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# Cambodia

## Urban Sector Assessment, Strategy, and Road Map



**Cambodia**

**Urban Sector Assessment, Strategy,  
and Road Map**

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**Asian Development Bank**

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# Currency Equivalents

(as of 30 September 2010)

Currency unit	-	riel (KR)
KR1	=	\$0.00024
\$1.00	=	KR4,231

## Abbreviations

ADB	-	Asian Development Bank
AFD	-	Agence Française de Développement
DED	-	Deutscher Entwicklungsdienst (German Development Service)
GDP	-	gross domestic product
GIZ	-	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation)
GMS	-	Greater Mekong Subregion
JFPR	-	Japan Fund for Poverty Reduction
JICA	-	Japan International Cooperation Agency
NCDD	-	National Committee for Sub-National Democratic Development
NSDP	-	national strategic development plan
UNESCAP	-	United Nations Economic and Social Commission for Asia and the Pacific
UN-HABITAT	-	United Nations Human Settlements Programme
UPDF	-	Urban Poor Development Fund

## Glossary

khan	-	urban district
PRAKAS	-	a Khmer word referring to a “Declaration”
sangkat	-	urban commune
srok	-	rural district

# Acknowledgments

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# Sector Assessment: Context and Strategic Issues

## A. Introduction

1. This sector assessment, strategy, and road map documents the current assessment and strategic investment priorities of the Government of Cambodia and Asian Development Bank (ADB) in Cambodia's urban sector. It highlights sector performance (Appendix 1), priority development constraints, government plans and strategies, past ADB support and experience, other development partner support, and the future ADB support strategy. In addition to providing sector-level input into the ADB country partnership strategy for Cambodia, this paper serves as a basis for further dialogue and action on how ADB and the government can work together to tackle the complex challenge of managing rapid urban growth and development in the coming years.

## B. Overall Sector Context

### 1. Overall Context

2. Cambodia has recorded sustained economic growth in recent years. The economy grew by about 8% per annum between 2000 and 2003, and just over 10% per annum between 2004 and 2007. The main determinants of economic growth since the mid-1990s have been a relatively stable macroeconomic environment, generally prudent domestic financial policies, and the creation of critical market economy institutions following years of conflict and socialist economic orientation. Recent economic growth has been derived from a narrow base comprising the garment, tourism, and construction sectors and, to a more limited extent, the agriculture sector. The agriculture sector's contribution to gross domestic product (GDP) is declining, with the economy's structural shifts toward industry and services. The relatively high national population growth rate (at about 1.5% per annum) and the limited absorption of labor into the secondary and tertiary sectors have left agriculture to absorb about 290,000 new entrants per year (ADB 2009c).

3. Three major transitions are taking place in the countries of the Greater Mekong Subregion (GMS): political reform from central planning to market-oriented economies, policies toward open borders, and major administrative and economic reforms toward decentralization. The political changes in Cambodia are mostly derived from the reestablishment of the state, coupled with reforms from central planning to a market-oriented economy. For the past 10 years, this has been supported by a national policy for decentralization and deconcentration. These developments run in parallel with the much larger transformation from a rural- to an urban-based economy.

4. In a market economy, the intended stronger, sustainable economic growth cannot be planned by a government alone, because most economic innovations and decisions depend on private sector initiatives, which need to be guided and facilitated by the government. Urban areas are growing and



diversifying, they are envisioned to establish the most desirable site and localization of economic activities, while reducing the congestion costs of unplanned cities. Thus, urban development strategies for Cambodia need to focus on a balanced regional distribution of viable small and medium-sized cities and towns<sup>1</sup>. The argument in favor of developing such areas is based on the ADB goal of guiding urban development in Cambodia under the overriding goal of being pro-poor and pro-rural, that is, to be inclusive and sustainable.

### 2. Growing Economic Contribution of the Urban Sector

5. The urban sector now accounts for about one-half of GDP in Cambodia, and the urban-based economy constitutes the most important share of the national economy. The bulk of the secondary and tertiary establishments and employment is located in towns and cities, while all primary sector employment is in villages (Appendix 2, Table A2.4). Due to greater labor productivity in the secondary and tertiary sectors, the urban-based economy is much larger than reflected in the urban population statistics due to newly created municipalities.<sup>2</sup>

6. Also, the urban informal sector is more productive than the rural one, which is the reason that so many rural people are attracted to marginally paid jobs in the larger cities, apart from the brighter prospects for services and education for their children. While the Phnom Penh capital region (which includes Kandal) obviously attracts most of the demographic and economic growth in the urban sector, the small and medium-sized cities and towns (footnote 1) should not be underestimated as to their role in the growing secondary and tertiary sectors. Deliberate urban growth policies in such secondary places are expected to contribute to poverty reduction in those provinces. Further, rural households in most countries derive a considerable percentage of their incomes from nonagricultural and nonrural activities, mostly in informal employment and petty trade (Rigg 1997, Yap unpublished).

7. The current urban population ratio stands at 20% (Khemro 2006) after the 2008 census, but the urban sector probably accounts for about 50% of GDP.<sup>3</sup> The urban-based labor force is much more productive than the agricultural labor force, which accounts for 75% of the total population.<sup>4</sup>

8. Urban population growth will continue to follow structural transformation. The next 10 years will see a considerable increase in overall population, with an even greater concentration on urban population to an estimated 30% or 5.6 million.<sup>5</sup> This constitutes a dramatic increase, which may indicate an urban share of the national economy in the order of 70% by 2020. Urban growth will be especially strong in the capital region, where more than one-half of urban development in the country will take place.

<sup>1</sup> Towns of less than 50,000 inhabitants; without defining a minimum size; among them towns with the administrative status of municipality (most of which were established in recent years only), but also all capitals of provinces (they do have the status of municipality) and the centers of districts (they are often typical rural market towns of rather small but growing population size).

<sup>2</sup> Of the existing 27 municipalities, 23 were created by new legislation in 2008 under the national decentralization and deconcentration reforms. The total population in municipalities is rated as urban although some small municipalities are more rural in character than urban. However, some peri-urban communities of the capital city may not be included in the urban population statistics.

<sup>3</sup> GDP sector contributions (2009) are reported to be 29% agriculture, 30% industries, and 41% services. Assuming 70% of industries and services as urban-based, the urban sector contribution would be 49.7% and very likely more than 50.0% of that for Phnom Penh alone.

<sup>4</sup> For comparison, Thailand's sector contribution (2009) is 12% agriculture, 44% industries, and 44% services. However, the labor share is 42% agriculture, 20% industries, and 38% services. The high official share of agricultural labor hides the fact that about 50% of agricultural incomes are derived from nonagricultural—and often nonrural—income sources.

<sup>5</sup> The official population projections by the National Institute of Statistics do not distinguish rural and urban ratios. This percentage figure is based on United Nations Development Programme and United Nations Economic and Social Commission for Asia and the Pacific estimates as well as a projection in Khemro (2006). These statistics are summarized in Yap (Unpublished draft).

9. Broad population estimates for 2020 (Table 1) are 2.8 million–3.4 million persons in metropolitan Phnom Penh (including Kandal), and 2.2 million–2.8 million in 25 municipalities. About 10 municipalities will reach 120,000–250,000; 15 towns will be in two classes (i.e., 70,000–100,000 and less than 50,000 inhabitants). In addition, some of the district towns will become municipalities. The estimates here are relatively crude because they are based on a simple sensitivity analysis of the shares of Phnom Penh and all other municipalities, beginning with the ratio of 55%–45% for 2008. It is not possible to project the expected population numbers for any specific town without further data on the economy and the regional differences in accessibility and connectivity among all towns (Appendix 2, Tables A2.5–A2.9).

10. The analysis shows that while Phnom Penh will dominate, population growth in other urban centers in Cambodia will be considerable—between 2.2 million and 2.8 million by 2020. This implies that policy must boost these urban centers to avoid an even more staggering dominance by the capital city. Appendix 2 has further population details.

**Table 1 Projected Urban Development in Cambodia, 2020**

Component	Alternative Projections (2020) <sup>a</sup>							
	Base Year (2008)		Breakdown as in 2008		Metropolitan Growth Faster		Metropolitan Growth Slower	
	%	Population (million)	%	Population (million)	%	Population (million)	%	Population (million)
Metropolitan Phnom Penh (including Kandal)	55	1.438	55	3.089	60	3.370	50	2.808
Other urban (about 26 cities and towns)	45	1.176	45	2.528	40	2.247	50	2.809
Total urban	100	2.614	100	5.617	100	5.617	100	5.617
Urbanization (%)		19.5		30.0		30.0		30.0
Total population (million)		13.396		18.724		18.724		18.724

<sup>a</sup> In the projections, the present 10 larger urban centers above 40,000 inhabitants have been separated from the remaining very small ones. The medium-sized centers comprised about 887,000 people in 2008, and the smaller ones about 289,000. This corresponds to a ratio of 75%–25%.

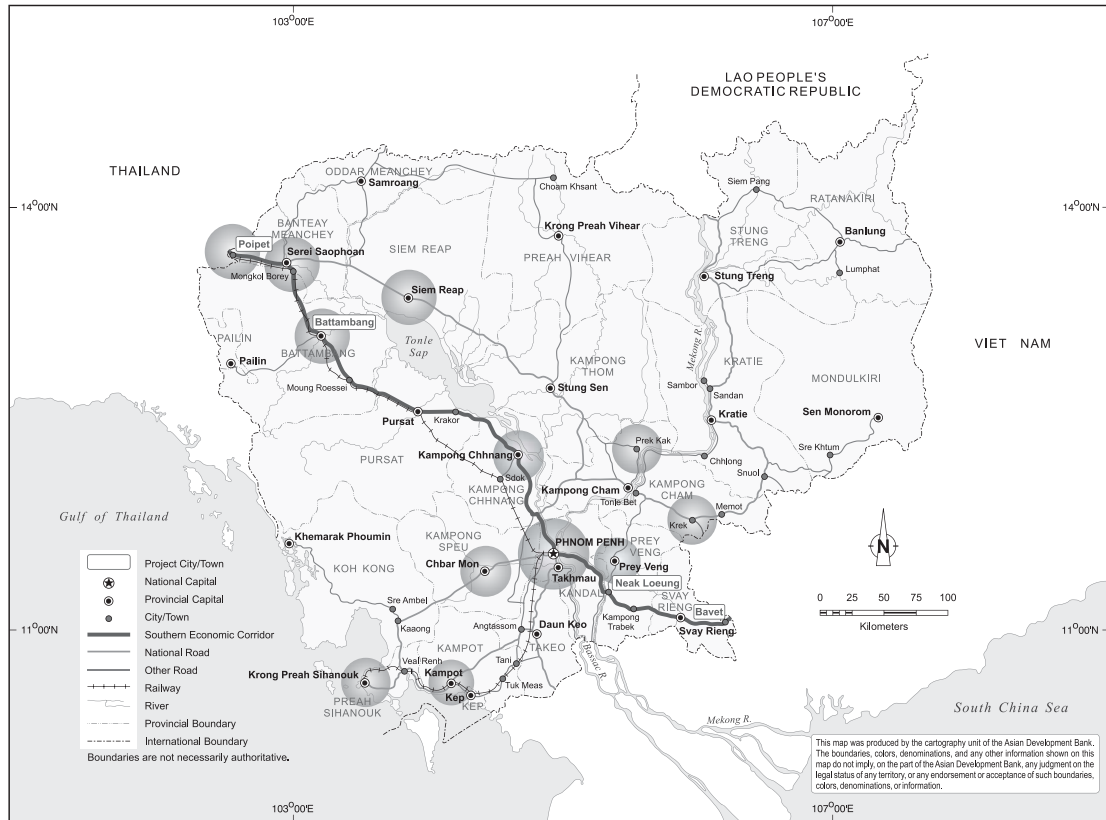
Source: ADB, based on Government of Cambodia, NIS (2008a).

11. Figure 1 illustrates the distribution of the most important municipalities (27 in total, 23 of which are new, as of 2009). Most provinces have only one municipality, but their geographic distribution across the country is unequal, with a concentration of the more important larger municipalities in the GMS Southern Economic Development Corridor, Phnom Penh, the port city of Sihanoukville, and near the border with Thailand in the northwest (Appendix 2, Tables A2.10–A2.11).

12. The urban development agenda is closely linked with development of agriculture and natural resources, transport, and water and sanitation. The urbanization trend is also driven by the market orientation of the economy and the regional policy of open borders. Thus, urban sector growth is inevitable, but its uneven distribution across the country is influenced by policies. The weak institutional framework, especially outside of the major urban centers, needs to be reformed, and the capacity of government needs to be strengthened, especially at the municipal level. The principal strategic issue is how to distribute urban growth across the country at the earliest possible stage.

13. Over the 15 years to 2007, the overall national poverty ratio declined to about 36% (United Nations World Food Programme 2007), which is still a high value by regional comparison (i.e., Viet Nam's

**Figure 1 Major Urban Areas in Cambodia**  
(more than 40,000 persons in 2008)



Sources: Government of Cambodia, NIS (2008a) and ADB (2006a).

fell 27%, and Thailand's 12%). The distribution of poverty varies considerably in Cambodia, from less than 15% in the capital city to well over 45% in the northern and northeastern provinces and in the vicinity of Tonle Sap. Urban poverty also differs from rural poverty because the reference values in cost of living differ between urban and rural areas. Comprehensive urban development measures for provincial and subregional centers need a different approach that targets both the urban poor in the towns and the poor in the urban hinterlands.

### C. Subsector Assessment

14. The subsectors of urban development are (i) the physical conditions and trends of urban land and housing; essential urban infrastructure conditions; and trends regarding roads, power supply, solid waste, and water supply and sanitation; and (ii) the institutional framework, especially regarding the newly established municipalities.

## 1. Subsector Physical Conditions

### a. Urban Housing and Infrastructure

15. The average household size decreased from 5.2 persons in 1998 to 4.7 persons in 2008. There are considerable variations; the smallest household sizes were not recorded in Phnom Penh (5.1 persons) but in the provinces of the Plain Region that are experiencing net outmigration (such as Svay Rieng and Prey Veang at 4.2 persons), whereas the largest household sizes were in relatively remote rural provinces like Ratanak Kiri and Stung Treang.

16. Urban housing conditions exhibited two interesting trends toward improvement. First, there was a considerable increase in the use of permanent construction materials in urban residential buildings, from 69% (1998) to 86% (2008), compared with much lower values for rural areas (Appendix 2, Table A2.12). Nevertheless, the pace of change has been impressive, measured by the use of permanent construction materials in all buildings from 34% (1998) to 57% (2008), with fast overall change in 12 provinces, and fast urban change in 16 provinces, and only few peripheral provinces lagging behind (Appendix 2, Table A2.13).

17. Second, the availability of improved water sources, electric power, and indoor toilets doubled across the country, although from a compounded low level of 8% in 1998 to 17% in 2008, with marked increases in urban areas (from 43% to 72%), especially in Phnom Penh (Appendix 2, Tables A2.14–A2.17).

18. The use of electric power is not recorded separately for urban areas, but it may be assumed that households in municipalities, mostly in larger urban areas are the prime consumers of electric power from the national grid. As of 2008, only 22% of all households were reported to have electricity, a similar figure to the urbanization ratio of 20%. The use of kerosene has been reduced from nearly 80% (1998) to about 39% (2008), indicating the increasing use of other sources like battery power and small generators. None of the more urbanized provinces come close to the high rates of domestic electricity use in Phnom Penh (at nearly 90%), indicating the large disparities between the capital and the other urban areas.

19. Urban infrastructure—that is, roads, water supply, solid waste collection, and sanitation—has improved considerably in the past 10 years, although only in Phnom Penh are conditions of a satisfactory standard. There is, therefore, much scope for improvement programs that can only be tackled in conjunction with institutional management programs to strengthen local governance.<sup>6</sup>

20. The analysis of roads reveals modest paved road networks of very limited length. On a national average, there are 3.4 urban inhabitants per meter of good-quality urban road, with a wide range of conditions between municipalities. In the most urbanized *sangkats* (urbanized quarters or divisions of communes), the ratio might be about 1.5 persons per meter. However, the statistical material is not complete. The data for 1995 listed in ADB (1999) are not directly comparable, because paved and unpaved roads of different widths were considered together, but an overall assessment of road conditions was given (typically “50% poor”). This kind of assessment is not available for 2008. Drainage in 1995 was poor (i.e., drainage conduits typically “70% blocked”). Presently, it must be assumed that drainage and flood control have been improved along with the extensions to the urban road systems (Appendix 2, Table A2.18).

<sup>6</sup> In the analysis of three infrastructure categories (i.e., roads, water supply, and sanitation), statistical information is not available for each municipality; it is hidden in the commune statistics. These statistics have been compiled in the new district data books. For the analysis, *sangkats* (the most urbanized quarters or divisions of communes) had to be used as proxies, because the municipalities are not shown in the district data books. All of the most urbanized *sangkats* add up to less than one-half of the urban population.

21. Urban water supply improved considerably from 1998 to 2008 (Table 2). The estimates of access to improved water sources agree with statistics extracted for the most urbanized *sangkats*, with an average coverage of 76% for piped water supply. Information on other water supply systems, such as pump and mixed wells, is given in Appendix 2, Table A2.19, but these systems do not figure prominently in those urbanized areas where piped water supply is now available (ADB 2010b).

22. Solid waste collection in urban areas (using the most urbanized *sangkat* as a proxy) must have improved considerably over the 10 years to 2008, when the national mean value stood at 58.6% coverage for all municipalities. Conditions in Phnom Penh are better than elsewhere. Secondary cities such as Battambang (54.2% coverage) and Sihanoukville (53.4% coverage) were better off than Siem Reap (surprisingly low at only 29.2%) and most of the smaller municipalities (ranging from zero to 35.0%) (Appendix 2, Table A2.20). Information on solid waste conditions in 1995 in ADB (1999) is very limited and not directly comparable with the 2008 data. There is no information on solid waste disposal, which is largely in open unregulated dumpsites, except for Phnom Penh (which receives about 1,000 tons per day).

23. Information on urban sanitation is not available separately from national statistics. Here, the overall conditions have improved from 85% of all households with no toilet (1998) to 66% (2008). For 2008, the two categories “connected to sewerage” and “septic tanks” have been combined to stand for “urban sanitation.” Using the resulting values as a proxy for describing urban sanitation, the national average stands at 28%, somewhat higher than the national urbanization ratio (Appendix 2, Tables A2.21–A2.22). This result tallies with the overall figure of 81% of urban households with access to improved sanitation in 2008 (Table 2). Sanitation conditions in the municipalities can now be assumed to be reasonably satisfactory, at least for the availability of toilets, and in comparison with poor rural sanitation conditions. The values range from less than 10% in Preah Vihear Province to more than 40%, approximately parallel to provincial urbanization ratios. Phnom Penh stands at 89%, although this is higher than expected, given the poor sanitation conditions in the many low-income housing areas.

**Table 2 Overview of the Water and Sanitation Sector**  
(% coverage)

Indicator	1998 Baseline	2004 Actual	2007 Actual	2008 Actual	2015 Target	2020 Target	2025 Target
Rural access to improved water	24.0	35.5	55.4	40.5	50.0	75.0	100.0
Urban access to improved water	60.0	52.7	67.1	75.8	80.0		
Rural access to improved sanitation	8.6	15.0	19.6	23.0	30.0	50.0	100.0
Urban access to improved sanitation	49.0	47.5	57.1	81.0*	74.0		

Note: The piped urban water supply is 42.3%, but a centralized water supply may be less than 5%.

Source: ADB (2010a).

### *b. Institutional Framework*

24. Several ministries are directly involved in managing urban development. The relevant ministries (i.e., Ministry of Economy and Finance; Ministry of Environment; Ministry of Interior; Ministry of Land Management, Urban Planning and Construction; Ministry of Planning; Ministry of Public Works and Transport; and Supreme National Economic Council) and their main departments appear to be

relatively well prepared for their tasks of coordinating national programs and preparing laws and regulations.<sup>7</sup> However, provincial, and particularly municipal, agencies under the ministries are understaffed and underequipped to carry out their assigned responsibilities.

25. The subsector performance can be described by three statements that also link the physical conditions to the institutional framework applicable to all urban subsectors:

- (i) Accelerating urban growth is not matched by growth in infrastructure systems, which is also unevenly distributed, with a heavy dominance by the capital region.
- (ii) Urban development is not sufficiently linked with the regional economies, even though some remote small towns have grown rapidly along with rural growth due to rural–rural migration.
- (iii) Development of institutions and capacity building has not been able to cope with urban development, although major achievements exist, including the creation of municipalities and efforts toward drafting a national urban development strategy and national housing policy.

26. The urban reclassification of 2004 (Government of Cambodia, NIS 2004c) also triggered the creation of new municipalities in 2009, using the same boundaries for delineating the administrative areas of local authorities. However, most municipalities are now too large, in the sense that the urban districts include large tracts of rural land, with some population that could also be rated as rural. Yet, it has been argued that the urbanization ratio of Cambodia is much higher than the officially adopted figure of 20% (UNCDF 2010).

## 2. Subsector Issues

27. Subsector issues are primarily those arising from the gap between urban growth and slow institutional development, which results in a considerable backlog demand for administrative capacity building. The four main issues are institutional deficiencies, lack of integration of the urban sector, incomplete information management, and inadequate urban finance. These issues can be grouped under five headings as follows.

- (i) **Economic potential and needed institutional response.** The importance and potential of urban development in Cambodia's structural transformation are beginning to be recognized, but the response in institutional changes is too slow to cope with the demand. Thus, there is a strong need for more adequate institutional responses, especially at subnational levels.
- (ii) **Integrating the urban development agenda.** The government and development partners need to integrate the new urban agenda with other policy reforms and strategies, because urban development cuts across many sector concerns, such as water, sanitation, transport, agriculture, and natural resources management.
- (iii) **Developing and using specialized information.** The planning and monitoring of urbanization processes require data in formats and combinations that are currently unavailable, although progress is being made.
- (iv) **Urban development finance system.** Urban infrastructure provision and maintenance are unable to cope with the demand from growing cities and towns. The infrastructure deficits

<sup>7</sup> However, no systematic assessment has been carried out on capacities at ministerial or departmental levels.

reflect the lack of managerial capacity and of inadequate local revenues, because most of the infrastructure expenditure is paid from national budgets. There is no financing system available to municipalities other than central government grants.

- (v) **Urban infrastructure development, management, and finance.** Urban infrastructure is typically seen as the responsibility of the sector line agencies that are vertically structured rather than horizontally at the level of each municipality, district, or province. Horizontal coordination and cooperation are needed to achieve progress in water supply simultaneously with sanitation and/or solid waste management, and local transport. This has not been achieved yet in the newly established municipalities, which are without staff and financial resources.

28. Limited local funding for capital investment, maintenance, and operations is available. Municipalities have few local revenue sources because user fees and taxes are not being collected. Urban infrastructure investment is supply-driven rather than based on local investment capacity, and there is a notable absence of participation of local stakeholders in local investment strategies. Exceptions include some community-based environmental projects in Phnom Penh, where local participation in decision making and cost sharing appears to be well organized. Also, community participation can still be found in villages where traditional self-help and mutual-help mechanisms are still intact.

29. Cities are only now being recognized as engines of growth by policy makers and development partners. However, unless cities and national urban development are carefully planned and managed, economic growth may remain limited to the few larger urban areas, without being properly interlinked with rural areas.

30. The Strategic Framework on Decentralization and Deconcentration, adopted in June 2005, establishes the vision that is supposed to guide governance reform for Phnom Penh (as a municipality at the level of a special province), the 23 other provinces, the newly formed municipalities, and the *khans* (rural districts, within the capital). The framework further strengthens commune and *sangkat* reform, which was launched with commune elections in 2002. To be effective, the principles of democratic development and improvement of service delivery at the subnational level will only be possible if the decentralization and deconcentration reform progresses in parallel with the Public Financial Management Reform Program and the National Program of Administrative Reform.

31. Comprehensive data on urban development have been missing from the national statistics in the past. The National Committee for Sub-National Democratic Development (NCDD) has now made available 2009 district data books, a comprehensive presentation developed by the National Institute of Statistics on all rural and urban districts outside of Phnom Penh.<sup>8</sup> The datasets have been compiled from many different sources, including detailed maps; they appear to be adequately cross-checked and georeferenced. Further, the data collection is comprehensive. This is not a separate urban data management tool, but it has considerable potential for further development as a planning and management tool.

32. A municipal investment facility, the Local Administration Investment Facility, has been proposed in the context of current World Bank assistance to the NCDD, which would enable the cities to receive project-specific fiscal transfers and, in the long term, to borrow funds from a special government fund at appropriate conditions. If realized, this will be a milestone for the development of decentralized municipal project management and funding.

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<sup>8</sup> Phnom Penh, a special province, is not included in this database.

33. The following are examples of recent infrastructure development in Phnom Penh that illustrate the issues outlined in this section.

- (i) **Urban transport.** Recent Japan International Cooperation Agency (JICA)–Agence Française de Développement (AFD) efforts have focused on creating a needed public transport authority in Phnom Penh and setting up a modern system of public transport (Paris City Council 2009). Due to low use of this public transport system, however, the experimental system has been canceled.
- (ii) **Services and land tenure for low-income groups.** The land-sharing and housing scheme at Borei Keila in Phnom Penh, the first of its kind in the country, has attracted much attention because of the personal involvement of the Prime Minister. It has been rated a success, although it will not be easy to replicate. The scheme is a creative, socially responsive solution to the urban land tenure problem for low-income groups. Several other low-income housing areas in Phnom Penh have been successfully upgraded in recent years, with assistance by the Urban Poor Development Fund (UPDF), which has been in operation since 1998. For several years, the UPDF has been receiving important support from the Prime Minister. The UPDF is also operating in 17 provincial towns, including the Tonle Sap region.
- (iii) **Management of environmental infrastructure with participation by private sector and community.** Solid waste management in Phnom Penh has been significantly improved under a JICA-funded program, which has also resulted in an improved public–private partnership for solid waste collection and management (JICA 2006). Another positive experience was the program, Partnerships for a Cleaner City, carried out in close cooperation between the Japan Fund for Poverty Reduction (JFPR) and ADB, with strong and active community involvement. The program was designed in a learning-by-doing manner and implemented in only 32 months (ADB and JFPR 2008). Also, the municipality of Phnom Penh is beginning to experiment with the “3R” concept (i.e., reduce, reuse, recycle) in solid waste management.

### 3. Subsector Constraints

#### *a. Policy Environment, Plans, and Financing*

34. **New national policy.** The recent National Strategic Development Plan (NSDP) is an important policy document; however, it does not yet consider the crucial role of the growing urban sector (Government of Cambodia 2009b). The NSDP touches on urban development only implicitly in its emphasis on governance, economic development, and infrastructure. In contrast, the Ministry of Land Management, Urban Planning and Construction is working on a draft national urban development agenda or strategy, including a policy on housing. The government intends to establish a national institute for urban planning to assist in policy formulation and management.

35. **Limited institutional framework and capacity.** The institutional framework and capacity for urban management are still severely limited, especially at the provincial and local levels, while major efforts are being made at the national level. Given the very short experience with municipalities and their inadequate staffing, it will require years of support and technical assistance by national agencies, down to the provincial level.

36. **New urban master plans.** The Ministry of Land Management, Urban Planning and Construction has recently made efforts to meet the demand for urban development plans (see Section II), which is now urgent because the municipalities need adequate planning documents. The work being carried out by a small but devoted staff in the ministry is commendable but constrained by planning issues. The plan-



making work, which has only recently begun, appears to be technically competent, including advanced mapping techniques and geographic information system applications. For the time being, however, the process is dominated by a few competent planners and technicians at the ministerial level, and the planning products are conventional land-use plans.

37. Urban development requires two sources of funding: largely private investments in buildings and sites (including the infrastructure on the site), and public investments in trunk and distributor lines of infrastructure as well as water treatments plants, wastewater treatment plants, solid waste facilities, ports, and airports. In Cambodia, most infrastructure is funded by donor grants, taking over the roles of national and local capital investment. The distinction between state and municipal funding of infrastructure is not yet well developed.

38. **Financial constraints.** The dependence on central government investments and the lack of funding at local levels, primarily due to lack of revenues, are evident. However, coherent data on municipality-level finance is limited. Figures available for Phnom Penh and Battambang suggest total municipal expenditures at the level of just \$2–\$4 per capita per year (in 2000), but a considerable increase, as of 2009, to about \$40 per capita per year in Phnom Penh only.

39. **Economic infrastructure and partnerships.** Economic infrastructure, such as markets, transport terminals, or industrial estates, is increasingly managed by private sector agencies, but there is more potential to form public–private partnerships for this kind of revenue-generating infrastructure. Evidence from Viet Nam suggests that such public–private partnerships are effective and efficient.<sup>9</sup>

### *b. Institutional Environment, Capacity, and Governance*

40. In some areas of Cambodia, scarcity and low qualification of staff prevails. However, both numbers and qualifications have risen over the past 10 years. Most government staff members work for low remuneration; all rely on additional income elsewhere. With the establishment of municipalities, the institutional environment will experience constraints in gaps of human resources, physical facilities, and imperfect regulations. For the time being, there is no municipal authority (except in Phnom Penh) with full and direct responsibility or capability in urban development and management, including the monitoring and evaluation of projects. Phnom Penh's capability is limited. Due to such institutional constraints, municipalities have to rely on national staff resources at the provincial level (even though these have their own limitations) to be delegated to perform local government tasks. These constraints affect the quality and performance of most tasks in urban management, including construction supervision, building permits, and general development control, including enforcement of environmental standards.

### *c. Physical and Institutional Infrastructure Provision*

41. The uneven distribution of towns and the uneven distribution of services between rural and urban areas are issues that need to be addressed by a national urban development policy. While a more balanced distribution of towns is a challenging long-term objective, it should be possible in the near term to provide urban services in secondary towns located in rural areas more evenly by locating central places for public services in a more organized manner.

42. All urban centers have to meet service distribution functions not only for their own municipal population but also for the rural population within a certain range of access. Access is not only defined as measurable physical distance or time distance but in terms of actual access by social group and gender. Data on this subject are not available, but deficiencies can be assumed to exist across all urban areas.

<sup>9</sup> Examples in Viet Nam are industrial estates, housing, and contracts for urban environmental services. See ADB (2006a).

#### 4. Political Economy Influences

43. Cambodia has experienced a growing divide between the poor, especially in rural areas, and an increasingly affluent, mostly urban, elite. The overall social inequality is reflected by the present Gini coefficient of 0.42, which has been rising. This social inequality raises serious questions as to the conflicting goals of poverty reduction and economic growth, which are to be considered in all urban development programs.

44. Cambodia has ample land resources but also many constraints to put these to good use. Constraints include increasing demographic pressures, insecure land rights, unequal landholdings, increasing landlessness, and low levels of productivity and investment. The Land Reform Law (1992, amended in 2001) contains a provision for “social land concessions,” which are not always handled as intended by the law. This is one reason progress in land management is slow, especially for urban development. An indicator of the inherent problems in this field is the recent termination of the World Bank–funded Land Management and Administration Project in 2009. While GIZ has continued its long-term work land registration work for the project, it has avoided critical urban areas. Future urban projects need to determine how to make land management more socially responsive.<sup>10</sup>

#### 5. Key Constraint and Development Needs

45. The lack of administrative and financial capacity in municipalities, the crucial new layer of local government, is the most important constraint. It is described as the core problem in the urban sector’s problem-tree diagram (Appendix 1). Growing economic disparities, rapid rural–urban migration with a focus on Phnom Penh, and slow implementation of the decentralization and deconcentration policy are the main contributors to the core problem of the urban sector. In turn, the effects are an unorganized urban management system with deficient urban infrastructure, severe underprovision of infrastructure and housing for the urban population, slow progress in realizing the revenue potential from land and other needed taxes, and a public service system with urban development challenges. Despite these institutional constraints, urban development and investment need to proceed, and overcoming the core institutional constraints can be integral to future development interventions.

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<sup>10</sup> A recent nongovernment organization (NGO)-sponsored publication on land registration and management is critical. See Grimsditch and Henderson (2009).

## A. Government Sector Strategy, Policy, and Plans

46. Until 2008 or 2009, there has not been much in terms of an explicit urban legislation or policy in government documents. However, now there are new developments in the form of laws and subdecrees, policy, and strategy statements that will have considerable influence on the emerging urban sector as their implementation begin in 2011. The links among sector issues, government plans, existing gaps, and a summary assessment are in Appendix 3 (Tables A3.1–A3.2).

### 1. Subnational Governance Reform

47. The government has embarked on a wide range of subnational governance reform, recognizing the need to introduce new systems of governance at provincial, municipal, and district levels. There are two strategic goals: to strengthen and expand local democracy, and to promote local development and reduce poverty. The Organic Law (2008) on the Management and Administration of Province/Municipality and *Srok* (Rural District) is meant to improve the effectiveness and efficiency of sector service delivery at the subnational administration through a hierarchical structure.

48. Subdecree no. 216 under the Organic Law defines clear roles and responsibilities of provinces and their districts. The present administration has vertical and horizontal components. The vertical component is the top-down administrative system where the Municipal Council and Executive Board of the Governor are accountable to a higher level of authority, that is, the provincial authority. In the horizontal component, the Executive Board of the Governor works closely with technical line departments of national ministries on various sectors, such as public works and transport; environment; land management, urban planning, and construction; rural development; health; and education.

49. By law, the municipalities are urban districts. At this level, only three ministries are represented by district offices—health, education, and land management, including urban planning and management functions. In practice, this means that an urban district may only have one lower-ranking officer from the Ministry of Land Management, Urban Planning and Construction. To meet the legally stipulated functions, all municipalities are soon to be equipped with urban development offices, as specified by a new PRAKAS under subdecree no. 216.<sup>11</sup>

### 2. New Planning Initiatives

50. In support of the new decentralized structure, the Ministry of Land Management, Urban Planning and Construction has taken several initiatives to set up a framework for urban development

<sup>11</sup> PRAKAS No. 4274 (Government of Cambodia, Ministry of Interior 2009b) states the need for restructuring the offices under the management of the municipalities. Referring to Article 112 of subdecree no. 216, each municipality has to restructure its numerous offices to only three offices called administration and finance; planning; and supporting communes, *sangkats*, and urban development. Battambang and Siem Reap have additional “one-window services offices”.

where the municipalities eventually have to take on the main role in further planning and implementation. The initiatives include the following draft policy documents: (i) spatial development policy (including regional planning), (ii) national housing policy, and (iii) a working program for the preparation of urban land-use plans.

51. Drafts for a national housing policy have been under consideration for nearly 10 years (Government of Cambodia 2009a and 2009b). To some extent, the drafts were supported by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). The drafts are comprehensive in outlining a government policy that includes progressive ideas, such as active community involvement and mobilization of dwellers' resources, saving schemes for low-income housing, and regulations for poor communities and their special needs in land and infrastructure management.

52. The working program for preparing urban land-use plans, under the Department of Planning of the ministry, involves all municipalities outside of Phnom Penh. The capital is excluded because it has its own urban planning department. Nine municipalities are being handled in a first batch of plans, ranging from relatively large ones like Kampong Cham and the newly created town of Suong (both with about 40,000 inhabitants) down to Alongveng with about 13,000 inhabitants.<sup>12</sup> The plans are technically competent, including advanced geographic information system mapping techniques, but they lack strategic orientation.

### 3. Government Agencies' Views on Emerging Urban Sector Strategies

53. The Supreme National Economic Council uses the development of economic and urban clusters as a central concept. Designated growth regions are the GMS Southern Economic Corridor; Greater Phnom Penh; and the corridor between Phnom Penh and Sihanoukville, which is part of the GMS North–South Economic Corridor. The council has expressed a regional development vision for corridor development, even though this is not shown in the NSDP update.

54. The Ministry of Public Works and Transport is working toward new border crossings to Viet Nam and the Lao People's Democratic Republic, and the designation of a new corridor connecting Stueng Traeng with Kampong Thom and Siem Reap, opening up a vast agricultural hinterland for industrialized farming activities.

55. The Ministry of Land Management, Urban Planning and Construction has been stepping up its planning and policy efforts to overcome the constraints of a low degree of urban planning and the lack of financial and human resources for plan implementation across the country. This ministry and the Ministry of Economy and Finance have still not agreed on land valuation and taxation, as proposed by the donor-supported Land Management and Administration Project. The absence of adequate revenues makes it difficult for the Ministry of Land Management, Urban Planning and Construction to implement routine activities of urban development control and planning.

56. The municipality of Phnom Penh has made progress in traffic management and resettlement of urban poor communities but continues to require assistance in wastewater treatment and solid waste management. The size of resettlement and upgrading activities is considerable: 569 poor communities were resettled in the outskirts of Phnom Penh, and improvements for another 200 settlements are ongoing. These are only some of the many externally funded projects in the capital city. See Appendix 5 for externally funded urban projects in Phnom Penh.

<sup>12</sup> Alongveng Province is located in Otdar Meanchey, near the Thai border.

## B. Support by Other Development Partners

57. The experiences of major development partners provide relevant lessons (Appendix 4, Tables A4.1–A4.4).

58. Like ADB, the World Bank has supported the investments of the Phnom Penh Water Supply Authority. Despite the fact that the World Bank considers that much of future economic growth will be urban, it has not yet committed to an urban investment program in Cambodia. The World Bank is preparing its country strategy for 2010 in coordination with the ADB Cambodia Resident Mission. The proposed Local Administration Investment Fund, suggested as part of the decentralization and deconcentration reforms, might become an area of engagement and offer options for ADB participation. The World Bank has discontinued its operations in urban land registration after the termination by the government of the Land Management and Administration Project.

59. JICA has a long trajectory of urban infrastructure and technical assistance projects in urban transport, sanitation, and urban roads and bridges. It led the 2004 public bus transport scheme for Phnom Penh, today seen as an experiment ahead of its time. JICA is considering further funding for transport management assistance to Phnom Penh. JICA also intends to support Phnom Penh in the development of a sewage treatment facility. Due to its broad, long-standing engagement in urban infrastructure, JICA may become a prime partner in ADB's urban interventions in Cambodia.

60. The Export–Import Bank of Korea, like JICA, intends to engage in the development of another sewage treatment facility for Phnom Penh. It hopes to develop two such facilities for the capital region. The Export–Import Bank of Korea may become a relevant cofinancing partner for ADB's urban activities.

61. GIZ does not engage in urban programs due to the Government of Germany's focus on rural development, health, and governance in Cambodia. GIZ-supported technical assistance on land titling does include urban areas as the agency continues to implement its part of the Land Management and Administration Program, which also includes donor contributions by other development partners. GIZ, through its support for regional economic development in Siem Reap, could be a partner for strategies for small towns connecting with the hinterland, private sector, and agricultural producers. The intentions of the program (which has been running 2 years, with a perspective to 2015) are to enhance economic links between urban centers and their surrounding rural districts. As a small-scale replica of the well-known European Union Leader Program for developing regional competitiveness, the program is geared to boosting local entrepreneurship and promoting partnerships with private sector players.<sup>13</sup> GIZ's initiative for a multilayer, national, spatial planning framework emphasizes land registration and geoinformation systems, which will become highly relevant for future ADB operations.

62. For several years, the German Development Service (DED) has supported land-use planning in Battambang Municipality, which might soon be replicated at Kampong Chhnang. This experience may benefit proposed ADB projects like the GMS Corridor Towns Development Project (ADB forthcoming) or Sustainable Urban Development in the Tonle Sap Region. DED is interested in partnering with ADB in the urban sector.

63. AFD currently has few projects under preparation. Under the city-to-city program of decentralized cooperation, the municipalities of Paris and Phnom Penh have a long-standing relationship with AFD, which has produced interesting pilot initiatives, including the suggested Phnom Penh Transport Authority.

<sup>13</sup> GIZ <http://www.giz.de>

64. The United Nations Human Settlement Programme (UN-HABITAT) has been engaged for years on issues of secure tenure and shelter for the urban poor and has assisted the municipality of Phnom Penh with the UPDF. UN-HABITAT's work has been reoriented recently toward the GMS Water and Sanitation Initiative, working in small and medium-sized towns in Kampong Cham, Kampong Thom, Pursat, and Svay Rieng provinces.

65. The United Nations Development Programme, with financing from the Department for International Development of the United Kingdom, continues to support the decentralization and deconcentration reforms, through which local governments are gaining experience and decision-making power in planning for capital investments and community development. There are related pilot projects in Siem Reap and Battambang where "one-window services" mark the start of local government self-responsibility.

66. The United Nations Capital Development Fund has recently commenced drafting a program called Local Development Outlook, comprising (i) a review of local development trends, (ii) a close look at policies and regulations for local development, and (iii) recommendations for establishing an urban development policy that is linked with the decentralization and deconcentration reforms.

### C. ADB Sector Support Program and Experience

67. ADB's first urban development strategy for Cambodia was prepared in 1999, but the document was not used as input to ADB country strategies because progress in this sector was slow.<sup>14</sup> The 1999 strategy was oriented in the right direction, but it proved to be too ambitious given prevailing capacity. During the early stages of a country's economic growth, financial resources are scarce, and investments are made where the return is highest, usually in the capital region because the capital city has the important role of nation building. In Cambodia, this phase has passed, and the government now must embark on a more comprehensive and bolder urban development strategy for the entire country in support of sustainable urban development and promotion of economic corridors. ADB's engagement in the urban sector is more feasible from a country needs perspective.

68. ADB's recent urban infrastructure projects are the Phnom Penh Water Supply and Drainage Project (ADB 2010b), community-based solid waste management in Phnom Penh (ADB and JFPR 2008), and the construction of a sewage treatment plant in Siem Reap (ADB 2002). The Phnom Penh Water Supply Authority has established a world-class urban service, with an excellent cost recovery ratio, and has received international recognition. The sewage treatment plant in Siem Reap was funded as part of a regional tourism development project, because tourism is the main driver in the region, and a clean and healthy environment is key to attracting tourists. Other examples of good practices are community-based environmental projects in Phnom Penh, in close cooperation with other partners. In all of these projects, strategic investments have been linked with capacity building of core institutions.

69. ADB's Strategy 2020 (2008a) includes gender equity as one of the five drivers of change toward poverty reduction; improved living standards; and sustainable, inclusive economic growth. All of these are crosscutting objectives for urban development. Urban development projects will offer notable gender mainstreaming opportunities, especially because community-based projects for infrastructure upgrading can explicitly promote a strong role for women. Gender equality issues are an integral component of urban development principles, along with general social development goals.

<sup>14</sup> Appendix 3 provides a detailed assessment of the changes since 1999.

70. The ADB regional study on rural–urban and regional links in the GMS advocated urban engagement (ADB 2008a), because the effects of open borders and macroregional programs, such as the GMS economic corridors, require interventions in small towns as the foundation for pro-poor and pro-rural development. Supporting small towns was seen as essential for the development of the surrounding rural areas where a substantial part of the country’s poverty is located. The four main socioeconomic functions of small and medium-sized towns are (i) markets and transport hubs for agricultural produce from rural areas, (ii) centers for the production and distribution of goods and services to the rural areas, (iii) centers for the growth and consolidation of rural nonfarm activities and employment, and (iv) centers to reduce migration pressure on larger urban centers (Tacoli 2006).

71. The recent ADB experience in Cambodia confirms the principles of selectivity and the need for sector focus. ADB’s Tonle Sap programs in agriculture, natural resources, and sustainable livelihoods are directed at poverty reduction of smallholders and include positive experiences in the use of community block grants.<sup>15</sup> A similar community development approach is being pursued by the UPDF, which operates in the Tonle Sap region and in Phnom Penh. Because of the savings scheme in the UPDF, the poor have become eligible for livelihood and home improvement loans. ADB’s Tonle Sap programs aim at strengthening the rural sector and, along with it, the rural market towns. There is a strong rationale for complementarity between rural and urban development, because small towns are essential for agricultural value-chain development.

## D. ADB Sector Forward Strategy

72. **Matching government and ADB sector strategies.** The rationale for ADB involvement in Cambodia’s urban sector is economic—the increasing economic importance of urban development, which is recognized by the government in its current efforts toward a national urban development strategy. However, the government’s strategies, such as the Rectangular Strategy and the NSDP,<sup>16</sup> are not yet clearly focused on urban development. Nevertheless, some innovative ideas have emerged over the past years, as the initiative of decentralization and deconcentration is translated into a framework of action. Urban interventions will strive to achieve balanced urbanization, that is, a balance of living conditions in rural and urban areas and equal access to those public facilities that are usually distributed from urban centers to rural areas.

73. **Integration of urban and other development agenda.** ADB will integrate its urban interventions with other priority areas, especially those for agriculture and natural resources development, water and sanitation, and transport. The required integration of urban sector needs may be achieved by defining mutually reinforcing objectives. During monitoring and evaluation, the same urban indicators (e.g., percentages of urban population with adequate water supply and other urban services) may be used for measuring urban sector performance and water or transport sector performance. Relevant aspects for an ADB urban program will be the role of (i) private sector participation in service delivery,<sup>17</sup> (ii) good governance and capacity development, and (iii) stakeholder partnerships.

74. **Principles.** ADB’s urban strategy should be innovative and relevant for economic development and poverty reduction. Its interventions will be primarily multisector, incorporating rural–urban links, and their implementation should emphasize cooperation with other development partners (cofinancing

<sup>15</sup> Loan 0018-CAM: Tonle Sap Rural Water Supply and Sanitation Sector Project, Loan 0034/35-CAM: Tonle Sap Sustainable Livelihoods, Loan 2376-CAM: STonle Sap Lowlands Rural Development, and Loan 2599-CAM: Tonle Sap Poverty Reduction and Smallholder Development.

<sup>16</sup> See Government of Cambodia (2003a) for Rectangular Strategy and Government of Cambodia (2009b) for NSDP.

<sup>17</sup> About 90% of employment is in the private sector, and its GDP share is 80%.

and technical assistance grants), and partnerships between local governments and the private sector. The GMS Corridor Towns Development Project reflects these principles. In addition to this, supplementary support should be extended to poor urban communities through small-scale credit and sustainable revolving fund mechanisms.

75. **Objectives.** The objectives of ADB urban interventions in Cambodia are to support and to guide urban development through assistance in infrastructure investments, through policy formation, institutional strengthening, and capacity development, emphasizing the local level. As the new municipalities are particularly disadvantaged in comparison with the capital city, assistance should emphasize cities and towns in the geographical focus area of ADB—along the transport corridors and the Tonle Sap region. The proposed pro-poor and pro-rural urban development orientation supports agricultural productivity through better transport connectivity to urban-based markets and decentralized services from smaller urban centers.

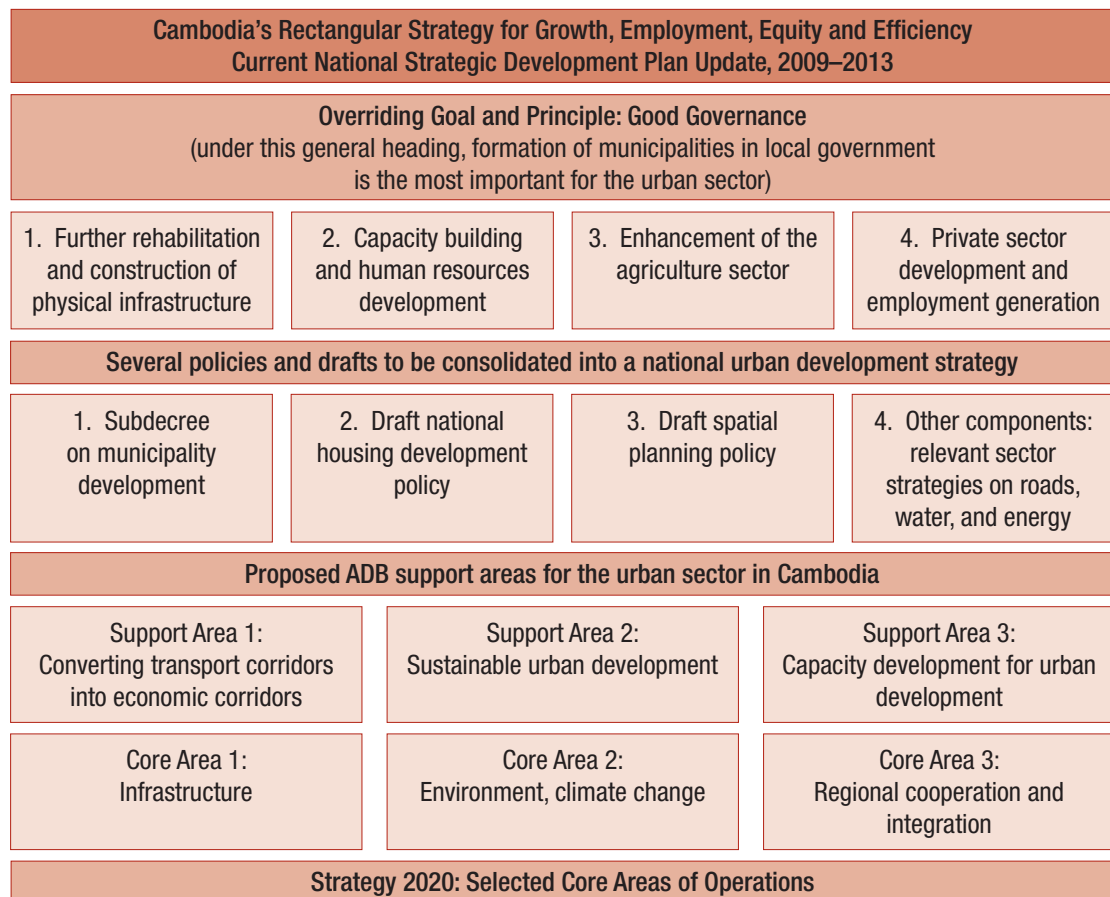


# Sector Road Map and Results Framework

## A. Conceptual Outline of the Road Map

76. The development agendas of the government and ADB’s Strategy 2020 form the framework for achieving inclusive economic growth and regional integration, and serve as guiding principles. Figure 2 illustrates the approach to defining the main support areas.

Figure 2 Linking Government Policy and Strategy 2020 in the Proposed Support Areas for Urban Development in Cambodia



ADB = Asian Development Bank.  
Source: ADB.

## B. Proposed ADB Support Areas

77. The proposed support areas shown in Figure 2 are selective and are intended to promote the principles of integrated and sustainable urban development effectively.

- (i) **Converting transport corridors into economic corridors.** The urban sector will play an increasingly important role in implementing the Greater Mekong Subregion (GMS) cooperation and integration programs. As the GMS transport corridors thrive and are converted to full-fledged economic corridors, towns and urban areas along the most active corridors will receive priority attention. This support area aims at developing towns along the Southern Economic Corridor and, possibly, the North–South Economic Corridor that connects the Lao People’s Democratic Republic with Sihanoukville.
- (ii) **Sustainable urban development.** This support area is closely related to ADB’s geographical focus on the Tonle Sap region, including the towns of Battambang, Kampong Chhnang, Pailin, Paoy Paet, Pursat, Samroang, Serei Saophaon, Siem Reap, and Stueng Saen. Priority subsectors are water (treatment and distribution), sanitation, solid waste management, flood control, urban roads, public markets, and sustainable community development.
- (iii) **Capacity development for urban development.** The third support area will address institutional capacity gaps that are apparent in the context of the decentralization and deconcentration reforms. The urban sector requires institutional and policy support at the national and local level, where the newly established municipalities are now playing an increasingly important role. Capacity development will be integrated into ADB-supported investment initiatives and will attempt to ensure not only smooth project implementation but also development of sustainable institutional capacities.

## C. Main Components of the Road Map

78. This selective road map has been drafted to cover a period of about 5 years, with a view toward a rolling plan for about 10 years. ADB strategic objectives in the wider regional context of the GMS were taken into account, in addition to the development agenda of the government.

### 1. Support Area 1: Converting Transport Corridors into Economic Corridors

79. The GMS Corridor Towns Development Project will initially only focus on the Southern Economic Corridor, in which the towns of Battambang, Bavet, Poipet, and Svay Rieng will participate. The project measures will help both the towns and the hinterland grow, because many service functions provided at those towns also serve the surrounding areas. The development approach to corridor towns is a new spatio-economic development approach, comparable with the city-cluster economic development approach that ADB has been promoting elsewhere (Choe and Aprodicio 2008).

80. The project will consist of three main activities: (i) formulation of strategic local economic development plans, (ii) implementation of strategic infrastructure investments, and (iii) implementation of capacity development activities to sustain project implementation and strengthen capacities to liaise with private sector partners.

81. Depending on the respective local demand, priority infrastructure investments will be in (i) urban roads, (ii) water supply, (iii) sewage treatment, (iv) flood control, (v) solid waste management, (vi) public markets, (vii) transport logistics, and possibly (viii) facilities for small and medium-sized enterprise development such as incubation centers. Concurrently, the project can support climate change

impact adaptation and mitigation as part of the infrastructure investments (e.g., solid waste management, sewage treatment, and eco-industrial development).

## 2. Support Area 2: Sustainable Urban Development

82. This support area is geared to the small and medium-sized towns, focused on the Tonle Sap region. Conditions in the rural hinterland will determine urban development needs. This represents a new conceptual approach, linking rural and urban development to meet the goal of balanced urban development that is both pro-poor and pro-rural (ADB 2008a).

83. The Sustainable Urban Development Project in the Tonle Sap Region will provide support for basic infrastructure development, economic infrastructure, and livelihood support. Priority investments will be in (i) urban roads, (ii) water supply, (iii) sewage treatment, (iv) flood control, (v) solid waste management, (vi) public markets, and (vii) microcredit for livelihood support of the urban poor. Local investments will be determined on a demand basis through participatory means.

84. Climate change adaptation and mitigation, environmental improvements, poverty reduction, and gender mainstreaming will be major crosscutting issues and will influence the detailed design of individual subprojects. The support area will encourage the application of the “3R” concept (reduce, reuse, recycle) in waste management. The Local Administration Investment Fund, yet to be established, may be utilized for fund flow and onlending to municipalities.

85. To provide additional livelihood support, a special revolving fund may be established for poor communities to fund (i) small-scale credit facilities, (ii) community infrastructure, and (iii) technical assistance. ADB might partner with the UPDF and UN-HABITAT and finance these activities through the JFPR or other sources.<sup>18</sup>

## 3. Support Area 3: Capacity Development for Urban Development

86. ADB will support institutional and policy development as part of its proposed investment projects. These capacity development components will be tailored to the requirements of subproject preparation and implementation at the level of executing and implementing agencies at both central and local levels. Capacity development activities for project preparation and implementation will deal with subproject feasibility studies, procurement, environmental supervision, social safeguards, operation and maintenance, and project evaluation and monitoring.

87. The capacity development activities will be funded through the loan schemes, but if technical assistance grants are available, such grant funding may be used for complementary projects, such as on sector-related reform issues, an agenda of policy reforms, addressing tariff policies, public-private participation, or community participation.

88. In case of availability of funds for a stand-alone advisory technical assistance project, ADB may finance other training or institutional development activities, which could include (i) a national program for urban management and planning officers (possibly as part of the proposed Urban Development Institute), (ii) special training on climate change impact adaptation and mitigation, (iii) development of the Local Administration Investment Fund, (iv) mainstreaming of the existing urban information system (i.e., district data books), and (v) development of an urban land valuation system.

<sup>18</sup> The UPDF has been in operation for more than 10 years and has successfully demonstrated the viability of community-based, on-site upgrading of poor communities (UPDF 2008).

## D. Assumptions and Risks

89. The key assumption is that the government affords high priority to the emerging urban development program and its implementation, and approves budget and staff resources to fund part of the program from government budgets at the national and local levels. However, both administrative capacity and funding are extremely limited. A second key assumption is that several other development partners are interested in the proposed road map for urban development and that cofinancing options emerge.

90. The main risks are that the support program fails to achieve its objectives because the government's commitment to policy issues waivers or severe resource constraints hinder implementation. Particularly difficult risks include capability of the local authorities in handling projects and in committing limited resources to regular maintenance and operation, inadequacy of user fees and their collection, and lack of motivation among the local communities due to inappropriate handling by local governments. Project design must include proper risk mitigation and management strategies. Donor-funded projects have also to deal with those universal risks stemming from the difficult political economy conditions—corruption and insecure property rights.

91. Table 3 summarizes the Road Map Results Framework.

Table 3 Road Map Results Framework

Country Sector Outcomes		Country Sector Outputs		ADB Sector Operations	
Outcomes Supported by ADB	Indicators with Targets and Baselines	Outputs Supported by ADB	Output Indicators with Incremental Targets	Planned and Ongoing ADB Interventions	ADB Interventions to Address Constraints
<b>Support Area 1: Converting Transport Corridors into Economic Corridors</b>	<ul style="list-style-type: none"> <li>Impacts of subprojects:               <ul style="list-style-type: none"> <li>Improved connectivity</li> <li>Improved health due to reduction in waterborne diseases</li> <li>Improved environment and health due to collected and treated waste</li> <li>Improved local market economy</li> <li>Improved livelihood of farmers</li> <li>Increased and more efficient trade</li> <li>Increased SME startups</li> <li>Achieved climate adaptation and mitigation targets</li> </ul> </li> <li>Enhanced economic development in small and medium-sized municipalities</li> </ul>	<ul style="list-style-type: none"> <li>Operations combine               <ul style="list-style-type: none"> <li>strategic local economic development planning</li> <li>infrastructure investments</li> <li>capacity development assistance</li> </ul> </li> <li>Cross-border transit agreements</li> </ul>	GMS CTDIP: CTDIP I: Southern Economic Corridor in Battambang, Baviet, Poipet, and Svay Rieng prepared and under implementation CTDIP II for the North–South Economic Corridor: Under preparation	CTDIP I: <ul style="list-style-type: none"> <li>R-PPTA in 2011</li> <li>CTDP loan in 2012</li> <li>Loan effective 2012–2018</li> </ul> CTDIP II under preparation, depending on success of CTDIP I Cross-border transit agreements implementation supported by ADB	CTDIP for small and medium-sized towns along the Southern Economic Corridor and, possibly later, the North–South Economic Corridor: CTDIP I: Battambang, Baviet, Poipet, Svay Rieng CTDIP II: Locations to be decided
<b>Support Area 2: Sustainable Environmental Infrastructure</b>	<ul style="list-style-type: none"> <li>Impacts of subprojects:               <ul style="list-style-type: none"> <li>Improved connectivity</li> <li>Improved health due to reduction in waterborne diseases</li> <li>Improved environment and health due to collected and treated waste</li> <li>Improved local market economy and improved livelihood of farmers</li> <li>Increased and more efficient trade</li> <li>Increased SME startups</li> <li>Achieved climate adaptation and mitigation targets</li> </ul> </li> <li>Number of urban poor families assisted through               <ul style="list-style-type: none"> <li>livelihood loans</li> <li>environmental infrastructure loans</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>ADB agriculture projects, climate change adaptation and mitigation</li> <li>Poverty reduction programs for livelihood of smallholders</li> <li>Rural water and sanitation projects</li> </ul>	The Sustainable Urban Development Project in the Tonle Sap Region prepared and under implementation. Candidate towns: Battambang, Kampong Chhnang, Pailin, Poipet, Pursat, Samraong, Saophaon, Serei, Siem Reap, and Stueng Saen	Absence of financing facility for municipalities Shortage of funding for public sector infrastructure investments JFPR support to assist the UPDF in the Tonle Sap Region	Sustainable Urban Development Project in the Tonle Sap Region Priority investments: <ul style="list-style-type: none"> <li>urban roads</li> <li>water supply</li> <li>sewage treatment</li> <li>flood control</li> <li>solid waste management</li> <li>public markets</li> <li>microcredit for livelihood support of the urban poor</li> </ul> Local Administration Investment Fund supported; special revolving fund for poor communities for small-scale livelihood loans, community infrastructure, and technical assistance

continued on next page

Table 3 *continued*

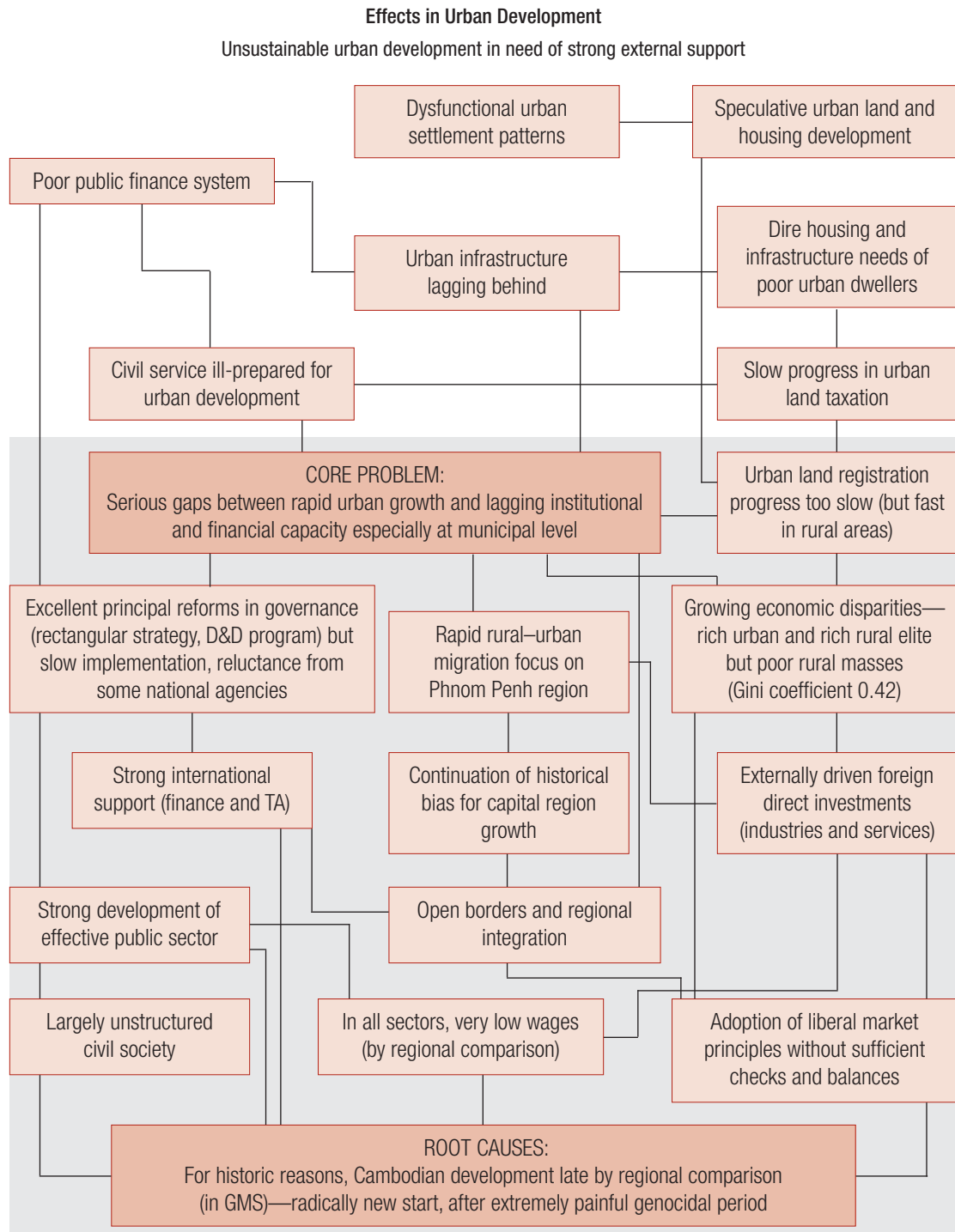
Country Sector Outcomes		Country Sector Outputs		ADB Sector Operations	
Outcomes Supported by ADB	Indicators with Targets and Baselines	Outputs Supported by ADB	Output Indicators with Incremental Targets	Planned and Ongoing ADB Interventions	ADB Interventions to Address Constraints
<b>Support Area 3: Capacity Development for Urban Development</b>	Trained staff available at all levels (central government, provinces, municipalities)	None so far	Capacity building and institutional development activities to be built into proposed loans; 200 local authority officials capacitated	Capacity building components included in design of investment projects (CTDP I; CTDP II; Sustainable Urban Development Project in the Tonle Sap Region)	Capacity development for subproject feasibility studies, procurement, environmental supervision, social safeguards, operation and maintenance, project evaluation, and monitoring.
<b>Medium- to long-term support, as part of proposed investment projects, and possibly as stand-alone advisory TA</b>	<ul style="list-style-type: none"> <li>— time requirement for administrative steps</li> <li>— reduction of environmental issues</li> <li>— reduction of safeguards issues</li> </ul> Training program for climate change impact adaptation and mitigation embedded in other training programs Improved data management Urban land valuation tested and adopted in municipalities Enhanced revenue collection of municipalities		Stand-alone advisory TA at national level (executing agency to be decided) Specific component on climate change added to environmental investment projects Enhanced urban data management system established and supporting ongoing projects Hardware and software for land valuation developed	Advisory TA for urban sector	Other training or institutional development activities: <ul style="list-style-type: none"> <li>— national program for urban management and planning officers (possibly as part of the proposed Urban Development Institute)</li> <li>— special training on climate change impact adaptation and mitigation</li> <li>— development of the Local Administration Investment Fund</li> <li>— mainstreaming of the existing urban information system (district data books)</li> <li>— development of urban land valuation system</li> </ul>

ADB = Asian Development Bank, CTDP = Corridor Towns Development Project, GMS = Greater Mekong Subregion, JFPR = Japan Fund for Poverty Reduction, R-PPTA = regional project preparatory technical assistance, SMES = small and medium-sized enterprises, TA = technical assistance, UPDF = Urban Poor Development Fund.

Source: ADB (2010a).

# Appendix 1

## Problem Tree: Urban Development in Cambodia



D&D = decentralization and deconcentration, GMS = Greater Mekong Subregion, TA = technical assistance.  
Source: ADB (2010a).

## Appendix 2

# Sector Statistics

### A. Introduction

1. The data tables are largely from the Population Census Report 2008, but also from 2004 population projections and other sources, such as the Commune Database, as summarized in the district data books. In many cases, it was possible to use data from the 1998 Population Census to provide a direct comparison with data for 2008. The tables on urban subsector performance were compiled from a mix of data as described in the overview at the end of this text. In addition to presenting the data in the greatest possible detail, that is, by municipality wherever possible, the data were further analyzed, which had not been done in the 1999 tables.
2. Data on municipalities are not easily obtained from the line agencies in charge of water, electricity, and roads, nor from the municipalities themselves because they typically have only commune data and, recently, district data books. For this study, it was thus necessary to look for recent data on urban areas from any source that could be tapped without too much administrative effort.
3. The data analysis aims at demonstrating the use of index figures for comparison across municipalities and across different time periods (usually 1998–2008 comparisons, based on population census results). This method can be used for setting targets or benchmarks for monitoring the performance of each municipality and would be part of the urban information database that could be developed from the district data books.
4. The compilation of subsector tables follows a systematic order, in presenting
  - (i) the original tables, in most cases from the 2008 Population Census Report;
  - (ii) newly formatted tables (version 1) on urban and rural areas by province; and
  - (iii) specifically formatted tables (version 2) on municipalities.
5. The specially prepared tables contain the essential data and analysis in terms of index figures for the 1998–2008 comparison as well as indices linking the performance of each province (or municipality) to the national or regional average.
6. In this context, reference is made to the new district data tables that provide detailed data for each district and, thus, implicitly on each municipality, on several infrastructure categories. The information is not available by municipality.



Table A2.1 Gross Domestic Product by Economic Activity in Cambodia, 2002–2007

	Percent Distribution at Current Prices							Percent Distribution at Constant 2000 Prices									
	2003 <sup>a</sup>	2004	2005 <sup>b</sup>	2006	2007 <sup>b</sup>	2002	2003	2004	2005 <sup>b</sup>	2006	2007 <sup>b</sup>	2002	2003	2004	2005 <sup>b</sup>	2006	2007 <sup>b</sup>
Agriculture, fisheries, and forestry	32.0	29.4	30.7	30.1	29.7	31.5	32.0	28.8	29.4	28.0	26.7	31.5	32.0	28.8	29.4	28.0	26.7
Crops	14.5	13.6	15.7	15.1	15.5	13.4	15.0	13.3	15.0	14.2	14.0	13.4	15.0	13.3	15.0	14.2	14.0
Paddy	7.5	6.5	8.7	7.7	8.6	7.2	8.2	6.5	8.2	7.8	7.6	7.2	8.2	6.5	8.2	7.8	7.6
Other crops	7.0	7.1	7.0	7.4	7.0	6.1	6.8	6.8	6.7	6.5	6.4	6.1	6.8	6.8	6.7	6.5	6.4
Livestock and poultry	4.8	4.4	4.7	4.6	4.4	5.3	5.2	4.9	4.5	4.4	4.2	4.4	5.2	4.9	4.5	4.4	4.2
Fisheries	9.3	8.2	7.3	7.2	6.9	9.9	9.3	8.3	7.7	7.3	6.6	9.9	9.3	8.3	7.7	7.3	6.6
Forestry and logging	3.4	3.2	3.0	3.1	2.9	2.9	2.6	2.3	2.2	2.1	1.9	2.9	2.6	2.3	2.2	2.1	1.9
<b>Industry</b>	<b>25.0</b>	<b>25.6</b>	<b>25.0</b>	<b>26.2</b>	<b>24.9</b>	<b>24.7</b>	<b>25.5</b>	<b>26.9</b>	<b>26.8</b>	<b>28.6</b>	<b>28.1</b>	<b>24.7</b>	<b>25.5</b>	<b>26.9</b>	<b>26.8</b>	<b>28.6</b>	<b>28.1</b>
Mining	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4
Manufacturing	18.2	18.8	17.8	18.6	17.3	18.3	18.9	20.2	19.6	20.8	20.5	18.3	18.9	20.2	19.6	20.8	20.5
Food, beverages, and tobacco	2.6	2.4	2.4	2.2	2.2	2.8	2.7	2.3	2.2	2.1	1.9	2.8	2.7	2.3	2.2	2.1	1.9
Textiles, apparel, and footwear	12.4	13.3	12.3	13.0	12.1	12.5	13.4	15.2	14.6	15.9	15.9	12.5	13.4	15.2	14.6	15.9	15.9
Wood, paper, and publishing	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.6	0.5	0.4	0.4	0.4	0.4
Rubber manufacturing	0.6	0.6	0.5	0.6	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.2
Other manufacturing	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.2	2.1
Nonmetallic manufacturing	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6
Basic metal and metal products	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other manufacturing	1.4	1.3	1.3	1.4	1.3	1.4	1.4	1.3	1.3	1.4	1.3	1.4	1.4	1.3	1.3	1.4	1.3
Electricity, gas, and water	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6
Construction	6.0	6.0	6.3	6.7	6.7	5.6	5.8	5.9	6.4	6.9	6.7	5.6	5.8	5.9	6.4	6.9	6.7
<b>Services</b>	<b>38.2</b>	<b>39.3</b>	<b>39.1</b>	<b>38.7</b>	<b>38.5</b>	<b>38.6</b>	<b>37.6</b>	<b>38.6</b>	<b>38.5</b>	<b>38.3</b>	<b>38.3</b>	<b>38.6</b>	<b>37.6</b>	<b>38.6</b>	<b>38.5</b>	<b>38.3</b>	<b>38.3</b>
Trade	9.5	9.4	9.2	8.9	8.9	9.9	9.5	9.1	8.7	8.4	8.4	9.9	9.5	9.1	8.7	8.4	8.4
Hotel and restaurants	3.9	4.2	4.3	4.4	4.3	4.7	3.6	4.0	4.3	4.4	4.4	4.7	3.6	4.0	4.3	4.4	4.4
Transport and communications	6.7	7.1	7.4	7.1	6.9	7.1	6.8	6.7	6.8	6.2	6.1	7.1	6.8	6.7	6.8	6.2	6.1
Finance	1.0	1.1	1.1	1.3	1.4	1.0	1.0	1.1	1.1	1.3	1.4	1.0	1.0	1.1	1.1	1.3	1.4
Public administration	2.2	2.0	1.8	1.7	1.9	2.2	1.9	1.6	1.5	1.4	1.2	2.2	1.9	1.6	1.5	1.4	1.2
Real estate and business	7.0	7.2	6.6	6.5	6.3	6.4	7.3	8.0	7.6	7.6	7.6	6.4	7.3	8.0	7.6	7.6	7.6
Other services	8.0	8.5	8.6	8.8	8.8	7.2	7.6	8.1	8.5	9.0	9.1	7.2	7.6	8.1	8.5	9.0	9.1
<b>Taxes on products less subsidies</b>	<b>5.7</b>	<b>6.6</b>	<b>6.2</b>	<b>6.0</b>	<b>8.0</b>	<b>6.2</b>	<b>5.7</b>	<b>6.6</b>	<b>6.2</b>	<b>6.0</b>	<b>8.0</b>	<b>6.2</b>	<b>5.7</b>	<b>6.6</b>	<b>6.2</b>	<b>6.0</b>	<b>8.0</b>
Taxes on products	6.1	6.9	27.8	31.9	46.8	6.5	6.1	6.9	6.5	6.5	8.1	6.5	6.1	6.9	6.5	6.5	8.1
Less: Subsidies	0.3	0.3	1.4	2.3	0.8	0.3	0.3	0.3	0.3	0.5	0.1	0.3	0.3	0.3	0.3	0.5	0.1
Less: FISIM	0.9	1.0	1.0	1.0	1.1	0.9	0.9	1.0	1.0	1.0	1.1	0.9	0.9	1.0	1.0	1.0	1.1
<b>Gross domestic product</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

FISIM = financial intermediation services indirectly measured.

<sup>a</sup> Revised estimates.<sup>b</sup> Preliminary estimates.

Source: Government of Cambodia, NIS (2008a), p. 363.

**Table A2.2** Population by Main Employment Status, Sex, and Region in Cambodia, 2004 (%)

		Employment Status					
		Total	Employer	Paid Employee	Own Account Worker	Unpaid Family Worker	Other
Total	Both sexes	100.0	0.2	12.9	41.0	45.7	0.2
	Male	100.0	0.3	16.8	53.1	29.6	0.2
	Female	100.0	0.2	9.3	29.7	60.7	0.1
Urban	Both sexes	100.0	0.5	30.8	40.7	27.6	0.4
	Male	100.0	0.6	39.2	43.1	16.6	0.5
	Female	100.0	0.4	21.9	38.2	39.2	0.3
Rural	Both sexes	100.0	0.2	10.2	41.0	48.5	0.1
	Male	100.0	0.2	13.1	54.9	31.7	0.1
	Female	100.0	0.2	7.5	28.5	63.7	0.1

Source: Government of Cambodia, NIS (2008b) p.105.

**Table A2.3** Employed Population in Cambodia by Sector, 1998 and 2004 (%)

Sectors	1998	2004
Primary Sector (agriculture, hunting, forestry, and fishing)	77.5	74.2
Secondary Sector (mining and quarrying, electricity, gas and water supply, and construction)	4.3	7.0
Tertiary Sector (trade, hotels and restaurants, transport, business, and administration service activities)	18.2	18.8

Source: Government of Cambodia, NIS (2008b) p.105.

**Table A2.4** Gross Domestic Product and Per Capita Gross Domestic Product, 1993–2007

	At Current Prices									
	1993 <sup>a</sup>	1995 <sup>a</sup>	2000 <sup>a</sup>	2001 <sup>a</sup>	2002 <sup>a</sup>	2003 <sup>b</sup>	2004 <sup>b</sup>	2005 <sup>a</sup>	2006 <sup>b</sup>	2006
GDP (KR billion)	7,105	8,434	14,083	15,617	16,756	18,508	21,343	25,693	29,809	33,952
Growth rate (%)	4.3	18.7	5.3	10.9	7.3	10.5	15.3	20.4	16.0	13.9
Per capita GDP (KR '000)	637	733	1,111	1,212	1,279	1,389	1,575	1,868	2,105	2,341
Growth rate (%)	1.1	15.2	3.6	9.1	5.5	8.6	13.4	18.0	13.3	11.2
GDP (\$ million)	765	3,419	3,649	3,980	4,273	4,656	5,315	6,278	7,265	8,332
Growth rate (%)	11.5	23.7	4.1	9.1	7.4	9.0	14.2	18.1	15.7	14.7
Per capita GDP (\$)	248	297	288	309	326	349	392	454	513	575
Growth rate (%)	8.1	20.0	2.4	7.3	5.6	7.1	12.3	15.7	13.0	12.0
HFCE (KR billion)	6,713	7,812	12,211	12,950	13,715	15,059	17,753	21,104	23,515	26,016
Per capita HFCE (KR '000)	620	679	963	1,005	1,047	1,130	1,310	1,526	1,660	1,794
Monthly per capita HFCE (KR)	51,661	56,606	80,250	83,731	87,221	94,169	109,185	127,178	138,359	149,495
	At Constant Prices									
GDP (KR billion)	9,297	9,896	14,083	15,215	16,210	17,589	19,351	21,956	24,334	26,587
Growth rate (%)	9.1	6.4	8.8	8.0	6.5	8.5	10.0	13.5	10.8	9.3
Per capita GDP (KR '000)	833	861	1,111	1,180	1,237	1,320	1,426	1,588	1,718	1,833
Growth rate (%)	5.6	3.3	7.0	6.3	4.8	6.7	8.2	11.2	8.2	6.7
GDP (\$ million)	3,617	4,011	3,649	3,877	4,134	4,425	4,819	5,365	5,931	6,525
Growth rate (%)	16.6	10.9	7.5	6.2	6.6	7.0	8.9	11.3	10.5	10.0
Per capita GDP (\$)	324	349	286	301	315	332	356	388	419	450
Growth rate (%)	13.1	7.6	5.8	4.5	4.9	5.2	7.1	9.1	7.9	7.4
HFCE	8,476	9,206	12,211	12,499	13,194	14,232	16,019	17,981	19,211	20,376
Per capita HFCE (KR '000)	759	801	963	970	1,007	1,066	1,182	1,300	1,356	1,405
Monthly per capita HFCE (KR)	63,284	66,710	80,250	80,815	83,909	88,998	98,517	108,357	113,036	117,099
Population estimate NIS population predictions 2004	11,161	11,500	12,680	12,889	13,104	13,326	13,550	13,828	14,163	14,502
Official exchange rate (KR–\$)	2,570	2,467	3,859	3,924	3,921	3,975	4,016	4,092	4,103	4,075

GDP = gross domestic product, HFCE = household final consumption expenditure, NIS = National Institute of Statistics.

<sup>a</sup> Revised estimates.

<sup>b</sup> Preliminary estimates.

Source: Government of Cambodia, NIS (2008b) p. 360.

Table A2.5 Urban Growth in Cambodia, 1998–2008 ('000 persons)

City or Town	Rank (1998)	Population 1998, Urban Reclassification <sup>a</sup>	Population 1998, Urban by Province <sup>b</sup>	Population 2008, Urban by Province	Remarks on Municipality Status
Phnom Penh	1	1,078.0	950.4	1,243.0	Capital city municipality
Battambang	2	124.3	177.0	180.8	Municipality population of only 144,000 in 2008
Siem Reap	3	97.1	102.7	174.3	
Mongkol Borei (Banteay Meanchey)	4	85.4	135.4	181.4	Includes two municipalities, Srisopon and Poipet
Sihanoukville	5	66.7	66.7	89.4	"Old municipality" (pre-2008)
Kampong Cham	6	45.3	117.6	118.2	Includes Suong
Suong	7	44.6	Included in Kampong Cham	50.0	Municipality established in 2008
Poipet	8	43.4	Included in Banteay Meanchey	107.0	Municipality established in 2008
Kampong Chhnang	9	41.7	41.7	43.1	
Kampong Speu	10	41.5	48.0	54.5	
Kampot	11	36.0	45.2	48.3	
Kampong Thom	12	31.4	31.4	31.9	
Kratie	13	28.9	36.3	36.0	
Pursat	14	27.2	27.2	25.6	
Smach Meanchey (Koh Kong)	15	26.8	41.8	36.0	
Prey Veang	16	20.4	35.3	33.1	
Svay Rieng	17	17.0	17.0	17.0	
Kandal	18	15.5	146.0	195.9	Urban Kandal part of Phnom Penh
Stueng Traeng	19	15.1	15.1	17.0	
Srae Ambel (Koh Kong)	20	15.0	...	...	Included in Koh Kong
Kampong Leav (Prey Veang)	21	14.9	...	...	Included in Prey Veang
Takeo	22	13.6	13.7	14.4	
Samroang (Outd Mean)	23	12.1	12.1	18.7	
Labansiek (Rotan Kiri)	24	11.2	11.2	19.3	
Pailin		...	8.5	15.7	"Old municipality" (pre-2008)
Bavet (Svay Rieng)		...	...	...	Municipality established in 2009
Alongveng (Outd Mean)		...	....	...	Town without municipality, estimated population of 15,000
Kep		...	4.0	4.7	"Old municipality" (pre-2008)
<b>Total Urban Population</b>			<b>2,095.1</b>	<b>2,614.0</b>	

... = data not available.

<sup>a</sup> Urban reclassification (2004) of the 1998 population figures.

<sup>b</sup> Urban population as per 1998 population figures in 2008 census report.

Note: Nonstandard spelling of cities and towns from the 1962 records used.

Source: ADB (2010a).

**Table A2.6 Long-Term Urban Population Change in Cambodia, 1962–1998**  
(\*000 persons)

A: Population 1962 <sup>a</sup>			B: Population 1998 <sup>b</sup>			Urban Growth (Ratio B/A)
Place Name	1962 <sup>a</sup>	Rank	Rank	1998 <sup>b</sup>	Place Name	Urban Growth (Ratio B/A)
Phnom Penh	393.9	1	1	1,078.0	Phnom Penh	2.74 o
Battambang	38.8	2	2	124.3	Battambang	3.20 +
Kampong Cham	28.5	3	3	97.1	Siem Reap	9.52 !
Pursat	14.5	4	4	85.4	Mongkol Borei	Probably > 10!
Kampong Chhnang	13.0	5	5	66.7	Sihanoukville	9.39 !
Kampot	12.7	6	6	45.3	Kampong Cham	1.59 –
Kratie	12.1	7	7	44.6	Suong	Probably > 10!
Svay Rieng	11.3	8	8	43.4	Poipet	Probably > 10!
Siem Reap	10.2	9	9	41.7	Kampong Chhnang	3.21 +
Kampong Thom	9.5	10	10	41.5	Kampong Speu	5.53 !
Prey Veang	8.8	11	11	36.0	Kampot	2.83 o
Kep	7.7	12	12	31.4	Kampong Thom	3.30 +
Kampong Speu	7.5	13	13	28.9	Kratie	2.39 –
Takeo	7.3	14	14	27.2	Pursat	1.88 –
Sihanoukville	7.1	15	15	26.8	Smach Meanchey	Probably fast!
Mongkol Borei	No comparable data are available, as none of these places were classified as urban in 1962. Presumably, the size of each place is less than 5,000 inhabitants.		16	20.4	Prey Veang	2.32 –
Suong		17	17.0	Svay Rieng	1.50 –	
Poipet		18	15.5	Kandal	Probably all small towns with fast growth	
Smach Meanchey		19	15.1	Stueng Traeng		
Kandal		20	15.0	Srae Ambel		
Stueng Traeng		21	14.9	Kampong Leav	1.86 –	
Srae Ambel		22	13.6	Takeo		
Kampong Leav		23	12.1	Samroang	Fast !	
Sampang Labansiek		24	11.2	Labansiek	Fast !	
				(33)	4.0	Kep <sup>c</sup>
<b>Total (A): 15 Urban Areas (1962)</b>		<b>582.9</b>	<b>Total (B): The same 15 urban areas (1998)</b>		<b>1,672.8</b>	
<b>All 15 Towns with Data for 1962 and 1998 (Mean Factor of Urban Growth)</b>						<b>2.87</b>

o = average growth (around the value of 2.87), + = above average (3.20–3.30), ! = much above average (5.50–9.50), – = below average (as low as 1.50).

<sup>a</sup> All 15 “urban” areas as per the 1962 census.

<sup>b</sup> Urban areas as per an “urban study” (Government of Cambodia, NIS 2004c), which interpreted the figures of the 1998 census (listing for places with more than 10,000 people only).

<sup>c</sup> Kep constitutes a special problem of the “urban” definition. In 1962, a large part of the total population would have been rated as “urban,” while in 1998, only 4,000 of the total population of 28,000 was rated as living in an “urban” area.

Note: The dark gray shading indicates no comparable data for 1962.

Source: ADB (2006a) p. 95.

**Table A2.7** Urbanization, Urban Growth Rate, and Gross National Income per Capita in Cambodia

	Population in 2010			Urban Annual Growth Rate, 2010–2015	Gross National Income per Capita, 2008 (\$) <sup>a</sup>
	Urban ('000)	Total ('000)	Urban (%)		
Brunei Darussalam	313	414	75.7	2.32	50,200
Cambodia	3,470	15,224	22.8	4.48	1,820
Indonesia	128,634	239,600	53.7	2.70	3,830
Lao People's Democratic Republic	2,049	6,173	33.2	4.80	2,040
Malaysia	20,150	27,920	72.2	2.44	13,740
Myanmar	16,973	50,051	33.9	2.70	1,290
Philippines	61,731	93,001	66.4	2.60	3,900
Singapore	4,592	4,592	100.0	0.92	46,940
Thailand	22,118	65,125	34.0	1.75	5,990
Viet Nam	26,190	90,845	28.8	3.02	2,700
Timor-Leste	357	1,271	28.1	4.99	4,690
Southeast Asia	286,577	594,216	48.2	2.63	

<sup>a</sup> Purchasing power parity, current international US dollar.

Sources: United Nations Development Programme (2008) and World Bank (2009).

**Table A2.8** Urbanization in Southeast Asia, 1950–2050  
(% population in urban areas)

Country	1950	1975	2000	2025	2050
Brunei Darussalam	26.8	62.0	71.1	80.9	87.2
Cambodia	10.2	4.4	16.9	33.2	53.2
Indonesia	12.4	19.3	42.0	65.9	79.4
Lao People's Democratic Republic	7.2	11.1	22.0	49.0	68.0
Malaysia	20.4	37.7	62.0	80.5	87.9
Myanmar	16.2	23.9	28.0	44.6	63.1
Philippines	27.1	35.6	58.5	74.6	83.9
Singapore	99.4	100.0	100.0	100.0	100.0
Thailand	16.5	23.8	31.1	42.2	60.0
Viet Nam	11.6	18.8	24.3	38.1	57.0

Source: Yap (unpublished) p. 8, Tables 1 and 2.

**Table A2.9** Population Projection by Province in Cambodia, 1998–2020

	1998	2008	2009	2014	2020
Banteay Meanchey	638,892	839,037	862,314	987,529	1,152,152
Battambang	887,507	1,057,263	1,078,923	1,198,694	1,358,445
Kampong Cham	1,691,798	1,944,031	1,974,976	2,142,407	2,358,926
Kampong Chhnang	440,144	551,472	565,337	642,623	749,791
Kampong Speu	630,782	779,910	797,956	896,468	1,026,473
Kampong Thom	599,695	722,338	736,642	813,138	911,441
Kampot	557,322	627,974	637,303	689,443	759,162
Kandal	1,129,876	1,300,974	1,321,841	1,435,326	1,582,712
Kep	30,123	41,589	42,928	50,249	60,002
Kratie	276,706	360,691	370,010	419,025	482,725
Mondul Kiri	34,406	46,210	47,543	54,843	65,394
Otdar Meanchey	82,345	105,488	108,232	123,448	144,242
Preah Vihear	126,389	164,764	169,073	192,245	223,613
Prey Veang	995,211	1,073,917	1,084,872	1,145,482	1,223,193
Pursat	390,004	451,141	459,822	510,104	579,665
Ratanak Kiri	99,703	131,835	135,695	157,065	187,401
Siem Reap	734,126	924,923	947,487	1,069,044	1,229,432
Sihanoukville	163,303	231,184	238,954	280,420	335,186
Stueng Traeng	85,602	112,684	115,739	132,129	154,126
Svay Rieng	503,080	557,058	563,958	602,190	651,073
Takeo	833,381	937,556	950,957	1,025,659	1,125,349
<b>Cambodia</b>	<b>12,132,172</b>	<b>14,655,950</b>	<b>14,957,752</b>	<b>16,589,047</b>	<b>18,724,315</b>

Source: Government of Cambodia, NIS (2004b) p. 40–41.

Table A2.10 Overview of 27 Municipalities and Urbanized Sangkats in District Data Books

No.	Municipal Code	Province	Municipality	Total Urban Population (2008 census)	Population in Most Urbanized Sangkat (2009 data book)	Remarks
<b>Cambodia</b>				<b>2,651,150</b>	<b>1,069,719</b>	The remaining 1.5 million are in less urbanized <i>sangkats</i> .
<b>A. Plain Region</b>				<b>1,658,819</b>	<b>682,218</b>	
1		Phnom Penh	Phnom Penh	1,242,992	571,649	
2	811	Kandal	Ta Khmao	195,898	18,381	
3	305	Kampong Cham	Kampong Cham	82,346	13,423	
4	317	Kampong Cham	Suong	35,896	22,730	
5	2006	Svay Rieng	Svay Rieng	17,029	13,253	
6	2008	Svay Rieng	Bavet	37,123	11,201	
7	1413	Prey Veng	Svay Antor	33,079	13,713	Contradiction in statistical records
8	2108	Takeo	Daun Keo	14,456	17,868	Contradiction in statistical records
<b>B. Tonle Sap Lake Region</b>				<b>671,533</b>	<b>268,234</b>	
9	106	Banteay Meanchey	Serei Saophaon	73,407	22,362	
10	110	Banteay Meanchey	Poipet	107,989	92,143	
11	203	Battambang	Battambang	180,853	26,202	
12	403	Kampong Chhnang	Kampong Chhnang	43,130	17,289	
13	603	Kampong Thom	Stueng Saen	31,871	18,548	
14	1710	Siem Reap	Siem Reap	174,265	40,473	
15	2401	Pailin	Pailin	15,674	11,402	
16	1505	Pursat	Pursat	25,650	21,069	
17	2204	Otdar Meanchey	Samroang	18,694	18,746	Nearly identical numbers
<b>C. Coastal Region</b>				<b>178,452</b>	<b>50,308</b>	
18	48274	Kampot	Kampot	48,274	11,567	
19	36053	Koh Kong	Khemara Phumin	36,053	12,745	
20	4678	Kep	Kep	4,678	4,235	
21	89447	Preah Sihanouk	Preah Sihanouk	89,447	21,761	
<b>D. Plateau and Mountainous Region</b>				<b>142,346</b>	<b>68,959</b>	
22	54505	Kampong Speu	Chbar Mon	54,505	15,223	
23	35964	Kratie	Kratie	35,964	11,894	
24	4859	Mondul Kiri	Saem Monourom	4,859	3,661	
25	10679	Preah Vihear	Preah Vihear	10,679	9,151	
26	19317	Ratanak Kiri	Ban Lung	19,317	15,665	
27	17022	Stung Treng	Stung Treng	17,022	13,265	

Source: Government of Cambodia, National Committee for Subnational Democratic Development (2009).



Table A2.11 General Population Census of Cambodia, 2008

	Total Households	Both Sexes	Male	Female	Sex Ratio	Average Household Size
<b>Cambodia</b>	<b>2,832,691</b>	<b>13,388,910</b>	<b>6,211,908</b>	<b>6,591,892</b>	<b>94.2</b>	<b>4.7</b>
<b>A. Plain Region</b>	<b>1,410,507</b>	<b>6,545,533</b>	<b>3,142,061</b>	<b>3,403,472</b>	<b>92.3</b>	<b>4.6</b>
Phnom Penh	257,828	1,325,681	622,197	703,484	88.4	5.1
Kandal	257,857	1,265,085	609,810	655,275	93.1	4.9
Kampong Cham	368,871	1,680,694	817,251	863,443	94.7	4.6
Svay Rieng	115,282	482,785	231,129	251,656	91.8	4.2
Prey Veng	226,764	947,357	451,875	495,482	91.2	4.2
Takeo	183,905	843,931	409,799	434,132	94.4	4.6
<b>B. Tonle Sap Lake Region</b>	<b>906,979</b>	<b>4,354,456</b>	<b>2,128,895</b>	<b>2,225,561</b>	<b>95.7</b>	<b>4.8</b>
Banteay Meanchey	144,400	678,033	331,289	346,744	95.5	4.7
Battambang	210,327	1,024,663	504,974	519,689	97.2	4.9
Kampong Chhnang	101,122	471,616	226,357	245,259	92.3	4.7
Kampong Thom	134,123	630,803	306,547	324,256	94.5	4.7
Siem Reap	180,097	896,309	437,994	458,315	95.6	5.0
Otdar Meanchey	38,642	185,443	93,193	92,250	101.0	4.8
Pailin	14,753	70,482	36,187	34,295	105.5	4.8
Pursat	83,515	397,107	192,354	204,753	93.9	4.8
<b>C. Coastal Region</b>	<b>206,310</b>	<b>960,487</b>	<b>471,098</b>	<b>489,389</b>	<b>99.8</b>	<b>4.7</b>
Kampot	129,745	585,110	283,604	301,506	94.1	4.5
Koh Kong	28,853	139,722	70,665	69,057	102.3	4.8
Kep	7,234	35,753	17,603	18,150	97.0	4.9
Sihanoukville	40,478	199,902	99,226	100,676	98.6	4.9
<b>D. Plateau and Mountainous Region</b>	<b>308,895</b>	<b>1,528,434</b>	<b>753,458</b>	<b>774,976</b>	<b>97.2</b>	<b>4.9</b>
Kampong Speu	149,132	716,517	347,594	368,923	94.2	4.8
Kratie	65,632	318,523	158,365	160,158	98.9	4.9
Mondul Kiri	12,296	60,811	31,128	29,683	104.9	4.9
Preah Vihear	33,260	170,852	84,909	85,943	98.8	5.1
Ratanak Kiri	27,396	149,997	75,827	74,170	102.2	5.5
Stung Treng	21,179	111,734	55,635	56,099	99.2	5.3

Note: Data based on preliminary report of provisional population totals.

Source: Government of Cambodia, NIS (2008b) p. 52.

**Table A2.12 Distribution of Residential and Partly Residential Buildings According to Nature of Construction, 1998 and 2008 (%)**

Code	Province	Year	Residence	Total Number of Buildings	Percentage of Buildings by Nature of Construction		
					Permanent	Semi-Permanent	Temporary
	Cambodia	2008	Total	2,637,654	56.97	24.56	18.47
			Urban	450,345	86.48	9.33	4.19
			Rural	2,187,309	50.90	27.69	21.41
		1998	Total	1,989,828	34.10	21.40	44.50
			Urban	295,148	69.06	14.11	16.83
			Rural	1,694,680	28.01	22.67	49.32
01	Banteay Meanchey	2008	Total	135,354	57.21	26.05	16.74
			Urban	34,491	69.96	19.31	10.73
			Rural	100,863	52.84	28.36	18.80
		1998	Total	102,574	30.97	22.64	46.39
			Urban	235,38	48.98	15.61	35.41
			Rural	79,036	25.60	27.74	49.66
02	Battambang	2008	Total	198,577	51.91	26.55	21.54
			Urban	33,789	77.86	18.15	3.99
			Rural	164,788	46.59	28.27	25.14
		1998	Total	134,828	30.69	25.29	44.02
			Urban	29,197	58.61	24.04	17.36
			Rural	105,631	22.98	25.63	51.39
03	Kampong Cham	2008	Total	344,091	55.10	26.76	18.15
			Urban	23,345	78.97	15.11	5.92
			Rural	320,746	53.36	27.60	19.04
		1998	Total	287,254	35.06	24.57	40.38
			Urban	19,398	65.54	17.17	17.29
			Rural	267,856	32.85	25.10	42.05
04	Kampong Chhnang	2008	Total	97,421	39.17	29.02	31.81
			Urban	7,831	62.43	22.76	14.81
			Rural	89,590	37.14	29.57	33.29
		1998	Total	78,118	21.91	19.21	58.88
			Urban	6,552	39.00	18.57	42.43
			Rural	71,566	20.35	19.27	60.38
05	Kampong Speu	2008	Total	142,924	63.01	19.02	17.97
			Urban	10,182	83.96	10.36	5.68
			Rural	132,742	61.41	19.68	18.91
		1998	Total	110,951	34.83	18.71	46.45
			Urban	8,116	63.01	17.98	19.01
			Rural	102,835	32.61	18.77	48.62
06	Kampong Thom	2008	Total	127,995	48.51	22.13	29.36
			Urban	6,333	78.49	13.69	7.82
			Rural	121,662	46.95	22.57	30.48
		1998	Total	100,567	32.57	18.67	48.76
			Urban	53,28	55.01	20.14	24.85
			Rural	95,239	31.31	18.59	50.10
07	Kampot	2008	Total	126,689	56.65	24.53	18.82
			Urban	9,321	81.72	11.13	7.16
			Rural	117,368	54.65	25.59	19.75
		1998	Total	101,565	33.91	21.07	45.03
			Urban	7,555	60.60	15.20	24.21
			Rural	94,010	31.76	21.54	46.70

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Table A2.12 *continued*

Code	Province	Year	Residence	Total Number of Buildings	Percentage of Buildings by Nature of Construction		
					Permanent	Semi- Permanent	Temporary
08	Kandal	2008	Total	237,190	65.41	25.22	9.37
			Urban	34,342	87.99	9.30	2.71
			Rural	202,848	61.59	27.92	10.49
		1998	Total	186,278	41.10	22.35	36.54
			Urban	23,036	70.82	14.53	14.66
			Rural	163,242	36.91	23.46	39.63
09	Koh Kong	2008	Total	23,108	77.23	11.65	11.13
			Urban	6,998	92.80	5.17	2.03
			Rural	16,110	70.47	14.46	15.08
		1998	Total	19,995	56.84	26.54	16.62
			Urban	6,784	68.01	22.88	9.11
			Rural	13,211	51.10	28.42	20.48
10	Kratie	2008	Total	60,021	48.84	19.63	31.53
			Urban	6,992	70.94	17.71	11.36
			Rural	53,029	45.92	19.88	34.19
		1998	Total	44,245	29.43	19.70	50.86
			Urban	5,647	48.73	18.04	33.22
			Rural	38,598	26.61	19.94	53.45
11	Mondul Kiri	2008	Total	10,689	57.37	16.00	26.63
			Urban	937	93.49	4.59	1.92
			Rural	9,752	53.90	17.09	29.01
		1998	Total	5,228	15.28	11.13	73.58
			Urban	460	71.74	20.65	7.61
			Rural	4,768	9.84	10.21	79.95
12	Phnom Penh	2008	Total	214,043	94.97	3.58	1.45
			Urban	198,082	95.91	3.02	1.06
			Rural	15,961	83.19	10.50	6.31
		1998	Total	116,418	83.68	8.13	8.19
			Urban	107,570	85.07	7.56	7.38
			Rural	8,848	66.82	15.08	18.11
13	Preah Vihear	2008	Total	31,930	48.02	20.66	31.32
			Urban	1,982	70.74	20.59	8.68
			Rural	29,948	46.52	20.67	32.82
		1998	Total	19,891	14.69	20.36	64.95
			Urban	1,320	47.05	25.00	27.95
			Rural	18,571	12.39	20.03	67.58
14	Prey Veng	2008	Total	212,552	39.01	37.69	23.30
			Urban	6,663	75.46	16.42	8.12
			Rural	205,889	37.83	38.38	23.79
		1998	Total	181,647	19.94	26.39	53.68
			Urban	6,325	51.27	16.00	32.73
			Rural	175,322	18.81	26.76	54.43
15	Pursat	2008	Total	79,828	52.79	21.26	25.95
			Urban	5,020	81.02	12.83	6.16
			Rural	74,808	50.90	21.82	27.28
		1998	Total	64,643	28.99	20.11	50.90
			Urban	4,769	64.25	15.66	20.09
			Rural	59,874	26.18	20.46	53.36
16	Ratanak Kiri	2008	Total	22,451	58.60	10.80	30.60
			Urban	3,279	93.38	4.76	1.86
			Rural	19,172	52.65	11.83	35.51

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Table A2.12 *continued*

Code	Province	Year	Residence	Total Number of Buildings	Percentage of Buildings by Nature of Construction				
					Permanent	Semi- Permanent	Temporary		
17	Siem Reap	1998	Total	12,111	22.35	10.44	67.21		
			Urban	1,866	74.76	15.33	9.91		
			Rural	10,245	12.81	9.55	77.65		
		2008	Total	167,827	50.24	25.41	24.34		
			Urban	28,013	72.22	17.07	10.70		
			Rural	139,814	45.84	27.09	27.08		
		1998	Total	119,468	22.54	17.16	60.30		
			Urban	16,081	51.82	14.43	33.75		
			Rural	103,387	17.98	17.59	64.43		
18	Preah Sihanouk	2008	Total	41,093	79.63	11.69	8.69		
			Urban	16,264	93.09	5.13	1.78		
			Rural	24,829	70.81	15.98	13.21		
		1998	Total	28,289	59.93	22.10	17.97		
			Urban	10,098	81.34	10.38	8.28		
			Rural	18,191	48.04	28.61	23.35		
		19	Stung Traeng	2008	Total	19,366	54.37	16.37	29.26
					Urban	3,008	91.76	5.95	2.29
					Rural	16,358	47.50	18.28	34.22
1998	Total			13,479	28.18	21.65	50.17		
	Urban			2,456	60.88	35.91	3.21		
	Rural			11,020	20.89	18.47	60.64		
20	Svay Rieng			2008	Total	108,974	40.45	39.89	19.65
					Urban	3,383	82.26	13.98	3.75
					Rural	105,591	39.11	40.72	20.16
		1998	Total	93,428	14.33	20.78	64.89		
			Urban	2,901	62.84	15.65	22.51		
			Rural	90,527	12.77	20.97	66.25		
		21	Takeo	2008	Total	177,998	57.87	30.18	11.95
					Urban	2,651	81.52	13.20	5.28
					Rural	175,347	57.52	30.43	12.05
1998	Total			148,611	36.12	22.43	41.45		
	Urban			2,360	70.34	10.81	18.86		
	Rural			146,251	35.57	22.62	41.81		
22	Otdar Meanchey			2008	Total	36,857	49.81	31.25	18.95
					Urban	3,441	67.42	21.59	10.99
					Rural	33,416	47.99	32.24	19.77
		1998	Total	11,235	31.03	54.17	14.80		
			Urban	1,751	45.40	53.11	1.48		
			Rural	9,484	28.37	54.37	17.26		
		23	Kep	2008	Total	6,888	63.55	22.14	14.31
					Urban	939	73.16	14.38	12.46
					Rural	5,949	62.03	23.37	14.61
1998	Total			5,118	31.20	16.71	52.09		
	Urban			761	40.47	14.06	45.47		
	Rural			4,657	29.58	17.17	53.25		
24	Pailin			2008	Total	13,788	57.88	16.17	25.95
					Urban	3,059	77.90	10.85	11.25
					Rural	10,729	52.18	17.68	30.14
		1998	Total	3,887	55.78	18.55	25.68		
			Urban	1,276	63.95	19.75	16.30		
			Rural	2,611	51.78	17.96	30.26		

Source: Government of Cambodia, NIS (2008a). pp. 264–267.

**Table A2.13 Housing Conditions by Province and Rural and Urban Sectors, 1998–2008:  
Combined Amenities**

Code	Province	Residence	Percentage of Households with Combined Amenities	
			1998	2008
<b>Cambodia</b>		<b>Total</b>	<b>8.00</b>	<b>17.41</b>
		<b>Urban</b>	<b>42.92</b>	<b>72.49</b>
		<b>Rural</b>	<b>0.92</b>	<b>5.34</b>
01	Banteay Meanchey	Total	4.48	17.79
		Urban	17.59	56.92
		Rural	0.53	4.25
02	Battambang	Total	6.95	14.37
		Urban	26.43	51.78
		Rural	1.52	6.70
03	Kampong Cham	Total	2.44	8.31
		Urban	20.75	48.36
		Rural	1.08	5.38
04	Kampong Chhnang	Total	1.81	6.67
		Urban	16.66	52.99
		Rural	0.35	2.52
05	Kampong Speu	Total	1.39	5.54
		Urban	13.76	45.09
		Rural	0.39	2.53
06	Kampong Thom	Total	1.27	5.22
		Urban	19.31	50.19
		Rural	0.27	2.86
07	Kampot	Total	3.08	7.25
		Urban	32.89	57.00
		Rural	0.51	3.17
08	Kandal	Total	4.38	19.46
		Urban	21.62	64.43
		Rural	1.82	11.99
09	Koh Kong	Total	9.68	26.64
		Urban	17.92	50.53
		Rural	5.16	16.11
10	Kratie	Total	4.79	8.56
		Urban	24.97	48.19
		Rural	1.66	3.47
11	Mondul Kiri	Total	2.15	9.68
		Urban	13.35	62.79
		Rural	1.09	5.29
12	Phnom Penh	Total	66.16	86.17
		Urban	70.12	89.85
		Rural	1.55	36.90
13	Preah Vihear	Total	1.04	5.33
		Urban	13.12	58.13
		Rural	0.19	1.83
14	Prey Veang	Total	1.68	4.00
		Urban	35.51	65.33
		Rural	0.46	2.04

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Table A2.13 *continued*

Code	Province	Residence	Percentage of Households with Combined Amenities	
			1998	2008
15	Pursat	Total	3.68	7.14
		Urban	32.88	56.45
		Rural	1.32	3.73
16	Ratanak Kiri	Total	1.61	12.28
		Urban	10.58	72.72
		Rural	0.35	2.75
17	Siem Reap	Total	3.41	16.69
		Urban	22.15	68.59
		Rural	0.32	4.51
18	Preah Sihanouk	Total	10.34	36.46
		Urban	21.58	68.25
		Rural	3.50	14.28
19	Stung Treng	Total	6.05	10.93
		Urban	28.13	56.71
		Rural	0.74	2.53
20	Svay Rieng	Total	1.56	7.87
		Urban	26.77	85.65
		Rural	0.72	5.37
21	Takeo	Total	1.17	5.02
		Urban	22.98	59.67
		Rural	0.84	4.21
22	Otdar Meanchey	Total	0.62	8.47
		Urban	3.02	23.36
		Rural	0.15	6.93
23	Kep	Total	0.42	5.17
		Urban	1.04	13.83
		Rural	0.31	3.84
24	Pailin	Total	5.60	22.91
		Urban	15.57	47.76
		Rural	0.49	15.78

Note: Combined amenities denote improved water supply, electric power, and toilet facilities within residence.

Source: Government of Cambodia, NIS (2008a) pp. 257–258.

**Table A2.14** Type of Roof for Houses and Use in All Cities and Provinces, 2002

City or Province	Thatch	Tile	Fiber Cement	Corrugated Iron	Concrete	Total Houses	Total Families
Banteay Meanchey	58,760	3,914	2,199	53,867	1,907	120,647	128,854
Battambang	77,433	8,531	4,013	74,946	2,129	167,052	174,807
Kampong Cham	123,539	128,510	10,906	44,972	2,624	310,551	351,108
Kampong Chhnang	41,076	21,679	7,117	13,011	624	83,507	88,115
Kampong Speu	53,541	34,239	8,055	27,491	548	123,874	127,953
Kampong Thom	56,491	43,443	1,247	7,365	486	109,032	118,638
Kampot	41,304	37,444	12,923	16,255	1,548	109,474	111,728
Kandal	52,015	61,428	14,364	71,716	3,801	203,324	225,163
Koh Kong	9,114	311	2,453	12,273	117	24,268	24,620
Kratie	26,306	15,027	789	7,048	385	49,555	54,863
Mondolkiri	5,311	315	53	2,035	14	7,728	8,784
Phnom Penh	8,022	22,192	20,278	65,968	48,984	165,444	182,464
Preah Vihear	15,701	1,322	536	6,788	20	24,367	26,491
Prey Veang	92,098	63,265	3,918	34,719	677	194,677	218,989
Pursat	39,418	14,724	1,141	15,696	488	71,467	73,219
Ratanak Kiri	13,226	945	94	4,030	100	18,395	22,395
Siem Reap	68,369	34,893	4,200	22,782	678	130,922	135,405
Sihanoukville	7,691	638	2,881	15,973	1,144	28,327	30,120
Stueng Traeng	8,664	337	228	6,265	133	15,627	17,231
Svay Rieng	48,605	21,050	1,526	29,654	735	101,570	107,758
Takeo	47,951	66,610	5,977	37,369	1,134	159,041	165,878
Udor Meanchey	16,076	345	318	7,428	5	24,172	25,915
Kep	2,995	805	733	1,266	84	5,883	6,392
Pailin	4,298	27	1,277	2,680	80	8,362	9,312
<b>Total Percentage</b>	<b>40</b>	<b>26</b>	<b>5</b>	<b>26</b>	<b>3</b>	<b>100</b>	

Source: Government of Cambodia, NIS (2004a).

Table A2.15 Changes in Residential Buildings by Standard of Construction, 1998–2008

Code and Province Name			Buildings	%	Permanent (%)	Change (1998 = 1.00)	Index: Speed of Change		
							Fast	Medium	Slow
Cambodia	2008	Total	2,637,654		57	1.68	> 1.71		< 1.65
		Urban	450,345	17	86	1.25	> 1.27		< 1.23
		Rural	2,187,309		51				
	1998	Total	1,989,828		34				
		Urban	295,148	15	69				
		Rural	1,694,680		28				
01 Banteay Meanchey	2008	Total	135,354		57	1.84	fast		
		Urban	34,491	25	70	1.43	fast		
		Rural	100,863		53				
	1998	Total	102,574		31				
		Urban	23,538	23	49				
		Rural	79,036		26				
02 Battambang	2008	Total	198,577		52	1.68		medium	
		Urban	33,789	17	78	1.32	fast		
		Rural	164,788		46				
	1998	Total	134,828		31				
		Urban	29,197	22	59				
		Rural	105,631		23				
03 Kampong Cham	2008	Total	344,091		55	1.57			slow
		Urban	23,345	7	79	1.22			slow
		Rural	320,746		53				
	1998	Total	287,254		35				
		Urban	19,398	7	65				
		Rural	267,856		33				
04 Kampong Chhnang	2008	Total	97,421		39	1.77	fast		
		Urban	7,831	8	62	1.59	fast		
		Rural	89,590		37				
	1998	Total	78,118		22				
		Urban	6,552	8	39				
		Rural	71,566		20				
05 Kampong Speu	2008	Total	142,924		63	1.80	fast		
		Urban	10,182	7	83	1.32	fast		
		Rural	132,742		61				
	1998	Total	110,951		35				
		Urban	8,116	7	63				
		Rural	102,835		32				
06 Kampong Thom	2008	Total	127,995		48	1.45			slow
		Urban	6,333	5	78	1.42	fast		
		Rural	121,662		47				
	1998	Total	100,567		33				
		Urban	5,328	5	55				
		Rural	95,239		31				
07 Kampot	2008	Total	126,689		57	1.68		medium	
		Urban	9,321	7	82	1.34	fast		
		Rural	117,368		55				
	1998	Total	101,565		34				
		Urban	7,555	7	61				
		Rural	94,010		32				
08 Kandal	2008	Total	237,190		65	1.59			slow
		Urban	34,342	14	88	1.24		medium	
		Rural	202,848		62				

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Table A2.15 *continued*

Code and Province Name		Buildings	%	Permanent (%)	Change (1998 = 1.00)	Index: Speed of Change		
						Fast	Medium	Slow
	1998	Total	186,278		41			
		Urban	23,036	12	71			
		Rural	163,242		37			
09 Koh Kong	2008	Total	23,108		77	1.35		slow
		Urban	6,998	30	93	1.37	fast	
		Rural	16,110		70			
	1998	Total	19,995		57			
		Urban	6,784	34	68			
		Rural	13,211		51			
10 Kratie	2008	Total	60,021	12	49	1.69		medium
		Urban	6,992		71	1.45	fast	
		Rural	53,029		46			
	1998	Total	44,245		29			
		Urban	5,647	13	49			
		Rural	38,598		27			
11 Mondul Kiri	2008	Total	10,689		57	3.80	fast	
		Urban	937	9	93	1.29	fast	
		Rural	9,754		54			
	1998	Total	5,228		15			
		Urban	460	9	72			
		Rural	4,768		10			
12 Phnom Penh	2008	Total	217,043		95	1.13		slow
		Urban	198,082	93	96	1.13		slow
		Rural	15,961		83			
	1998	Total	116,418		84			
		Urban	107,570	92	85			
		Rural	8,848		67			
13 Preah Vihear	2008	Total	31,930		48	3.20	fast	
		Urban	1,982	6	71	1.51	fast	
		Rural	29,948		47			
	1998	Total	19,891		15			
		Urban	1,320	7	47			
		Rural	18,571		12			
14 Prey Veang	2008	Total	112,552	6	39	1.95	fast	
		Urban	6,663		75	1.47	fast	
		Rural	105,889		38			
	1998	Total	81,647		20			
		Urban	6,325	8	51			
		Rural	75,322		19			
15 Pursat	2008	Total	79,828		53	1.83	fast	
		Urban	5,020	6	81	1.27		medium
		Rural	74,808		51			
	1998	Total	64,643		29			
		Urban	47,769	7	64			
		Rural	59,874		26			
16 Ratanak Kiri	2008	Total	22,451		59	2.68	fast	
		Urban	3,279	15	93	1.24		medium
		Rural	19,172		53			
	1998	Total	12,111		22			
		Urban	1,866	15	75			
		Rural	10,245		13			
17 Siem Reap	2008	Total	167,827		50	2.17	fast	
		Urban	28,013	17	72	1.38	fast	
		Rural	139,814		46			

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Table A2.15 *continued*

Code and Province Name			Buildings	%	Permanent (%)	Change (1998 = 1.00)	Index: Speed of Change		
							Fast	Medium	Slow
	1998	Total	119,468		23				
		Urban	16,081	13	52				
		Rural	103,387		18				
18 Preah Sihanouk	2008	Total	41,093		80	1.33			slow
		Urban	16,264	40	93	1.15			slow
		Rural	24,829		71				
	1998	Total	28,289		60				
		Urban	10,098	35	81				
		Rural	18,191		48				
19 Stung Treng	2008	Total	19,366		54	1.93	fast		
		Urban	3,008	16	92	1.51	fast		
		Rural	16,358		47				
	1998	Total	13,479		28				
		Urban	2,459	18	61				
		Rural	11,020		21				
20 Svay Rieng	2008	Total	108,974		40	2.86	fast		
		Urban	3,383	3	82	1.30	fast		
		Rural	105,591		40				
	1998	Total	93,428		14				
		Urban	2,901	3	63				
		Rural	90,527		13				
21 Takeo	2008	Total	177,998		58	1.61			slow
		Urban	2,651	1	81	1.16			slow
		Rural	175,347		57				
	1998	Total	148,611		36				
		Urban	2,360	2	70				
		Rural	146,251		36				
22 Otdar Meanchey	2008	Total	36,857		50	1.61			slow
		Urban	3,441	9	67	1.49	fast		
		Rural	33,416		48				
	1998	Total	11,235		31				
		Urban	1,751	16	45				
		Rural	9,484		28				
23 Kep	2008	Total	6,888		64	2.06	fast		
		Urban	939	14	73	1.83	fast		
		Rural	5,949		62				
	1998	Total	5,118		31				
		Urban	761	15	40				
		Rural	4,357		30				
24 Pailin	2008	Total	13,788		58	1.04			slow
		Urban	3,059	22	78	1.24		medium	
		Rural	10,729		52				
	1998	Total	3,887		56				
		Urban	1,276	33	63				
		Rural	2,611		52				
<b>Overall Change in Provinces</b>							<b>12</b>	<b>3</b>	<b>9</b>
<b>Urban Change in Provinces</b>							<b>16</b>	<b>4</b>	<b>4</b>

Notes:

1. Analysis based on index of change.
2. National mean value for overall change 1998–2008: factor 1.68 or midpoint in rate 1.65–1.71. Therefore, change over 1.71 is rated as fast, and change under 1.65 is rated as slow. Similarly, the national value for urban change 1998–2008: factor 1.25 or midpoint in range 1.23–1.71. Therefore, change over 1.27 is rated as fast, and change under 1.23 is rated as slow.

Source: Data from Government of Cambodia, NIS (2008a) pp. 264–267. Interpretation by means of statistical analysis by the authors.

**Table A2.16** Changes in Residential Buildings with Combined Amenities, 1998–2008

Code and Province Name			%	Change (1998 = 1.00)	Index: Speed of Change		
					Fast	Medium	Slow
Cambodia	2008	Total	17.41	2.18	Range from 1.30 to 13.66		
		Urban	72.49	1.69	Range from 1.28 to 13.30		
		Rural	5.34	5.45	Range from 2.30 to 46.20		
	1998	Total	8.00				
		Urban	42.92				
		Rural	0.98				
01 Banteay Meanchey	2008	Total	17.79	3.97	fast		
		Urban	56.92	3.24	fast		
		Rural	4.52	8.53	fast		
	1998	Total	4.48				
		Urban	17.59				
		Rural	0.53				
02 Battambang	2008	Total	14.37	2.07	medium		
		Urban	51.78	1.96	fast		
		Rural	6.70	4.41			slow
	1998	Total	6.95				
		Urban	26.43				
		Rural	1.52				
03 Kampong Cham	2008	Total	8.31	3.41	fast		
		Urban	48.36	2.33	fast		
		Rural	5.38	4.98			slow
	1998	Total	2.44				
		Urban	20.75				
		Rural	1.08				
04 Kampong Chhnang	2008	Total	6.67	3.69	fast		
		Urban	52.99	3.18	fast		
		Rural	2.52	7.20	fast		
	1998	Total	1.81				
		Urban	16.66				
		Rural	0.35				
05 Kampong Speu	2008	Total	5.54	3.99	fast		
		Urban	45.09	3.28	fast		
		Rural	2.53	6.49	fast		
	1998	Total	1.39				
		Urban	13.76				
		Rural	0.39				
06 Kampong Thom	2008	Total	5.22	4.11	fast		
		Urban	50.19	2.60	fast		
		Rural	2.86	10.59	fast		
	1998	Total	1.27				
		Urban	19.31				
		Rural	0.27				
07 Kampot	2008	Total	7.25	2.35	medium		
		Urban	57.00	1.73	medium		
		Rural	3.17	6.22	fast		
	1998	Total	3.08				
		Urban	32.89				
		Rural	0.51				
08 Kandal	2008	Total	19.46	4.44	fast		
		Urban	64.43	2.98	fast		
		Rural	11.99	6.59	fast		

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Table A2.16 *continued*

Code and Province Name			%	Change (1998 = 1.00)	Index: Speed of Change		
					Fast	Medium	Slow
	1998	Total	4.38				
		Urban	21.62				
		Rural	1.82				
09 Koh Kong	2008	Total	26.64	2.75	fast		
		Urban	50.53	2.82	fast		
		Rural	16.11	3.12			slow
	1998	Total	9.68				
		Urban	17.92				
		Rural	5.16				
10 Kratie	2008	Total	8.56	1.79			slow
		Urban	48.19	1.93	fast		
		Rural	3.47	2.09			slow
	1998	Total	4.79				
		Urban	24.97				
		Rural	1.66				
11 Mondul Kiri	2008	Total	9.68	4.50	fast		
		Urban	62.79	4.70	fast		
		Rural	5.29	4.85			slow
	1998	Total	2.15				
		Urban	13.35				
		Rural	1.09				
12 Phnom Penh	2008	Total	86.17	1.30			slow
		Urban	89.85	1.28			slow
		Rural	36.90	23.81	fast		
	1998	Total	66.16				
		Urban	70.12				
		Rural	1.55				
13 Preah Vihear	2008	Total	5.33	5.13	fast		
		Urban	58.13	4.43	fast		
		Rural	1.83	9.63	fast		
	1998	Total	1.04				
		Urban	13.12				
		Rural	0.19				
14 Prey Veang	2008	Total	4.00	2.38	fast		
		Urban	65.33	1.84	fast		
		Rural	2.04	4.43			slow
	1998	Total	1.68				
		Urban	35.51				
		Rural	0.46				
15 Pursat	2008	Total	7.14	1.94	fast		
		Urban	56.45	1.72		medium	
		Rural	3.73	2.83			slow
	1998	Total	3.68				
		Urban	32.88				
		Rural	1.32				
16 Ratanak Kiri	2008	Total	12.28	7.63	fast		
		Urban	72.72	6.87	fast		
		Rural	2.75	7.86	fast		
	1998	Total	1.61				
		Urban	10.58				
		Rural	0.35				
17 Siem Reap	2008	Total	16.69	4.89	fast		
		Urban	68.59	3.10	fast		
		Rural	4.51	14.09	fast		

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Table A2.16 *continued*

Code and Province Name			%	Change (1998 = 1.00)	Index: Speed of Change		
					Fast	Medium	Slow
	1998	Total	3.41				
		Urban	22.15				
		Rural	0.32				
18 Preah Sihanouk	2008	Total	36.46	3.53	fast		
		Urban	68.25	3.16	fast		
		Rural	14.28	4.08		slow	
	1998	Total	10.34				
		Urban	21.58				
		Rural	3.50				
19 Stung Traeng	2008	Total	10.93	1.81		slow	
		Urban	56.71	2.02	fast		
		Rural	2.53	3.42		slow	
	1998	Total	6.05				
		Urban	28.13				
		Rural	0.74				
20 Svay Rieng	2008	Total	7.87	5.04	fast		
		Urban	85.65	3.20	fast		
		Rural	5.37	7.46	fast		
	1998	Total	1.56				
		Urban	26.77				
		Rural	0.72				
21 Takeo	2008	Total	5.02	4.29	fast		
		Urban	59.67	2.60	fast	medium	
		Rural	4.21	5.01			
	1998	Total	1.17				
		Urban	22.98				
		Rural	0.84				
22 Otdar Meanchey	2008	Total	8.47	13.66	fast		
		Urban	23.36	7.74	fast		
		Rural	6.93	46.20	fast		
	1998	Total	0.62				
		Urban	3.02				
		Rural	0.15				
23 Kep	2008	Total	5.17	12.31	fast		
		Urban	13.83	13.30	fast		
		Rural	3.84	12.39	fast		
	1998	Total	0.42				
		Urban	1.04				
		Rural	0.31				
24 Pailin	2008	Total	22.91	4.09	fast		
		Urban	47.76	3.07	fast		
		Rural	15.78	32.20	fast		
	1998	Total	5.60				
		Urban	15.57				
		Rural	0.49				

## Notes:

1. Combined amenities denote improved water source, electric power, and toilet facility within residence.
2. Analysis is based on an index of change: (i) overall change: mostly fast, very few slow; (ii) urban change: mostly fast; and (iii) rural change: mostly fast.
3. National mean value for overall change 1998–2008: factor 2.18 or midpoint in a range of 2.00–2.36. Therefore, change over 2.36 is rated as fast, and change under 2.00 is rated as slow. Similarly, the national value for urban change 1998–2008: factor 1.69 or midpoint in a range of 1.60–1.78. The national value for rural change 5.45 or midpoint in a range of 5.00–5.90.

Source: Government of Cambodia, NIS (2008a) pp. 257–258.

Table A2.17 Changes in City Power and Kerosene Use, 1998–2008

Code and Province		City Power	Kerosene	Change (1998 = 1.00)		Remarks
				City Power	Kerosene	
<b>Cambodia</b>	<b>2008</b>	<b>22.47</b>	<b>38.62</b>	<b>1.79</b>	<b>0.48</b>	<b>Complementary trends, electrification still low</b>
	<b>1998</b>	<b>12.56</b>	<b>79.86</b>			
01 Banteay Meanchey	2008	26.19	50.82	3.20	0.60	
	1998	8.19	83.19			
02 Battambang	2008	21.13	55.34	2.11	0.67	
	1998	10.01	83.19			
03 Kampong Cham	2008	14.19	34.54	1.53	0.42	
	1998	9.25	82.70			
04 Kampong Chhnang	2008	9.13	54.65	1.98	0.61	
	1998	4.62	89.93			
05 Kampong Speu	2008	9.13	40.43	3.55	0.43	
	1998	2.57	94.92			
06 Kampong Thom	2008	9.17	54.86	1.72	0.61	
	1998	5.32	89.39			
07 Kampot	2008	10.83	54.14	2.21	0.59	
	1998	4.91	92.48			
08 Kandal	2008	27.12	14.79	2.88	0.19	
	1998	9.42	78.11			
09 Koh Kong	2008	40.04	42.85	1.40	0.76	
	1998	28.70	56.22			
10 Kratie	2008	12.44	48.84	1.31	0.60	
	1998	9.51	80.83			
11 Mondul Kiri	2008	13.17	53.16	4.65	1.11	More kerosene use in 2008, very low electrification
	1998	2.83	47.93			
12 Phnom Penh	2008	89.82	1.74	1.19	0.10	By far the highest ratio of city power
	1998	75.50	17.52			
13 Preah Vihear	2008	7.61	55.30	4.53	1.21	More kerosene use in 2008, very low electrification
	1998	1.68	45.85			
14 Prey Veang	2008	6.30	28.22	2.13	0.31	
	1998	2.96	89.83			
15 Pursat	2008	13.71	71.06	1.71	0.81	
	1998	8.00	88.11			
16 Ratanak Kiri	2008	15.54	55.92	1.22	1.33	More kerosene use in 2008, very low electrification
	1998	12.77	42.09			
17 Siem Reap	2008	20.09	57.90	2.64	0.65	
	1998	7.61	88.81			
18 Preah Sihanouk	2008	51.08	32.97	1.47	0.55	
	1998	34.79	59.50			
19 Stung Treang	2008	16.59	59.48	1.42	0.98	Similar to mountain provinces Mondul Kiri and Ratanak Kiri
	1998	11.67	60.47			
20 Svay Rieng	2008	10.49	32.67	3.00	0.36	
	1998	3.50	91.35			
21 Takeo	2008	9.59	34.52	2.86	0.37	
	1998	3.35	92.72			
22 Otdar Meanchey	2008	12.77	58.22	7.02	0.61	
	1998	1.82	96.20			
23 Kep	2008	14.33	64.10	2.91	0.71	
	1998	4.92	89.68			
24 Pailin	2008	37.69	38.02	3.39	0.54	Fast electrification
	1998	11.13	69.83			

## Notes:

1. The analysis is based on two factors: (i) city power is mostly applicable in urban areas, and (ii) there is a significant increase in all provinces.
2. Kerosene is used everywhere but more in rural than in urban areas. The decline in kerosene use is mostly due to introduction of electricity in urban areas.
3. Main sources of light covered by statistics include city power, generator, both city power and generator, kerosene, candles, battery, and other sources.

Source: Data from Government of Cambodia, NIS (2008a) pp. 253–254. Interpretation by means of statistical analysis by the authors.

Table A2.18 Urban Infrastructure Data, 2008—Urban Roads

No.	Municipal Code	Province	Municipality	Total Urban Population (2008 census)	Population in Most Urbanized Sangkat (2009 data book)	Bituminous Road, Total by Municipality in 2008 (m)	DBST, Total by Municipality in 2008 (m)	Total DBST and Bituminous Roads (m)	Urban Population Served (per m of DBST and bituminous)	Index
<b>Cambodia</b>										
<b>A. Plain Region</b>										
1		Phnom Penh	Phnom Penh <sup>a</sup>	1,658,819	682,218	7113	63,036	771,947	3.4	1.0
2	811	Kandal	Ta Khmao	1,242,992	571,649	...	...	518,849	3.2	1.1
3	305	Kampong Cham	Kampong Cham	195,898	18,381	0	5,278	448,700	2.8	1.2
4	317	Kampong Cham	Suong	82,346	13,423	3,463	37,132	40,595	37.1	0.1
5	2006	Svay Rieng	Svay Rieng	35,896	22,730	0	13,000	13,000	2.0	1.7
6	2008	Svay Rieng	Bavet	17,029	13,253	0	626	626	2.8	1.2
7	1413	Prey Veng	Svay Antor	37,123	11,201	0	0	0	27.2	0.1
8	2108	Takeo	Daun Keo	33,079	13,713	0	0	0	0.0	0.0
<b>B. Tonle Sap Lake Region</b>										
9	106	Banteay Meanchey	Serei Saophaon	14,456	17,868	3,650	7,000	10,650	1.4	2.5
10	110	Banteay Meanchey	Poipet	674,533	268,234	29,203	117,215	146,418	4.6	0.7
11	203	Battambang	Battambang	73,407	22,362	0	1,180	1,180	62.2	0.1
12	403	Kampong Chhnang	Kampong Chhnang	107,989	92,143	0	0	0	0.0	0.0
13	603	Kampong Thom	Stueng Saen	180,853	26,202	16,203	11,230	27,433	6.6	0.5
14	1710	Siem Reap	Siem Reap	43,130	17,289	0	0	0	0.0	0.0
15	2401	Pailin	Pailin	31,871	18,548	0	21,228	21,228	1.5	2.3
16	1505	Pursat	Pursat	174,265	40,473	9,000	78,438	87,438	2.0	0.6
17	2204	Otdar Meanchey	Samroang	15,674	11,402	0	5,139	5,139	3.1	1.1
<b>C. Coastal Region</b>										
18	708	Kampot	Kampot	25,650	21,069	0	0	0	0.0	0.0
19	904	Koh Kong	Khemara Phumin	18,694	18,746	4,000	0	4,000	4.7	0.7
20	2302	Kep	Kep	178,452	50,308	42,143	46,962	89,105	2.0	1.7
21	1801	Preah Sihanouk	Preah Sihanouk	48,274	11,567	0	8,667	8,667	5.6	0.6
<b>D. Plateau and Mountainous Region</b>										
22	502	Kampong Speu	Chbar Mon	36,053	12,745	23,558	0	23,558	1.5	2.2
23	1002	Kratie	Kratie	4,678	4,235	0	15,000	15,000	0.3	11.0
24	1105	Mondul Kiri	Saem Monourom	89,447	21,761	18,585	23,295	41,880	2.1	1.6
25	1308	Preah Vihear	Preah Vihear	142,346	68,959	1,500	16,075	17,575	8.1	0.4
26	1602	Ratanak Kiri	Bang Lung	54,505	15,223	1,500	0	1,500	36.6	0.1
27	1904	Stung Treng	Stung Treng	35,964	11,894	0	10,500	10,500	3.4	1.0
				4,859	3,661	0	1,000	1,000	4.9	0.7
				10,679	9,151	0	0	0	0.0	0.0
				19,317	15,665	0	3,395	3,395	5.7	0.6
				17,022	13,365	0	1,180	1,180	14.4	0.2

... = data not available, DBST = double bituminous surface treatment, m = meter.

<sup>a</sup> Roads in Phnom Penh include all kinds of paved and concrete roads.

Source: Government of Cambodia, National Committee of Subnational Democratic Development (2009).

Table A2.19 Urban Infrastructure Data, 2008—Water Supply

No.	Municipal Code	Province	Municipality	Total Urban Population (2008 census)	Population in Most Urbanized Sangkat (2009 databook)	Piped Water <sup>a</sup> (% covered)	Pump and Mixed Wells <sup>b</sup> (% covered)	Population Served by Piped Water in Urbanized Sangkat	Index Piped Water
<b>Cambodia</b>									
<b>A. Plain Region</b>				<b>2,651,150</b>	<b>1,069,719</b>	<b>76.1</b>		<b>814,274</b>	<b>1.0</b>
1		Phnom Penh	Phnom Penh <sup>c</sup>	1,242,992	682,218	90.6	not applicable	618,034	1.2
2	811	Kandal	Ta Khmao	195,898	18,381	80.3	19.7	14,760	1.3
3	305	Kampong Cham	Kampong Cham	82,346	13,423	98.6	0.2	13,235	1.1
4	317	Kampong Cham	Suong	35,896	22,730	1.7	73.7	386	0.0
5	2006	Svay Rieng	Svay Rieng	17,029	13,253	28.7	68.1	3,804	0.4
6	2008	Svay Rieng	Bavet	37,123	11,201	9.9	89.3	1,109	0.1
7	1413	Prey Veng	Svay Antor	33,079	13,713	46.2	53.8	6,335	0.6
8	2108	Takeo	Daun Keo	14,456	17,868	69.8	14.6	12,472	0.9
<b>B. Tonle Sap Lake Region</b>				<b>674,533</b>	<b>268,234</b>	<b>48.0</b>		<b>128,681</b>	<b>0.6</b>
9	106	Banteay Meanchey	Serei Saophaon	73,407	22,362	68.1	24.9	15,229	0.9
10	110	Banteay Meanchey	Poipet	107,989	92,143	21.9	45.9	20,179	0.3
11	203	Battambang	Battambang	180,853	26,202	81.4	0.5	21,328	1.1
12	403	Kampong Chhnang	Kampong Chhnang	43,130	17,289	41.1	42.2	7,106	0.5
13	603	Kampong Thom	Stueng Saen	31,871	18,548	98.7	0.2	18,307	1.3
14	1710	Siem Reap	Siem Reap	174,265	40,473	36.5	62.0	14,773	0.5
15	2401	Pailin	Pailin	15,674	11,402	27.5	32.7	3,136	0.4
16	1505	Pursat	Pursat	25,650	21,069	75.0	8.0	15,802	1.0
17	2204	Otdar Meanchey	Samroang	18,694	18,746	68.4	18.1	12,822	0.9
<b>C. Coastal Region</b>				<b>178,452</b>	<b>50,308</b>	<b>66.0</b>		<b>33,346</b>	<b>0.9</b>
18	708	Kampot	Kampot	48,274	11,567	100.0	0.0	11,567	1.3
19	904	Koh Kong	Khemara Phumin	36,053	12,745	82.9	0.0	10,566	1.1
20	2302	Kep	Kep	4,678	4,235	39.2	52.1	1,660	0.5
21	1801	Preah Sihanouk	Preah Sihanouk	89,447	21,761	43.9	11.9	9,553	0.6
<b>D. Plateau and Mountainous Region</b>				<b>142,346</b>	<b>68,959</b>	<b>50.0</b>		<b>34,214</b>	<b>0.7</b>
22	502	Kampong Speu	Chbar Mon	54,505	15,223	75.1	10.8	11,432	1.0
23	1002	Kratie	Kratie	35,964	11,894	96.5	0.0	11,478	1.3
24	1105	Mondul Kiri	Saem Monourom	4,859	3,661	0.0	11.4	0	0.0
25	1308	Preah Vihear	Preah Vihear	10,679	9,151	32.8	45.0	3,002	0.4
26	1602	Ratanak Kir	Bang Lung	19,317	15,665	12.3	18.2	1,927	0.2
27	1904	Stung Treng	Stung Treng	17,022	13,365	47.7	15.6	6,375	0.6

<sup>a</sup> Coverage of piped water services in percent of most urbanized sangkat only.

<sup>b</sup> Pump and mixed wells are still common in areas not served by piped water.

<sup>c</sup> Phnom Penh information is from the municipality, not from the data books.

Source: Government of Cambodia, National Committee of Subnational Democratic Development (2009).



Table A2.20 Solid Waste Collection, 2008

No.	Municipal Code	Province	Municipality	Total Urban Population (2008 census)	Population in Most Urbanized Sangkat (2009 data book)	% of Households with Access to Garbage Collection in Urbanized Sangkat (2009 data book)	Population Served in Most Urbanized Sangkat	Index <sup>a</sup>
<b>Cambodia</b>								
<b>A. Plain Region</b>				<b>2,651,150</b>	<b>1,069,719</b>	<b>58.6</b>	<b>627,089</b>	<b>1.0</b>
1		Phnom Penh	Phnom Penh <sup>b</sup>	1,658,819	682,218	78.1	532,986	1.3
2	811	Kandal	Ta Khmao	1,242,992	571,649	90.0	514,484	1.5
3	305	Kampong Cham	Kampong Cham	195,898	18,381	38.4	7,058	0.7
4	317	Kampong Cham	Suong	82,346	13,423	45.2	6,067	0.8
5	2006	Svay Rieng	Svay Rieng	35,896	22,730	7.2	1,637	0.1
6	2008	Svay Rieng	Bavet	17,029	13,253	15.9	2,107	0.3
7	1413	Prey Veng	Svay Antor	37,123	11,201	0.0	0	0.0
8	2108	Takeo	Daun Keo	33,079	13,713	3.7	507	0.1
<b>B. Tonle Sap Lake Region</b>				<b>674,533</b>	<b>268,234</b>	<b>23.9</b>	<b>63,991</b>	<b>0.4</b>
9	106	Banteay Meanchey	Serei Saophaon	73,407	22,362	20.8	4,651	0.4
10	110	Banteay Meanchey	Poipet	107,989	92,143	18.4	16,954	0.3
11	203	Battambang	Battambang	180,853	26,202	54.2	14,201	0.9
12	403	Kampong Chhnang	Kampong Chhnang	43,130	17,289	5.8	1,003	0.1
13	603	Kampong Thom	Stueng Saen	31,871	18,548	47.5	8,810	0.8
14	1710	Siem Reap	Siem Reap	174,265	40,473	29.2	11,818	0.5
15	2401	Pailin	Pailin	15,674	11,402	0.1	11	0.0
16	1505	Pursat	Pursat	25,650	21,069	29.0	6,110	0.5
17	2204	Otdar Meanchey	Samroang	18,694	18,746	2.3	431	0.0
<b>C. Coastal Region</b>				<b>178,452</b>	<b>50,308</b>	<b>46.4</b>	<b>23,339</b>	<b>0.8</b>
18	708	Kampot	Kampot	48,274	11,567	72.0	8,328	1.2
19	904	Koh Kong	Khemara Phumin	36,053	12,745	26.6	3,390	0.5
20	2302	Kep	Kep	4,678	4,235	0.0	0	0.0
21	1801	Preah Sihanouk	Preah Sihanouk	89,447	21,761	53.4	11,620	0.9
<b>D. Plateau and Mountainous Region</b>				<b>142,346</b>	<b>68,959</b>	<b>9.8</b>	<b>6,773</b>	<b>0.2</b>
22	502	Kampong Speu	Chbar Mon	54,505	15,223	16.5	2,512	0.3
23	1002	Kratie	Kratie	35,964	11,894	3.5	416	0.1
24	1105	Mondul Kiri	Saem Monourom	4,859	3,661	0.0	0	0.0
25	1308	Preah Vihear	Preah Vihear	10,679	9,151	0.0	0	0.0
26	1602	Ratanak Kiri	Bang Lung	19,317	15,665	19.0	2,976	0.3
27	1904	Stung Treng	Stung Treng	17,022	13,365	6.5	869	0.1

<sup>a</sup> The index relates only to the most urbanized sangkats.

<sup>b</sup> Phnom Penh information from interviews.

Source: Government of Cambodia, National Committee for Subnational Democratic Development (2009).

**Table A2.21** Changes in Households with Toilets, 1998–2008  
(connected to sewerage and septic tanks)

Code and Province Name	Year	% Urban Forms of Sanitation				% Change (1998 = 1.00)		Urban Sanitation Index (Cambodia = 1.00)	Remarks
		No Toilets	Toilets	Sewerage	Septic Tanks	Urban Sanitation	Toilets		
Cambodia	2008	66.29	33.71	13.50	14.51	28.01	2.33	1.00	
	1998	85.52	14.48		no data for 1998				
01 Banteay Meanchey	2008	65.00	35.00	14.51	17.07	31.58	3.37	1.07	
1998	89.61	10.39							
02 Battambang	2008	56.05	43.95	14.33	21.37	35.70	2.21	1.06	
1998	80.14	19.86							
03 Kampong Cham	2008	74.44	25.56	4.92	14.16	19.08	2.65	0.36	
1998	90.35	9.65							
04 Kampong Chhnang	2008	81.24	18.76	5.86	9.19	15.05	3.11	0.43	
1998	93.96	6.04							
05 Kampong Speu	2008	82.51	17.49	6.36	8.43	14.79	4.54	0.47	Rapid progress at low level
1998	96.15	3.85							
06 Kampong Thom	2008	72.19	27.81	4.27	8.89	13.16	2.12	0.32	
1998	86.87	13.13							
07 Kampot	2008	73.82	26.18	6.49	9.85	16.34	3.27	0.48	
1998	92.00	8.00							
08 Kandal	2008	54.25	45.75	13.47	25.70	39.17	3.73	1.00	
1998	87.72	12.28							
09 Koh Kong	2008	61.38	38.62	13.10	18.46	31.56	2.38	0.97	
1998	83.80	16.20							
10 Kratie	2008	73.97	26.07	3.23	14.25	17.48	1.94	0.24	
1998	86.56	13.44							
11 Mondul Kiri	2008	83.44	16.56	3.55	7.87	11.42	1.46	0.26	
1998	88.64	11.36							
12 Phnom Penh	2008	9.31	90.96	66.39	22.99	89.38	1.22	4.92	By far the best conditions
1998	25.14	74.86							
13 Preah Vihear	2008	89.18	10.82	2.65	4.70	7.35	2.21	0.20	Worst conditions
1998	95.10	4.90							

*continued on next page*

Table A2.21 *continued*

Code and Province Name	Year	% Urban Forms of Sanitation			% Urban Forms of Sanitation		Change (1998 = 1.00)		Urban Sanitation Index (Cambodia = 1.00)	Remarks
		No Toilets	Toilets	Sewerage	Septic Tanks	Urban Sanitation	Toilets	Urban Sanitation Index		
14 Prey Veang	2008	83.20	16.80	4.97	5.67	10.64	3.93	0.37		
	1998	95.73	4.27							
15 Pursat	2008	81.64	18.36	5.04	8.61	13.65	2.15	0.37		
	1998	91.48	8.52							
16 Ratanak Kiri	2008	78.92	21.08	4.50	8.06	12.56	2.29	0.33		
	1998	90.80	9.20							
17 Siem Reap	2008	72.90	27.10	12.09	11.85	23.94	4.09	0.90		
	1998	93.37	6.63							
18 Preah Sihanouk	2008	50.39	49.61	17.19	28.26	45.45	2.14	1.27		
	1998	76.78	23.22							
19 Stueng Traeng	2008	66.79	33.03	11.08	16.67	27.75	2.39	0.82		
	1998	86.17	13.83							
20 Sray Rieng	2008	78.73	21.27	6.05	8.34	14.39	2.60	0.45		
	1998	91.82	8.18							
21 Takeo	2008	76.28	23.72	7.82	12.10	19.92	5.54	0.58		
	1998	95.72	4.28							
22 Otdar Meanchey	2008	78.62	21.38	7.82	12.10	19.92	5.00	0.58		
	1998	95.72	4.28							
23 Kep	2008	73.95	26.05	9.87	11.90	21.77	7.87	0.73		
	1998	96.69	3.31							
24 Pailin	2008	60.67	39.33	10.45	17.79	28.24	1.99	0.77		
	1998	80.25	19.75							

## Notes:

- The analysis is based on two factors: (i) progress 1998–2008 (measured by percentage of households with toilets) and (ii) provincial ratios of urban sanitation. No separate data are available for urban areas; therefore, the analysis is based on proxies.
- Assuming that the relatively few toilets available in most provinces are concentrated on urban areas, the changes from 1998–2008 provide a first impression of the progress in sanitation. Even though many provinces now have relatively high ratios of toilets, Phnom Penh is at the top at about 90%.
- Using the two categories of "connected to sewerage" and "septic tanks" from the original table as a proxy for urban sanitation, the conditions are analyzed in relation to the national mean value. Again, Phnom Penh has the highest value, 89% of the municipality equipped, that is, about five times (4.92) the national index (1.00).

Source: Data from Government of Cambodia, NIS (2008a) pp. 255–256. Interpretation by means of statistical analysis by the authors.

**Table A2.22** Distribution of Households in Provinces by Toilet Facility Availability and Category of Toilet Facility, 1998<sup>a</sup> and 2008  
(data inputs for Table A2.21)  
(%)

Code	Province	Year	No. of Households	Households without Toilets	Households with Toilet Facilities <sup>b</sup>				
					Total	Connected Sewerage	Septic Tank	Pit Latrine	Other
<b>Cambodia</b>		<b>2008</b>	<b>2,817,637</b>	<b>66.29</b>	<b>33.71</b>	<b>13.50</b>	<b>14.41</b>	<b>4.91</b>	<b>0.88</b>
		<b>1998</b>	<b>2,162,086</b>	<b>85.52</b>	<b>14.48</b>				
01	Banteay Meanchey	2008	144,658	65.00	35.00	14.51	17.07	3.05	0.38
		1998	110,994	89.61	10.39				
02	Battambang	2008	209,702	56.05	43.95	14.33	21.37	7.11	1.15
		1998	146,661	80.14	19.86				
03	Kampong Cham	2008	368,114	74.44	25.56	4.92	14.16	5.78	0.71
		1998	311,151	90.35	9.65				
04	Kampong Chhnang	2008	100,801	81.24	18.76	5.86	9.19	2.71	0.96
		1998	81,201	93.96	6.04				
05	Kampong Speu	2008	149,270	82.51	17.49	6.36	8.43	2.39	0.30
		1998	114,959	96.15	3.85				
06	Kampong Thom	2008	133,878	72.19	27.81	4.27	8.98	13.27	1.29
		1998	105,583	86.87	13.13				
07	Kampot	2008	129,646	73.82	26.18	6.49	9.85	9.29	0.55
		1998	104,498	92.00	8.00				
08	Kandal	2008	255,029	54.25	45.75	13.47	25.70	5.97	0.62
		1998	203,357	87.72	12.28				
09	Koh Kong	2008	24,166	61.38	38.62	13.10	18.46	2.95	4.11
		1998	21,401	83.80	16.20				
10	Kratie	2008	65,323	73.93	26.07	3.23	14.25	6.50	2.09
		1998	48,761	86.56	13.44				
11	Mondul Kiri	2008	12,270	83.44	16.56	3.55	7.87	4.78	0.36
		1998	5,615	88.64	11.36				
12	Phnom Penh	2008	250,597	9.31	90.69	66.39	22.99	0.90	0.42
		1998	167,758	25.14	74.86				
13	Preah Vihear	2008	33,115	89.18	10.82	2.65	4.70	2.73	0.75
		1998	21,007	95.10	4.90				
14	Prey Veang	2008	226,312	83.20	16.80	4.97	5.67	4.98	1.18
		1998	192,735	95.73	4.27				
15	Pursat	2008	83,412	81.64	18.36	5.04	8.61	2.99	1.72
		1998	67,022	91.48	8.52				
16	Ratanak Kiri	2008	27,485	78.92	21.08	4.50	8.06	5.40	3.11
		1998	16,646	90.80	9.20				
17	Siem Reap	2008	179,754	72.90	27.10	12.09	11.85	2.59	0.57
		1998	125,387	93.37	6.63				
18	Preah Sihanouk	2008	44,656	50.39	49.61	17.19	28.26	3.12	1.04
		1998	30,075	76.78	23.22				
19	Stueng Traeng	2008	20,922	66.97	33.03	11.08	16.67	3.83	1.45
		1998	14,126	86.17	13.83				
20	Svay Rieng	2008	114,758	78.73	21.27	6.05	8.34	6.03	0.85
		1998	97,796	91.82	8.18				
21	Takeo	2008	183,742	76.28	23.72	7.82	12.10	2.99	0.80
		1998	153,863	95.72	4.28				
22	Otdar Meanchey	2008	38,398	78.62	21.38	6.58	9.36	4.51	0.93
		1998	12,208	97.97	2.03				
23	Kep	2008	7,193	73.95	26.05	9.87	11.90	2.18	2.10
		1998	5,282	96.69	3.31				
24	Pailin	2008	14,436	60.67	39.33	10.45	17.79	9.59	1.50
		1998	4,000	80.25	19.75				

<sup>a</sup> In 1998, information on type of toilet was not obtained.

<sup>b</sup> The percent distribution of categories of toilet is for total households.

Source: Government of Cambodia, NIS (2008a) pp. 255–256.

## Appendix 3

# Sector Issues

**Table A3.1** Links between Sector Issues, Government Plan, Gaps, and ADB Summary Assessment

Core Sector and Subsector Issues (Constraints and Problems)	Government Plan	Policy, Institutional, Investment Action, and Resource Gap Needs	Overview of Plan Relevance and Feasibility
<p><b>Close service gaps in infrastructure services.</b> Despite improved services in urban areas—water services (76% with piped water) and sanitation (34%), electricity (22%), solid waste collection (58%), and road access—much investment is needed in the future. Since service levels are best in Phnom Penh, other urban centers deserve priority.</p>	Improved infrastructure services in major towns and capital city	Investments in growth centers along transport corridors and Tonle Sap region; multisector investment packages	Highly relevant and consistent with government’s strategy and country partnership strategy
<p><b>Improved and permanent housing.</b> The quality of housing stock, tenure conditions, and service levels must be improved.</p>	National Housing Policy encourages private sector investments	Housing finance; land tenure policy	Institutional setup for housing finance not yet clarified, and land tenure policy needs articulation
<p><b>Capacity of national institutions dealing with urban sector.</b> Most capacities are limited to sector ministries, provincial centers, and the capital city. The capacity of municipalities to plan and manage services must be increased.</p>	Decentralization and deconcentration policy reform	Need to strengthen municipalities and communes	Reform program highly relevant for future urban sector programs and capacity development of municipalities
<p><b>Developing and utilizing specialized information.</b> The planning and monitoring of urbanization processes requires data in formats and combinations that are currently unavailable, although an early version of a special set of data has now become available.</p>	Rectangular Development Strategy and district data books	Need to strengthen information base for policy decisions and planning	Urban statistics deficient and a drawback to any developmental work
<p><b>Urban development finance system.</b> There is no financing system available to municipalities other than central government grants.</p>	Decentralization and deconcentration policy reform	Proposed Local Administration Investment Fund to require resources and operational guidelines	Could be built into ADB’s Sustainable Urban Development Project for the Tonle Sap Region

ADB = Asian Development Bank.

Source: ADB.

**Table A3.2 Summary of Sector Issues, Government Action, and Development Partner and ADB Support**

Core Issue and Government Action	Other Development Partner Support	ADB Support
<b>Close service gaps in infrastructure services.</b> Invest in growth centers along transport corridors and Tonle Sap region.	JICA, KEXIM, Government of PRC support for various infrastructure projects	Greater Mekong Subregion: Corridor Towns Development Project (I and II) and Integrated Urban Environmental Management in the Tonle Sap Basin
<b>Improved and permanent housing.</b> The government is working on its housing policy.	Bill & Melinda Gates Foundation and ACHR support for Urban Poor Development Fund	None so far
<b>Capacity of national institutions dealing with urban sector.</b> Initiate decentralization and deconcentration reforms, and decide on future of capacity development of municipalities.	World Bank and United Nations support decentralization and deconcentration reforms	To be addressed by urban investment projects, and, possibly, by a stand-alone capacity development technical assistance project
<b>Specialized information.</b> Develop urban statistics as policy and planning tools.	United Nations	Could be built into ADB's Integrated Urban Environmental Management in the Tonle Sap Basin
<b>Urban development finance system.</b> Establish Local Administration Investment Fund.	Government to seek official development assistance from ADB, United Nations Capital Development Fund, or the World Bank	Could be built into ADB's Integrated Urban Environmental Management in the Tonle Sap Basin

ACHR = Asian Coalition for Housing Rights, ADB = Asian Development Bank, JICA = Japan International Cooperation Agency, KEXIM = Export-Import Bank of Korea, PRC = People's Republic of China.

Source: ADB.

**Table A4.1 ADB and Other Development Partner Sector Support, Loans and Grants**

Grant/Loan No.	Project or Program Name	Approved Amount (\$ million)	Approval Date	Signing Date	Effective Date	Closing Date		Current Status
						Original	Revised	
1725-CAM	Provincial Towns Improvement Project	20.00	17 Dec 1999	2 Feb 2000	11 Apr 2000	31 Dec 2005	31 Mar 2007	Closed
1969-CAM(SF)	GMS: Mekong Tourism Development Project	15.60	12 Dec 2002	7 Feb 2003	6 Aug 2003	30 Jun 2008	30 Jun 2010	Closed
2013-CAM	Provincial Towns Improvement (Supplementary Loan)	6.26	28 Oct 2003	18 Dec 2003	2 Jan 2004	30 Jun 2006	31 Mar 2007	Closed
2023-CAM	Agricultural Sector Development Project	4.70	26 Nov 2003	10 Nov 2004	2 Dec 2004	30 Jun 2009	30 Jun 2010	Closed
2035-CAM (SF)	Northwest Irrigation Sector	18.00	9 Dec 2003	–	–	31 Dec 2010	–	Active
2052-CAM	Greater Mekong Subregion Transmission Project	44.30	15 Dec 2003	–	–	31 Dec 2008	31 Dec 2010	Closed
2122-CAM	Second Education Sector Development	25.00	9 Dec 2004	–	–	30 Jun 2010	–	Closed
2455-CAM	Emergency Food Assistance Project	17.50	2 Oct 2008	–	–	–	–	Active
2373-CAM(SF)	GMS: Southern Coastal Corridor Project	7.00	28 Nov 2007	18 Feb 2008	12 Aug 2008	31 Dec 2012	–	Active
2376-CAM	Tonle Sap Lowlands Rural Development Project	10.10	5 Dec 2007	18 Feb 2008	5 Nov 2008	30 Jun 2015	–	Active
2599-CAM	Tonle Sap Poverty Reduction and Smallholder Development Project	3.40	8 Dec 2009	27 Dec 2009	31 Mar 2010	28 Feb 2018	–	Active
<b>Subtotal Loans</b>		<b>171.86</b>						
0018-CAM	Tonle Sap Rural Water Supply and Sanitation Sector	18.00	20 Oct 2005	–	–	30 Jun 2012	–	Closed
0034(SF) and 0035-CAM	Tonle Sap Sustainable Livelihoods Project	19.74	21 Dec 2005	–	–	30 Jun 2010	–	Closed
0066-CAM(SF)	Commune Council Development Project 2	7.80	12 Dec 2006	–	–	31 Dec 2009	–	Closed
0116-CAM(SF)	Emergency Food Assistance Project	17.50	2 Oct 2008	–	–	30 Sep 2011	–	Active
<b>Subtotal Grants</b>		<b>63.04</b>						
<b>Total Loans + Grants</b>		<b>234.90</b>						

– = data not available, GMS = Greater Mekong Subregion.  
Source: ADB Cambodia Resident Mission.

## Appendix 4

# Sector Support: ADB and Other Development Partners

Table A4.2 ADB and Other Development Partner Activities in Cambodia

Agency	Area and Activities in Urban Development	Status
ACHR (1988–1998)	<p>Support for strengthening urban community-based initiatives in Phnom Penh (1994, Training and Advisory Program) through exchanges and learning process from other countries</p> <p>Surveyed activities of urban poor communities</p> <p>Presented and discussed with all relevant stakeholders, especially MPP and the government</p>	Significant changes observed since 1998 in savings and credit, community organization, and Solidarity for the Urban Poor Federation and Urban Sector Group
ADB	<p>Water supply for PPWSA in Phnom Penh</p> <p>Solid waste management through JFPR in Phnom Penh</p> <p>Wastewater treatment plant in Siem Reap</p> <p>Corridor towns development</p> <p>Cities Initiative for Asia in Battambang municipality</p>	<p>Solid waste management project completed in 2007</p> <p>Developing its country partnership strategy, 2010–2013 in which more attention is given to the urban sector</p>
AFD	<p>Rehabilitation of Phnom Penh Central Market (protection of patrimonies)</p> <p>Urban drainage system in Siem Reap</p> <p>Possibility for streetlight project with MPP (to be discussed with MPP)</p> <p>Support for study on establishment of urban transport authority</p>	AFD funding completed since June 2009 (has already lasted for 5 years)
CDIA (prefeasibility study from November 2009–April 2010)	Study being carried out in Battambang. First secondary cities project supported by ADB to identify and prioritize urban environmental infrastructure facilities for investment	Prefeasibility study ongoing
CFD: 2003–present, local NGO	<p>Community development, and capacity building in rural water supply and sanitation</p> <p>Implementation of small-scale sanitation investment component of their program, targeting poor and vulnerable households across 24 towns in four provinces</p>	Recently received \$700,000 from UN-HABITAT to implement a project on water and sanitation (including capacity development and a revolving fund) in four towns: Kampong Cham, Kampong Thom, Pursat, and Svay Rieng (2009–2011)
CATDG, local NGO	Initiated by a group of young Cambodians, this professional partnership program produced low-cost housing material (mud block) by importing equipment from India	Closed in 2001 due to absence of funds

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Table A4.2 *continued*

Agency	Area and Activities in Urban Development	Status
DANIDA (commune and community-based natural resource management) with Danish Special Assistance for 2004–2008 (strategic environmental assessments)	Natural Resources and Environmental Management in decentralization and deconcentration, focusing on land management, forests, and fisheries; land; and civil society  A block grant supports the district initiatives program to strengthen roles and responsibilities of district authorities	
DED	Support for the preparation of land-use plan in Battambang and Siem Reap under good governance component (since 2004)  GIZ regional economic development	Banteay Meanchey, Kampong Chhnang, Kampong Speu, Kampong Thom, Kandal, Pursat, and Takeo requested support from DED  DED expresses much interest in the urban development sector (with ADB)
EU (since 1997)	Support the implementation of the government's National Strategic Development Plan and the Poverty Reduction Support Operation. Cambodia is a priority partner country in the EU's policies concerning sustainable development and reduction of poverty. The EU is also a major donor toward supporting basic education.	Did not directly touch on the issues of urban development.
GIZ	Land Management and Administration Program  Support for the preparation of spatial planning (2010)  Regional economic development in Siem Reap; local economic development through enhancing agriculture products, finding marketplaces, and bringing together buyers and producers	Support for the program continuing through land titling in urban areas
Habitat for Humanity	Focuses on site upgrading of urban poor communities and small loans to urban poor communities	An urban poor housing project being implemented in Battambang in Sangkat Praek Preah Sdach commune  A revolving loan being carried out in Siem Reap and Phnom Penh
JICA	The Government of Japan, through JICA, is heavily involved in construction of physical facilities and technical assistance support for the urban sector through flood protection phases 1 and 2 (phase 3 is approved); water supply (PPWSA); solid waste and transport master plans (for MPP); master plan of Siem Reap; and coastal zone planning (in Kampot, Kep, Koh Kong, and Sihanoukville)	Bus experiment under urban transport master plan failed in 2001. A Project for Urban Transport Planning in Phnom Penh Capital City financed under a JICA Technical Assistance being implemented
Samakum Teang Thnot (2005–present), local NGO	Vision to ensure that urban poor communities have decent housing units. Two projects being implemented: technical assistance to the urban poor and advocacy	Received funds from Bill & Melinda Gates Foundation, DED, ICCO, Norwegian People's Aid, and Open Society Institute

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Table A4.2 *continued*

Agency	Area and Activities in Urban Development	Status
UNCDF (1992–present)	Provides technical assistance to the government (MOP) in three critical areas: (i) designing subnational planning guidelines and monitoring; (ii) supporting fiscal decentralization (with MEF); and (iii) supporting analysis, monitoring, and planning. Activities from 2009 will contribute to creating the framework for judicious injection of capital grants at the subnational level and technical leveraging of policy lessons.	Next steps are to support the drafting of subnational finance law, roll out planning guidelines, and realign UNCDF annual work plan with national program  Drafting the local development outlook that addresses the role of local administrations in planning, especially in physical planning
UNESCAP	Supported Cambodia to embrace green policy in 2007  Tackled women's roles (February 2009, with National Institute of Statistics, Phnom Penh)	
UN-HABITAT	Support for various NGO activities and MPP; focus on slum improvement and Millennium Development Goals	To refocus engagement on a water and sanitation agenda
UN-HABITAT (2007–present)	Urban poor housing and land tenure security  Small and medium-sized towns water supply in collaboration with CFD, a local NGO	Country office challenges the issues due to irregular funds to support the activities
UPDF (initiated by the Prime Minister since 2003 with support from development partners and others, local saving unit of MPP)	Benefit directly to urban poor communities and members (access to land, housing units)	Growing in a sustainable way. Funding increased from roughly KR6 million (\$7,500) in 2003 to nearly \$2 million in 2010.
Urban Sector Group, formed by ACHR	Similar to URC, and community sanitation and recycling	Closed in 2007 due to absence of funds
URC, formed by ACHR, local NGO	Research on urban related-housing and settlements  Advocacy  Training for the urban poor on low-cost housing construction	Closed in 2004 due to absence of funds
World Bank	Main portfolio (90%–95%) targets rural development. Some programs related to urban areas: (i) urban water supply (Phnom Penh, Sihanoukville, and Siem Reap); (ii) peri-urban water supply (not yet implemented); and (iii) the Water Sanitation Program	

ACHR = Asian Coalition for Housing Rights, ADB = Asian Development Bank, AFD = Agence Française de Développement, CATDG = Cambodia Appropriate Technology and Development Group, CDIA = Cities Initiative for Asia, CFD = Center for Development, DANIDA = Danish International Development Agency, DED = German Development Service, EU = European Union, GIZ = German Society for International Cooperation, ICCO = Interchurch Organization for Development Cooperation, JICA = Japan International Cooperation Agency, JFPR = Japan Fund for Poverty Reduction, MEF = Ministry of Economy and Finance, MOP = Ministry of Planning, MOU = memorandum of understanding, MPP = municipality of Phnom Penh, NGO = nongovernment organization, PPWSA = Phnom Penh Water Supply Authority, UNCDF = United Nations Capital Development Fund, UNESCAP = United Nations Economic and Social Commission for Asia and the Pacific, UN-HABITAT = United Nations Human Settlements Programme, UPDF = Urban Poor Development Fund, URC = Urban Resources Center.

Source: ADB.

Table A4.3 Municipality of Phnom Penh: Externally Funded Projects, 1997–2010

No.	Project Name	Outline	Project Cost	Financial Sources	Period		Progress
					Start	End	
<b>I. Completed Projects</b>							
<b>A. Master Plan Study</b>							
1	Study on drainage improvement and flood control in the MPP	Review of existing conditions and facilities Master plan formulation Feasibility study of priority project components		Japan (grant)	1998	1999	Completed (implementing agency: DPWT)
2	Study of the Transport Master Plan of the Phnom Penh metropolitan area	Review of the existing city road network and all transport modes Master plan formulation including city public transport		Japan (grant)	2000	2001	Completed (implementing agency: DPWT)
3	Study on solid waste management in the MPP	Review of current situation of solid waste management in the city Master plan formulation Feasibility study of priority project components		Japan (grant)	2003	2005	Completed (implementing agency: DPWT)
4	Phnom Penh Urban Master Plan Study to 2020	Review of overall existing aspects and formulation of city planning orientation to 2020		France/Paris (grant)	2002	2005	Completed (implementing agency: BAU/MPP)
5	Phnom Penh Lighting Master Plan Study	Renovation of 5,065 existing lighting poles; new installation of 11,117 lighting poles; illumination of 20 monuments, parks, and gardens; and establishment of a remote control center and its expansion to suburban area		France/Paris (grant)	2007	2008	Completed (implementing agency: DPWT)

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Table A4.3 *continued*

No.	Project Name	Outline	Project Cost	Financial Sources	Period		Progress
					Start	End	
<b>B. Technical Assistance</b>							
1	Neighborhood Improvement Program (cofinancing with part B of Phnom Penh Water Supply and Drainage Project)	Human resources development and capacity building to DPWT on drainage and solid waste management	About \$4.6 million	NORAD/Norway (grant)	1997	2002	Completed (implementing agency: DPWT)
2	Project for improvement of transport and public spaces	Capacity building to BAU and DPWT to manage and improve the traffic and transport in the center of Phnom Penh		France/Paris (grant)	2005	2007	Completed (implementation agencies: BAU and DPWT)
3	Project on the strengthening of solid waste management for the MPP	Technical cooperation project for capacity building to the PPWMA		Japan (grant)	2006	2007	Completed and terminated by JICA (implementation agency: PPWMA)
4	Study on the Phnom Penh City Skyrail Airport Line Project	Feasibility study		JETRO/Japan (grant)	2008	2008	Completed. Requested by DPWT (implementing agency: DPWT)
5	Project for improvement of green spaces in Phnom Penh City	Capacity building to DPWT to manage and improve the city green spaces and trees along the streets	\$0.22 million	France/Paris (grant)	2007	2009	Completed (implementing agency: DPWT)
6	Project for improvement of transport, displacement, and public spaces in Phnom Penh City	Capacity building to DPWT to manage and improve the traffic and transport in Phnom Penh	\$0.41 million	France/Paris (grant)	2007	2009	Completed (implementing agency: DPWT)
7	Urban development management in Phnom Penh City	Capacity building to DATUC for zoning and urban development management	\$0.40 million	France/Paris (grant)	2007	2009	Completed (implementing agency: DATUC)
8	Phnom Penh Urban Master Plan 2020 update	Strategic orientations and technical recommendation; finalization of the Master Plan 2020 for Council Minister and MPP validation	\$0.10 million	France/MFA (grant)	2008	2009	Completed (implementing agency: DATUC and BAU/MPP)

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Table A4.3 continued

No.	Project Name	Outline	Project Cost	Financial Sources	Period		Progress
					Start	End	
9	Study for the development of light rail transit in the MPP	Prefeasibility study		Private sector (grant)	2009	2009	Completed. Requested by MPWT
<b>C. Infrastructure Improvement</b>							
1	Phnom Penh Water Supply and Drainage Project (part B: drainage)	Reconstruction of Boeung Trabek pumping station and concrete lining of Boeung Trabek and Tuol Sen canals	\$8.36 million	ADB and OPEC (loan)	1997	2003	Completed (implementing agency: DPWT)
2	Reconstruction of Mao Tse Tung Boulevard	Asphalt pavement with the installation of road equipment	\$2.41 million	People's Republic of China (loan)	2002	2002	Completed (implementing agency: DPWT)
3	Road Improvement Project (administered by MPWT)	Phnom Penh component covered on asphalt pavement of 10,742 meters of city roads and improvement of two at grade road intersections		World Bank (loan)	2002	2004	Completed (implementing agency: DPWT)
4	Project for flood protection and drainage improvement in the MPP (phase 1)	Reconstruction of Boeung Tumpun pumping station and improvement of Boeung Tumpun road dike and Stoeng Mean Chey and Boeung Salang canals	\$0.017 million	Japan (grant)	2002	2004	Completed (implementing agency: DPWT)
5	Access road improvement to Choeng Ek Genocide Memorial (infrastructure component of ADB Tourism Development Project)	Reconstruction of 6.4 kilometers asphalt road and reconstruction of two bridges	\$1.91 million	ADB (loan)	2005	2007	Completed (implementing agency: DPWT)
6	Project for flood protection and drainage improvement in the MPP (phase 2)	Reconstruction of two sections of river bank revetment, installation of drainage and wastewater interceptor pipes, and construction of underground reservoirs and pumping stations	\$0.023 million	Japan (grant)	2007	2010	Completed (implementing agency: DPWT)

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Table A4.3 *continued*

No.	Project Name	Outline	Project Cost	Financial Sources	Period		Progress
					Start	End	
<b>II. Ongoing Projects</b>							
<b>A. Technical Assistance</b>							
1	Project for traffic improvement in Phnom Penh City (technical cooperation project)	To improve traffic conditions in Phnom Penh through implementation of 3 Es: engineering, education, and enforcement		Japan (grant)	2007	2010	Implementing agencies: engineering, DPWT; education, DPWT and DLT/MPWT; and enforcement, Traffic Police Office of MPP (completed by end of March 2010)
<b>B. Infrastructure Improvement</b>							
1	Solid Waste Management Improvement Project in Phnom Penh	Development of a new sanitary landfill site in Phnom Penh and procurement of landfill equipment and waste collection trucks	\$13.9 million	Japan (grant)	2005	2007	Suspended by JICA (Implementation agency: DPWT and PPWMA)
2	Central Market Rehabilitation Project	Structure reinforcement and drainage system renovation	\$4.2 million	France/AFD (grant)	2008	2010	Implementation agency: MPP
3	Central Market Lighting Project	Renovation of lighting inside and outside of the central market	\$0.17 million	France/AFD (grant)	2009	2010	To be implemented after completion of central market rehabilitation. (Implementation agency: MPP)
<b>III. Approved Projects</b>							
<b>A. Technical Assistance – none</b>							
<b>B. Infrastructure Improvement</b>							
1	Solid Waste Management Improvement Project in Phnom Penh	Development of a new sanitary landfill site in Phnom Penh and procurement of landfill equipment and waste collection trucks	\$13.9 million	Japan (grant)	2005	2007	Suspended by JICA (Implementation agency: DPWT and PPWMA)

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Table A4.3 *continued*

No.	Project Name	Outline	Project Cost	Financial Sources	Period		Progress
					Start	End	
2	Project for flood protection and drainage improvement in the MPP (phase 3)	Improvement of the drainage system of Boeng Trabek Catchment Area	\$37.13 million	Japan (grant)	2009	2012	Preparatory study is under way from March to November 2010 (implementing agency: DPWT)
<b>IV. Proposed Projects</b>							
<b>A. Technical Assistance</b>							
1	Feasibility study for the establishment of transport and mobility organization authority for the MPP	Manage urban transport and traffic in Phnom Penh and coordinate between public and private operators and projects	\$0.53 million–\$0.80 million	Seeking funding	2010	2011	Feasibility assessment study has been completed in 2009 under technical assistance and is now seeking financial assistance
<b>B. Infrastructure Improvement</b>							
1	Urban Streets Improvement Project	Improvement of city roads as well as some complicated intersections	\$9.44 million	Seeking funding	2010	2012	Already included in project investment plan and seeking financial assistance
2	Project for the development of a new public lighting system in the MPP	Improvement of street lighting as well as illumination of parks, gardens, and monuments in the city center	\$70.3 million	Seeking funding	2010	2013	Already included in project investment plan, and the MPP is now negotiating with AFD for loan and will delegate the management work of street lighting to CITELLUM, a French company

ADB = Asian Development Bank; AFD = Agence Française de Développement; BAU = Bureau of Urban Affairs; DATUC = Department of Land Management, Construction, and Cadastral of the Municipality of Phnom Penh; DLT = Department of Land Transport; DPWT = Department of Public Works and Transport; JETRO = Japan External Trade Organization; JICA = Japan International Cooperation Agency; MFA = Ministry of Foreign Affairs; MPP = municipality of Phnom Penh; MPWT = Ministry of Public Works and Transport; NORAD = Norwegian Agency for Development Cooperation; OPEC = Organization of the Petroleum Exporting Countries; PPWMA = Phnom Penh Waste Management Authority.

Source: ADB Cambodia Resident Mission (as of 24 March 2010).

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The following bibliography contains a collection of relevant documents that have been compiled and used by the consultants in this paper. The list of documents may also serve for orientation in the further development of the sector strategy and related priority programs within ADB.

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## **Cambodia: Urban Sector Assessment, Strategy, and Road Map**

This publication documents the current assessment and strategic investment priorities of the Government of Cambodia and the Asian Development Bank (ADB) in the country's urban sector. It highlights sector performance, priority development constraints, government plans and strategies, past ADB support and experience, other development partner support, and future ADB support strategy.

The road map covers three main support areas: (i) converting transport corridors into economic corridors—corridor towns of the Greater Mekong Subregion; (ii) sustainable urban development—environmental infrastructure in selected urban areas; and (iii) capacity development for urban management—institutional and policy development.

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