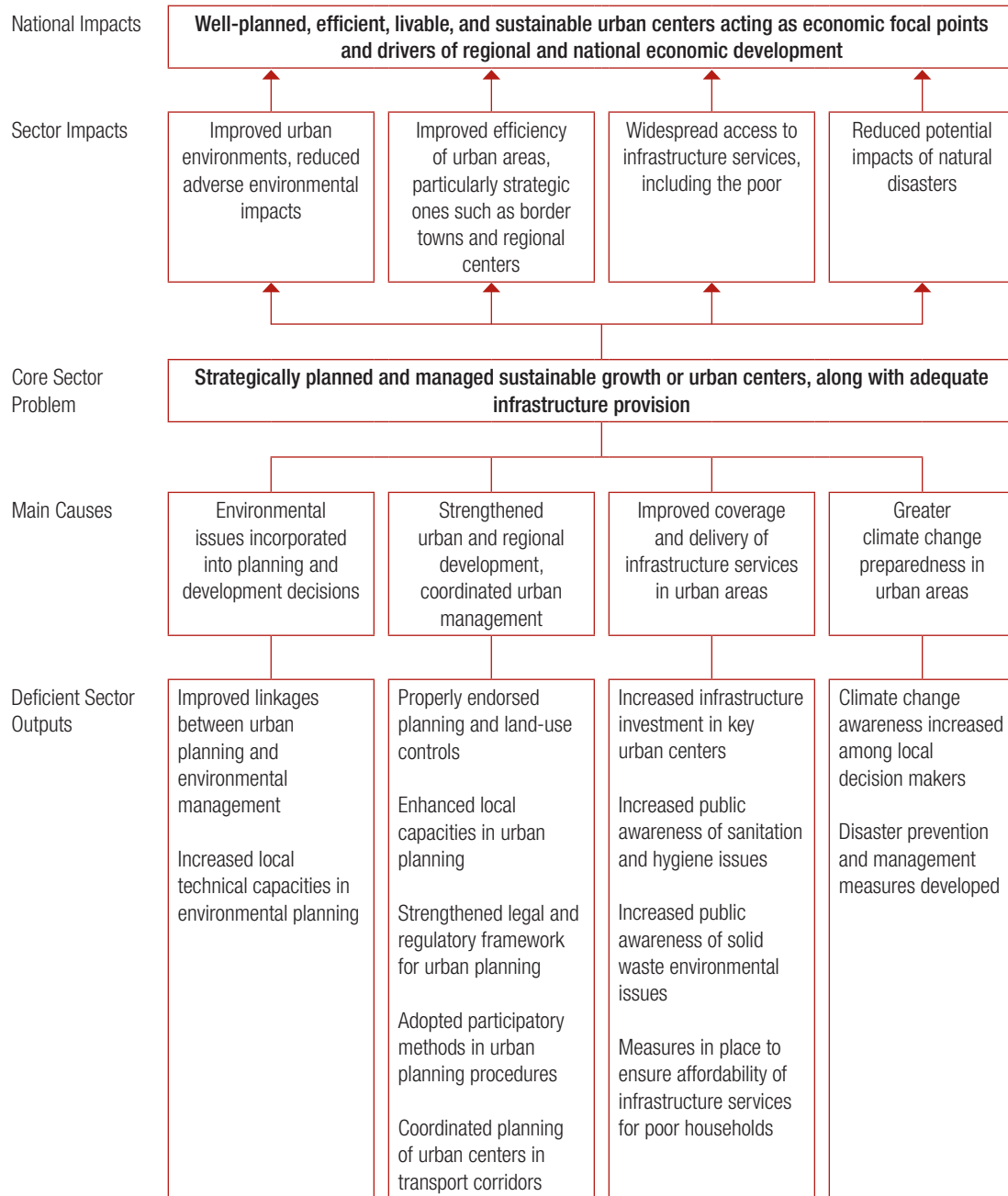
Sector Problem Analysis and Objectives Tree

Figure A1.1 Sector Problem Analysis



GHG = greenhouse gas.

Figure A1.2 Sector Objectives Tree



Appendix 2

Data Tables

Table A2.1 Urban Populations by District*

Vientiane Capital		Other Provincial Capitals	
Subtotal inner districts	319,656	Pek	37,893
Subtotal outer districts	250,073	Xayabury	28,506
Total Greater Vientiane	569,729	Xay	27,068
		Namtha	20,524
		Pakxanh	18,184
		Xamneua	16,254
		Huoxai	15,450
		Viengkham	13,550
		Samakxhixay	11,189
		Saravan	10,259
		Lamam	10,024
		Phongsaly	5,555
Secondary Towns		Districts	
Kaysone Phomvihane	81,401	Phonhong	27,046
Pakse	57,669	Khamkheuth	15,736
Luang Prabang	55,027	Outhoomphone	14,844
Thakhek	38,130	Bachiangchaleunsook	13,508
		Parklai	12,679
		Thoulakhom	12,551
		Champhone	11,988
		Phine	11,879
		Phonthong	11,791
		Vangvieng	10,872
		Champasack	9,977
		Songkhone	9,798
		Phiang	8,904
		Bolikhanh	8,847
		Nambak	8,674
		Pakkading	7,738
		Keo Oudom	7,703
		La	2,951
		Tonpheung	2,861
		Khua	2,850
		Viengxay	2,765
		Nonghed	2,761
		Huaphanh Province	2,539
		Borikhamxay Province	2,418
		Nakai	2,381
		Xienghone	2,375
		Thongmyxay	2,286
		Xonbuly	2,233
		Xaybuathong	2,208
		Nhommalath	2,194
		Longsane	2,164
		Nalae	2,162
		Khop	2,097
		Xiengkhor	2,075

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Table A2.1 *continued*

Districts			
Hinboon	6,946	Dakcheung	2,007
Nongbok	6,740	Xaybuly	1,979
Pathoomphone	6,631	Feuang	1,926
Paksxong	6,351	Vilabuly	1,921
Thaphabath	6,272	Moonlapamok	1,882
Kasy	6,139	Mad	1,881
Khong	6,095	May	1,828
Mahaxay	6,078	Xebangfay	1,799
Xanakharm	6,045	Nong	1,751
Ngeun	6,019	Hinhurp	1,720
Sanasomboon	5,503	Phoukhoun	1,716
Hongsa	5,484	Kaleum	1,708
Atsaphangthong	5,383	Sanamxay	1,685
Bualapha	5,379	Long	1,681
Sepone	5,216	Thaphalanxay	1,678
Sukhuma	5,031	Add	1,608
Lao Ngarm	4,825	Pak xeng	1,566
Xaysetha	4,689	Nga	1,550
Lakhonepheng	4,673	Phouvong	1,463
Kenethao	4,601	Phonxay	1,425
Sing	4,381	Vapy	1,410
Thateng	4,328	Atsaphone	1,351
Khongxedone	4,295	Morkmay	1,265
Botene	4,033	Park Ou	1,196
Pakbeng	3,748	Phaxay	1,125
Boontai	3,654	Huameuang	1,097
Nhot Ou	3,621	Meung	1,049
Namor	3,473	Kham	1,025
Xamtay	3,472	Ta Oi	970
Khoune	3,414	Hoon	942
Boon Neua	3,346	Xieng Ngoun	897
Sopbao	3,333	Samuoi	883
Thapangthong	3,143	Phookood	855
Nan	3,104	Beng	677
Ngoi	3,060	Toomlarn	674
Viengphoukha	2,986	Pha Oudom	555

* Data based on amalgamation of population by village for those villages coded as "urban" in the census. In a few cases, this will include villages not within the main urban area.

Source: National Census 2005.

Table A2.2 Urban Water Supply Service and Consumption 2008

Province Name	Capacity as Designed (m ³ /day)			Provincial Pop. 2008			Service Area				(% of Customer)			2008 (M ³)		Water Loss (%)	No. of Connections		Ave. Water Consumption (lpcd)
	No. of Village	No. of HHs	Population	No. of Village	No. of HHs	Population	No. of HHs	Population	Population Served	Province	Service Area	Water Product	Water Sale	2007	2008				
Attapeu	174	20,447	116,417	15	2,593	13,250	10,762	9.24	81.22	850,812	584,572	31.29	1,930	2,100	148.82				
Bokeo	292	27,520	156,173	25	3,646	19,246	14,943	9.57	77.64	967,322	793,797	17.94	2,390	2,594	145.54				
Borikhamxay	356	41,127	241,265	39	8,039	43,055	19,760	8.19	45.89	1,133,890	981,786	13.41	2,997	3,597	136.12				
Champasack	637	108,568	624,730	44	12,910	76,604	63,244	10.12	82.56	4,981,543	3,981,717	20.07	9,628	10,566	172.49				
Huaphanh	738	44,658	285,766	20	3,612	21,475	15,500	5.42	72.18	765,579	580,981	24.11	2,859	3,100	102.69				
Khammouane	601	66,297	353,636	44	9,198	49,905	38,686	10.94	77.52	2,703,360	2,175,916	19.51	6,156	6,281	154.10				
Luang Namtha	357	28,831	154,655	39	5,456	34,079	16,769	10.84	49.21	789,851	593,419	24.87	2,786	2,935	96.95				
Luang Prabang	797	71,163	404,988	77	12,292	67,513	57,580	14.22	85.29	6,432,244	5,136,642	20.14	9,583	10,484	244.41				
Oudomxay	490	44,923	275,926	30	4,434	28,168	20,275	7.35	71.98	1,473,541	1,044,115	29.14	4,035	4,226	141.09				
Phongsaly	563	28,453	163,300	31	2,930	13,162	10,679	6.54	81.14	265,660	171,357	35.50	2,320	2,467	43.96				
Saravan	631	56,815	348,792	39	5,697	40,656	20,381	5.84	50.13	1,088,075	929,789	14.55	3,468	3,725	124.99				
Savannakhet	20,482	139,191	857,581	67	20,521	134,502	84,900	9.90	63.12	6,644,431	5,426,868	18.32	13,943	14,795	175.13				
Sekong	2,160	15,200	95,249	19	3,246	25,031	22,531	23.65	90.01	725,023	507,434	30.01	2,191	2,743	61.70				
Vientiane Capital	121,300	128,464	681,323	249	121,291	428,376	343,640	50.44	80.22	49,781,245	36,177,870	27.33	59,799	63,989	288.43				
Vientiane Province	8,910	83,017	450,006	48	12,794	70,697	33,907	7.53	47.96	2,120,036	1,828,983	13.73	5,222	6,303	147.78				
Xayabury	6,200	448	66,575	44	8,810	47,523	28,227	8.02	59.40	1,095,208	917,601	16.22	4,082	4,621	89.06				
Xiangkhouang	8,018	39,029	249,818	39	7,727	44,267	22,717	9.09	51.32	1,186,494	863,917	27.19	3,453	4,008	104.19				
Total	233,246	8,855	1,010,278	869	245,196	1,157,509	824,501	14.19	71.23	83,004,314	62,696,764	24.47	136,842	148,534	208.33				

HH = household, lpcd = liters per capita per day, m³ = cubic meter.
Source: Department of Housing and Urban Planning, Water Supply Division.

Table A2.3 Types of Household Toilet Facility in Urban Areas by Province

Province	Household	Type of Toilet					Not Stated
		Piped Water	Modern	Normal (pour flush)	Other	None	
Vientiane Capital	102,377	51.54	11.11	75.52	2.75	8.29	1.15
Phongsaly	4,060	41.97	0.12	46.31	38.35	13.15	0.91
Luangnamtha	5,750	41.06	0.83	79.55	9.41	8.24	0.92
Oudomxay	6,915	55.13	0.75	65.05	18.13	13.67	1.07
Bokeo	3,665	43.93	3.33	74.54	2.35	9.20	9.41
Luang Prabang	12,903	63.92	5.08	64.31	11.61	10.23	7.02
Huaphanh	5,746	39.05	0.52	64.41	28.05	2.58	3.60
Xayabury	14,970	14.52	1.21	74.30	17.96	4.88	0.76
Xiengkhouang	8,390	25.15	0.85	62.12	29.94	6.29	0.13
Vientiane	17,569	27.95	2.62	82.68	4.80	7.89	0.48
Borikhamxay	10,439	18.83	4.18	77.20	4.41	12.64	0.61
Khammuane	13,094	35.63	4.30	61.38	1.80	30.53	1.03
Savannakhet	30,485	34.78	3.01	52.66	2.49	39.59	1.51
Saravan	4,874	66.97	2.28	55.79	2.75	37.14	0.86
Sekong	2,894	49.93	1.87	58.60	10.57	26.40	0.79
Champasack	20,582	37.41	4.23	64.95	2.75	25.68	1.42
Attapeu	3,469	1.62	0.04	2.06	0.16	1.05	0.03
Total	268,182	42.22	5.96	69.32	6.73	15.37	1.51

Source: National Census 2005.

Table A2.4 Solid Waste

Province	Towns	Total HH	HH Served	%	Landfill
Vientiane Capital	Vientiane City	55,503	26,711	48.13	Sanitary landfill*
Phongsaly	Phongsaly	1,215	1,215	100.00	Sanitary landfill*
	Muang May	1,703	307	18.03	Open landfill
	Nhot Ou	3,875	716	18.48	Open landfill
	Muang Khoua	584	356	60.96	Open landfill
	Bountai	562	513	91.28	Open landfill
Luang Namtha	Namtha	8,201	548	6.68	Sanitary landfill*
	Sing	800	138	17.25	Open landfill
Oudomxay	Xay	3,899	3,285	84.25	Sanitary landfill*
Bokeo	Houayxai	2,285	701	30.68	Sanitary landfill*
Luang Prabang	Luang Prabang	4,769	4,574	95.91	Sanitary landfill*
	Xieng Ngeun	5,659	1,293	22.85	Open landfill
	Nane	904	904	100.00	Open landfill
	Ngoy	6,699	487	7.27	Open landfill
	Nambak	20,113	2,274	11.31	Open landfill

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Table A2.4 *continued*

Province	Towns	Total HH	HH Served	%	Landfill
Huaphanh	Xamneua	2,833	2,601	91.81	Sanitary landfill*
	Sob Bao	224	224	100.00	Open landfill
	Xiengkho	355	355	100.00	Open landfill
	Houamuang	255	181	70.98	Open landfill
	Viengthong	449	329	73.27	Open landfill
Sayabouly	Sayabouly	3,982	3,307	83.05	Sanitary landfill*
	Paklay	1,777	1,196	67.30	Open landfill
	Kenethao	1,254	1,254	100.00	Open landfill
Xiengkhouang	Pek	5,534	1,221	22.06	Sanitary landfill*
	Khoun	936	158	16.88	Open landfill
Vientiane Province	Phonhong	11,361	2,000	17.60	Open landfill
	Thoulakhom	1,756	1,263	71.92	Open landfill
	Keo Oudom	1,147	168	14.65	Open landfill
	Vangvieng	1,519	1,207	79.46	Sanitary landfill*
	Viengkham	3,448	173	5.02	Open landfill
	Xaysomboune	947	55	5.81	Open landfill
	Lak 52	1,858	60	3.23	Open landfill
Borikhamxay	Pakxanh	2,927	819	27.98	Sanitary landfill*
	Bolikhanh	1,222	25	2.05	Open landfill
	Khamkeut	2,412	448	18.57	Open landfill
	Kumbanpattana	2,764	1,082	39.15	Open landfill
Khammouane	Thakhek	6,713	2,455	36.57	Sanitary landfill*
	Nakay	534	53	9.93	Open landfill
Savannakhet	Kaysone Phomvihane	18,146	4,212	23.21	Sanitary landfill*
	Outhoumphone	3,305	255	7.72	Open landfill
	Songkhone	1,986	0	0.00	Open landfill for market
	Champhone	1,877	81	4.32	Open landfill
	Atsaphangthong	835	70	8.38	Open landfill
	Phalanexay	1,200	0	0.00	Open landfill for market
	Phine	1,594	0	0.00	Open landfill for market
	Xepon	1,150	0	0.00	Open landfill for market
	Thapangthong	452	45	9.96	Open landfill
	Atsaphone	525	0	0.00	Open landfill for market
Saravan	Saravan	1,907	354	18.56	Sanitary landfill*
	Khongxedonh	799	549	68.71	Open landfill

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Table A2.4 *continued*

Province	Towns	Total HH	HH Served	%	Landfill
Champassack	Pakse	8,202	2,656	32.38	Sanitary landfill*
	Sanasomboun	1,050	25	2.38	Open landfill
	Pakxong	1,487	155	10.42	Open landfill
	Khong	374	164	43.85	Open landfill
Attapeu	Xaysettha	2,034	622	30.58	Open landfill
Xekong	Lamam	1,691	100	5.91	Open landfill
	Thateng	548	87	15.88	Open landfill

HH = household.

* The term "sanitary landfill" has been used here by the Department of Housing and Urban Planning. However, it is not certain that these sites meet international standards to be classified as such.

Source: Department of Housing and Urban Planning, Rural Development Division, June 2010.

Table A2.5 Development Status and Function of Provincial and District Towns

Province	Dist. No.	District	Urban Projects	Urban Plan	Water Supply	Poor District	Strategic Function					Industry/Trade
							Road	Airport	Node	Border	Tourism	
Vientiane Capital	1	Chanthabuly		2001	ES	.						
	2	Sikhottabong		2001	ES	.						
	3	Xaysetha		2001	ES	.						
	4	Sisattanak		2001	ES	.						
		Vientiane City	VUIISP	2001	.	.	R13	INT	Major	THA		IE
	5	Naxaithong		1998	ES	.	R13N					
	6	Xaythany (Thagnone)		1998	ES	.	R13S		Minor			
	7	Hadxaifong (Thadeua)		1999	ES	.			Major	THA		
	8	Sangthong (Phialath)		1996	Private	PP						
Phongsaly	9	Mayparkngum (Ban hai)		1996		.	R13S					
	1	Phongsaly	STDP	1997	NPTWSP	.		DOM			PRC/IE	
	2	May		1997		P						
	3	Khua		1997	WB	P						
	4	Samphanh		2006		PP						
	5	Boon Neua		1994	WSSP	.			Minor			
	6	Nhot Ou		1997		PP			Minor		PRC/IE	
Luangnamtha	7	Boontai		1997		.	R1B				PRC/IE	
	1	Namtha	STDP	2000	WB	.	NSEC		Major			ET/AT
	2	Sing		1994	NCRWSUDP	.						ET/AT
	3	Long		1994		PP	R16					ET/AT
	4	Viengpoukha		1994		PP	NSEC,R13					ET/AT
	5	Nalae		1994		PP						
		Nateui		1994		NA	NSEC		Major			Resort
Oudomxay		Botene		1994		NA	NSEC			PRC		
	1	Xay	STDP	2004	GOL/WB	.	R13N	DOM	Major			
	2	La		2001		P						
	3	Namor		2001		PP	R13N				PRC	
	4	Nga		2004	NCRWSUDP	PP						
	5	Beng		2001		PP	R13N					
	6	Hoon		1996		PP	R13N					
Bokeo	7	Pakbeng		1998		PP	R13N,R2W					
	1	Huixai	STDP	1999	ADB	.	NSEC,R2	DOM			THA	
	2	Tonpheung		1995	WSSP	.					MYA	
	3	Meung		2002		PP						
	4	Pha Oudom		2002		PP						
	5	Paktha		1997		P						
		Ban Khuan		1998		NA						
	Ban Mom		1998	NCRWSUDP	NA							

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Table A2.5 *continued*

Province	Dist. No.	District	Urban Projects	Urban Plan	Water Supply	Poor District	Strategic Function					Industry/Trade
							Road	Airport	Node	Border	Tourism	
Luang Prabang	1	Luang Prabang	STUDP	2004	Germany	.	R13N	INT	Major		Heritage	
	2	Xieng Ngeun		1998	UN-HABITAT	.						
	3	Nan		1998	NCRWSUDP	.						
	4	Park Ou		2002		.	R13N					
	5	Nambak		1997	WSSP	.	SEZ,R13N					
	6	Ngoi		1998	NCRWSSP	.	R1C					
	7	Pakxeng		2002			PP					
	8	Phonxay		2007			PP					
	9	Chomphet		2001			.					
	10	Viengkham		1998			PP	R1C			VIE	
	11	Phoukhoune		2006			PP					
Huaphanh	1	Xamneua	STDP	1997	NPTWSP/GOL	.	R6		Minor			
	2	Xiengkhor		1995		PP						
	3	Viengthong		1998		PP	R6					
	4	Viengxay		1997	WSSP	PP	R6			VIE		
	5	Huameuang		2005		PP	R6					
	6	Xamtay		1995	NCRWSUDP	PP				VIE		
	7	Sopbao		1998		P				VIE		
	8	Add		1998		P	R6A			VIE		
Xayabury	1	Xayabury	STDP	1998	NPTWSP	PP	R4	DOM				
	2	Khop		1998		P	R4,R3			THA		
	3	Hongsa		1995	WSSP	P	R4					
	4	Ngeun		1995		P						
	5	Xienghone		1995		PP	R4			THA		
	6	Phiang		1994		.						
	7	Parklai		1995	WSSP	.	R4					
	8	Kenetao		1995	NCRWSUDP	.	R4			THA		
	9	Botene		1995		.	NSEC,R4			THA		
	10	Thongmyxay		1996		.						
Xiengkhouang	1	Pek	STDP	1998	NPTWSP	P	R7/R1D	DOM	Major		Heritage	
	2	Kham		1992	WSSP	P	R7					
	3	Nonghed		1992		PP	R7,R6			VIE		
	4	Khoune		1992	NCRWSUDP	PP	R1D					
	5	Morkmay		1995		.				VIE		
	6	Phookood		1992		.	R7					
	7	Phaxay		1992		.						
	8	Thathom		2004		PP	R1D					
Vientiane Province	1	Phonhong	STDP		NPTWSP	.	R13N		Minor			
	2	Ban Km 52		1996	WSSP	.						
	3	Thoulakhom (Ban Kern)		1996	ES	.	R10					
	4	Keo Oudom (Thalat)		1998	NCRWSUDP	.	R10					
	5	Kasy				.	R13N					
	6	Vangvieng		1998	France	.	R13N				Resort	
	7	Feuang			France	P						
	8	Xanakharm		2000	NCRWSUDP	.				THA		
	9	Mad				P						
	10	Viengkham		2005		.	R10					
	11	Hinherb				.	R13N					
	12	Lonsan(Hom)		2003		PP						
	13	Xaysomboun		1997	ADB	PP	R5					
Borikhamxay	1	Phakxane	STDP	2004	NPTWSP	.	R13S			THA		
	2	Thaphabath (Thabok)		1997		.	R13S			THA		
	3	Phakading		1997		.	R13S			THA		
	4	Bolikhanh				PP						
	5	Khamkheuth (Km 20)		2003	WSSP	PP	R8			VIE		
	6	Viengthong				PP	R8,R1D				Ecotourism	

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Table A2.5 *continued*

Province	Dist. No.	District	Urban Projects	Urban Plan	Water Supply	Poor District	Strategic Function					Industry/Trade
							Road	Airport	Node	Border	Tourism	
Khammuane	1	Thakhek	STUDP	1997	EU/GOL	.	R13S					
	2	Mahaxay		1996	ES	P						
	3	Nongbok		1998	WSSP	.						
	4	Hinboon		2002		.		R13S				
	5	Nhommalath		2001				P				
	6	Bualapha		1995				PP			VIE	
	7	Nakai		2001				PP				
	8	Xebangfay		2001				.	R13S			
	9	Xaybuathong						P				
Kaysone Phomvihane	1	Kaysone Phomvihane	STUDP	2001	France/JICA	.	EWEC	DOM	Major	THA		
	2	Outhoomphone (Seno)		1998	WSSP	.	EWEC		Minor			
	3	Atsaphangthong		2000		.	EWEC		Minor			
	4	Phine					PP	EWEC		Minor		
	5	Sephone		2003			PP	EWEC		Minor	VIE	
	6	Nong				BTC	PP					
	7	Thapangthong		1997		BTC	P					
	8	Songkhone		1999			.	R13S				
	9	Champhone (Kengkok)		2006		BTC	.					
	10	Xonbuly					P					
	11	Xaybuly		2003			.				THA	
	12	Vilabuly					PP					
	13	Atsaphone		2000			.					
	14	Xayphoothong					.				THA	
	15	Thaphalanxay		2004			P					
Saravan	1	Saravan	STDP	1996	ADB	.	R15/1H,R20		Minor			
	2	Ta Oi		2006		PP						
	3	Toomlan				P						
	4	Lakhonepheng		2006		.		R13S				
	5	Vapy				.						
	6	Khongxedone		1997		WSSP		.	R13S		Minor	
	7	Lao Ngam		1996		BTC		.				
	8	Samuoi						PP				VIE
Sekong	1	Lamam		2001	ADB/NORAD	.	R16F/11		Minor			
	2	Kaleum			√	PP						
	3	Dakcheung			√	PP					VIE	
	4	Thateng		2002	√	.		R16F,R15				
Champasack	1	Pakse	STUDP	2001	ADB/BTC	.	R13S	INT	Major			
	2	Sanasomboon		1998	ADB	.	R13S					
	3	Bachiangchaleunsouk					PP	R13S				
	4	Paksong		1998			.	R16E,R13S		Minor		
	5	Pathoomphone				Private	P	R13S				
	6	Phonthong (Xongmek)		1997		WSSP	.				THA	
	7	Champasack		2000			.	R13S		Minor	Heritage	
	8	Sukhuma		1998			PP					
	9	Moonlapamok		1998			P					
	10	Khong (Khinak)		1998		WSSP	.				CAM	
Attapeu	1	Xaysetha		2002		P	R18B,R16A					
	2	Samakkhixay		2000	WSSP	.	R11/18B		Minor			
	3	Sanamxay				.	R18A				CAM	
	4	Sanxay		2001			PP					
	5	Phouvong		2007			PP				CAM	

ADB = Asian Development Bank, AT = advantage tourism, BTC = Belgian Technical Cooperation, CAM = Cambodia, DOM = domestic airport, ES = existing system, ET = ecotourism, EU = European Union, EWEC = East–West Economic Corridor, GOL = Government of the Lao People's Democratic Republic, IE = industrial estate, INT = international airport, JICA = Japan International Cooperation Agency, MYA = Myanmar, NCRWSUDP = Northern and Central Region Water Supply and Urban Development Project (technical assistance), NORAD = Norwegian Agency for Development Cooperation, NPTWSP = Northern Provincial Towns Water Supply Project, NSEC = North–South Economic Corridor, P = poor district, PP = priority poor district, PRC = People's Republic of China, SEC = South Economic Corridor, SEZ = special economic zone, STDP = Small Towns Development Project, STUDP = Secondary Towns Urban Development Project, THA = Thailand, UN-HABITAT = United Nations Human Settlements Programme, VIE = Viet Nam, VUIISP = Vientiane Urban Infrastructure and Services Project, WB = World Bank, WSSP = Water Supply and Sanitation Project.

Note: Population projections based on standard growth rates incorporated in the National Development Framework, provincial capitals shown in bold.

Source: Department of Housing and Urban Planning.

Appendix 3

Summary of Legislation for Decentralization

Date	Decree/Origin	Objective	Impact
September 1994– February 1995	PPTA reports and MOU	ADB proposed creation of a separate body to take responsibility for planning, management, and implementation of all urban infrastructure and services in urban Vientiane and to implement VIUDP.	February 1995: Acceptance of a decree establishing VUDMC was made condition of further processing of VIUDP loan.
April 1995	40/FAMC	VUDMC as an entity under Vientiane Prefecture to implement VIUDP	<ul style="list-style-type: none"> • June 1995: VIUDP loan agreement was signed between the Government of the Lao PDR and ADB. • 1995–1996: VUDMC in practice not accepted as operational agency. Other infrastructure development projects were being implemented without involvement of VUDMC and without coordination with works proposed under VIUDP (EU waste water project, Six Roads Project). Functions and staff were not transferred from Prefecture DCTPC, as was agreed.
Early 1997	Reports TA 2377	Review and query within TA 2377 of the legal basis of VUDMC decree	VUDMC decree was reissued by the Prime Minister in February 1999.
October 1997	177/PM	Establishment of urban development administration authorities in four secondary towns under TA 2396	UDAAs acted as project implementation units for the ADB STUDP. Solid waste management was not under UDAAs.
February 1999	14/PM	Establishment of Vientiane Urban Development Administration Authority to replace VUDMC as judicial entity	Although with a broad mandate, VUDAA was still considered an implementation agency of the ADB VIUDP.
August 1999	157/PM	Establishment of VUDAA Steering Committee or Board	Board included chiefs of four urban districts.
September 1999	1366/VP	Appointment of VUDAA Deputies	
December 1999	1836 and 1837/VP	Issuance of decrees on transfer of solid waste and environment section and establishment of O&M section for road maintenance, etc.	<ul style="list-style-type: none"> • Asset registration of solid waste equipment was completed as basis for transfer. • There was no formal preparation for transfer of roads and drainage maintenance.
March 2000	331/VP	Decentralization of collection of national-level charges to districts and villages	

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Date	Decree/Origin	Objective	Impact
March 2000	01/PM	Decentralization Policy	Provinces as strategic units, districts as planning units, and villages as implementation units were established.
March 2000	128/SPC	Advice on implementation of 011/PM	
March 2000	475/MOF	Advice on implementation of 011/PM	
May 2000	141/PM	Provision of operational instructions on the implementation of Decrees No. 14/PM and 171/PM	
June 2000	71/PM	Appointment of VUDAA committee	
July 2000	104/PM	Establishment of steering committee for UDAAs	
August 2000	2711/MCTPC	Transfer of duties as defined in 177/PM and 14/PM from CTPCs to UDAAs	Meetings in preparation of transfer were held.
January 2001	018/PMO	Organization structure and duties of UDAAs	
October 2002	2083/MOF	Revenue raising by UDAAs	Provincial governors were empowered to instruct UDAAs to raise revenue on a number of specified urban services.
April 1999	03/99/NA	Law on Urban Planning	Principles, regulations, and actions were outlined regarding management (including urban management), land use, construction, and building erections at national and local scales.
October 2003	47/NA	Law on Local Administration	
May 2003	90/PM	Amendment of Decree No. 177/PM	Establishment of UDAAs was authorized in other towns (not provincial capitals), which have economical characteristics. A UDAA in Vangvieng, a district town of Vientiane Capital, was established.
November 2004	1858/PMO	Notification to provincial governors	Establishment of UDAAs was authorized in small towns (provincial capitals): Phongsaly (Phongsaly), Luangnamtha (Namtha), Oudomxay (Xay), Bokeo (Huoixai), Saravan (Saravan), Attapeu (Samakhhixay), and Sekong (Lamam).

ADB = Asian Development Bank; CTPC = communication, transport, post and construction; DCTPC = Department of Communication, Transport, Post and Construction; EU = European Union; FAMC = Foreign Administration and Management Committee; Lao PDR = Lao People's Democratic Republic; MCTPC = Ministry of Communication, Transport, Post and Construction; MOF = Ministry of Finance; MOU = memorandum of understanding; NA = National Assembly; O&M = operation and maintenance; PM = Prime Minister; PMO = Prime Minister's Office; PPTA = project preparatory technical assistance; SPC = State Planning Committee; STUDP = Secondary Towns Urban Development Project; TA = technical assistance; UDAA = Urban Development Administration Authority; VIUDP = Vientiane Integrated Urban Development Project; VP = Vientiane Prefecture; VUDMC = Vientiane Urban Development and Management Committee.

Appendix 4

Responsibilities for Urban and Environmental Planning and Management

Urban Services, Planning, and Management Components and Activities	Central Government (indicate ministry)	Provincial Government (indicate department)	District Government
LAND AND NATURAL RESOURCES			
Land administration and registration	Prime Minister's Office (Minister of Land Management), National Land Management Organization	PLMO	District Land Management Organization (DLMO) for collecting land taxes only
Land mapping	Prime Minister's Office (Minister of Land Management)	PLMO	DLMO participates in the land survey for land mapping (member of the committee)
Land-use planning	Prime Minister's Office (Minister of Land Management)	Land Management Organization, Department of Agriculture and Forestry	DLMO participates in the land survey for land-use planning (member of the committee)
Land supply	Prime Minister's Office (Minister of Land Management)	Land Management Organization	DLMO participates in the land survey for land supply (member of the committee)
Development control	Prime Minister's Office (Minister of Land Management)	Land Management Organization, Department of Planning and Investment, DPWT	DLMO participates in the investigation in case of disputes on land occupation (member of the committee)
Environmental planning	WREA	Provincial Water Resources and Environment Office	District Office of Water Resources and Environment
Environmental protection	WREA	Provincial Water Resources and Environment Office	District Office of Water Resources and Environment
BUILDINGS			
Building permits	All building permits – MPWT (DHUP)	All building permits – DPWT	Buildings lower than 7 meters – UDAA for UDAA area, except Pakse-OPWT
Building standards	MPWT(DHUP)	DPWT	
INFRASTRUCTURE			
Roads	MPWT (Department of Roads and Bridges)	DPWT, UDAA	OPWT
Drainage	MPWT (DHUP)	DPWT, UDAA	OPWT outside UDAA area
Water supply	MPWT (DHUP)	Enterprise of Water Supply (Nam Papa Lao)	

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Urban Services, Planning, and Management Components and Activities	Central Government (indicate ministry)	Provincial Government (indicate department)	District Government
Sewerage and sanitation	MPWT (DHUP)		
Electricity supply	Ministry of Energy and Mining, EDL	State Enterprise – EDL	
Waste collection	MPWT (DHUP)	UDAA	District Office
Waste disposal	MPWT (DHUP)	UDAA	District Office
Airports	MPWT (Department of Civil Aviation)	Provincial Governor Office, Civil Aviation Office	
Ports	MPWT (Department of River Transport)	DPWT	
OTHERS			
Education	MOE	Department of Education	District's Office of Education for lower secondary schools, primary schools, and kindergartens
Health	Ministry of Public Health (MOH)	Department of Public Health	District Office of Public Health
Parks and open spaces	MPWT (DHUP)	DPWT and UDAA	District Tourist Office outside UDAA area
Sports facilities	National Sports Committee, Prime Minister's Office	Department of Sports	District Office of Sports
Markets	Ministry of Industry and Commerce	Department of Industry and Commerce	District Market Management Office
Public transport	MPWT (DHUP)	DPWT	OPWT for tuktuks and jumbos (tricycles)
Telecommunications	National IT Organization	Department of Communication, Transport, Post and Construction	District Office of Post and Telecommunications
Tourism	National Tourist Authority	Department of Tourism	District Tourist Office
Disaster management and monitoring	Ministry of Labor and Social Welfare	Department of Labor and Social Welfare	
Administration	Public Administration and Civil Service Authority	Provincial Governor's Administration Office	District Governor's Administration Office
Mass organizations	Lao Trade Union Central Party or Lao Front for National Construction	District Lao Women's Union, trade unions, youth organizations, and elder organizations	
Security	Ministry of National Security	Provincial Security Headquarters	District Security Headquarters
Defense	Ministry of National Defense	Provincial Military Headquarters	District Military Headquarters
International relations	Ministry of Foreign Affairs	Provincial Office, International Relations	District Office, International Relations

DHUP = Department of Housing and Urban Planning, DLMO = District Land Management Organization, DPWT = Department of Public Works and Transport, EDL = Electricite du Laos, IT = information technology, MOE = Ministry of Education, MOH = Ministry of Health, MPWT = Ministry of Public Works and Transport, OPWT = Office of Public Works and Transport, PLMO = Provincial Land Management Organization, UDAA = Urban Development Administrative Authority, WREA = Water Resources and Environment Administration.

Appendix 5

Previous and Ongoing ADB Assistance to the Urban Sector in the Lao People's Democratic Republic

Table A5.1 Loans to the Urban Sector by ADB, 2012
(\$ million)

Loan No.	Project	Year Approved	Amount
1362	Vientiane Integrated Urban Development	1995	20.00
1525	Secondary Towns Urban Development	1997	27.00
1834	Vientiane Urban Infrastructure and Services	2001	25.00
1994	Small Towns Development Sector	2003	16.00
2876	Pakse Urban Environmental Improvement	2012	24.25

Table A5.2 Technical Assistance to the Urban Sector by ADB, 2012
(\$ million)

TA No.	Project	Type	Year Approved	Amount
1911	Vientiane Integrated Urban Development	PP	1993	0.60
2972	Support for Urban Development Administration Authorities	AD	1997	0.50
3333	Vientiane Urban Infrastructure and Services	PP	1999	0.60
3492	Small Towns Development	PP	2000	0.70
4377	Northern and Central Region Water Supply and Urban Development	PP	2004	0.20
4875	Small Towns Water Supply and Sanitation Sector	PP	2006	0.20
7567	Pakse Urban Environmental Improvement	PP	2010	0.70
7919	Strengthening Urban Water Supply Regulation	CD	2011	0.50

AD = advisory, ADB = Asian Development Bank, CD = capacity development, PP = project preparatory, TA = technical assistance.

Table A5.3 Grant Assistance to the Urban Sector by ADB, 2012
(\$ million)

Grant No.	Project	Year Approved	Amount
9035	Solid Waste Management and Income Generation for Vientiane's Poor	2003	1.00
0143	Small Towns Water Supply and Sanitation	2009	23.50
0297	Pakse Urban Environmental Improvement	2012	3.25

ADB = Asian Development Bank.

Appendix 6

Linkages among Assessment, Strategy, and Road Map; Country Strategy and Program; and National and Greater Mekong Subregion Strategies

Summary of Selected Policies and Targets Relevant to the Urban Sector

	NSEDP 5-Year Plan 2011–2015 (Draft)	National Urban Sector Strategy to 2020 (DHUP Draft)	GMS (Strategic Framework 2002)	ADB CSP (Proposed, based on CSP 2007–2011 with Additions)	ADB Sector Strategy (Proposed ASR)
General economic development and poverty reduction	<p>Reduce poverty to below 19% of total population</p> <p>Reduce gap between urban and rural areas</p> <p>Consider urban areas as focus points for economic development</p> <p>Encourage dispersed populations to group in villages—“focal areas”</p>	<p>Reduce gap in development between urban and rural areas</p>	<p>Pro-poor sustainable economic growth through regional integration and cross-border cooperation</p>	<p>Sustainable pro-poor economic growth</p> <p>Inclusive social development</p>	<p>Overarching Goal: Sustainable development, livable urban areas, poverty reduction</p>
Urban and Environmental Planning and Management	<p>Establish new land-use system to protect natural resources and ensure sustainable development</p> <p>Protect quality of environment in 25 towns^a</p> <p>Set up models for managing green environment in Vientiane and the four secondary towns</p> <p>Raise awareness on need for environmental protection</p> <p>Sustainable development of water resources</p> <p>Complete land management plans at macro and micro levels</p>	<p>Protect cultural heritage and natural resources</p> <p>Strengthen capacity in urban management</p> <p>Improve delivery of urban services</p> <p>Increase participation of civil society and private sector in the urban planning process</p>	<p>Promote sustainable use of shared natural resources</p> <p>Strengthen land use planning in GMS countries to ensure people and vulnerable activities are kept out of hazardous floodplain areas</p> <p>Strengthen development and building control measures to reduce flood damage to structure in urban areas</p>	<p>Measures to mitigate negative impact of development in GMS economic corridors</p> <p>Biodiversity corridors linked to economic corridor development</p> <p>Assistance to improve policies and institutional capacity to support broad-based private sector-led growth</p>	<p>Support Area: Strengthening urban and regional planning capacities, including incorporation of environmental issues into urban management—green infrastructure, sustainability, etc.</p> <p>Incorporating climate change planning and preparedness into all urban planning and projects</p>

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	NSEDP 5-Year Plan 2011–2015 (Draft)	National Urban Sector Strategy to 2020 (DHUP Draft)	GMS (Strategic Framework 2002)	ADB CSP (Proposed, based on CSP 2007–2011 with Additions)	ADB Sector Strategy (Proposed ASR)
	<p>Increase enforcement and effectiveness of public administration</p> <p>Strengthen public works and transport sector to increase efficiency</p> <p>Secure the country from losses due to natural disasters</p>		Strengthen capacities for flood preparedness and emergency management	<p>Assistance to enhance government's regulatory and policy-making role, widening scope of civil society involvement, and improvement of financial management</p> <p>Assistance for strengthening climate change adaptation</p> <p>Improvements to environmental database</p>	
Infrastructure and urban development	<p>Provide or connect North–South and East–West economic corridors</p> <p>Water supply to 67% of urban population</p> <p>Increase population having access to clean water to 80%</p> <p>Increase population having access to latrines to 60%</p> <p>Build main roads in districts and rural roads that connect with priority areas</p>	<p>Develop towns along regional corridors and at border points</p> <p>In all urban areas:</p> <ul style="list-style-type: none"> Road improvements Improve master plan and prepare local plans to ensure protection of built heritage and natural environment Develop and improve infrastructure services <p>Develop Luang Prabang, Luang Namtha, Kaysone Phomvihane, and Pakse as regional centers</p>	<p>Investments in priority infrastructure to focus on corridors to maximize their development impacts</p> <p>North–South Economic Corridor</p> <p>East–West Economic Corridor</p> <p>Strengthen infrastructure linkages through multi-sector approach</p> <p>Construction of flood mitigation infrastructure</p>	<p>Transport corridors to become economic corridors</p> <p>Clean water access for 75% of population by 2015</p> <p>Support to water supply and sanitation in small towns</p> <p>Improved sustainability of transport infrastructure</p> <p>Rehabilitation of secondary and tertiary roads</p>	Support Area: Infrastructure investments in corridor towns and in other key urban centers (border towns, regional centers, small towns)
Climate change and disaster management					

ADB = Asian Development Bank; ASR = assessment, strategy and road map; CSP = country strategy and program; DHUP = Department of Housing and Urban Planning; GMS = Greater Mekong Subregion; NSEDP = national socio-economic development plan.

^a Not specified but presumably the largest 25.

Lao People's Democratic Republic: Urban Development Sector Assessment, Strategy, and Road Map

This urban development sector assessment, strategy, and road map documents the strategic investment priorities of the Government of the Lao People's Democratic Republic and the Asian Development Bank (ADB). It identifies the three priority areas: (i) strengthening of urban, regional, and environmental planning and management; (ii) planning and development of corridor towns; and (iii) infrastructure investments in other priority urban areas.

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