12. Sri Lanka

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INTRODUCTION

Sri Lanka is an island country that has been affected significantly in recent years by natural disasters and civil unrest. The uncertainty created by these events has made it difficult for Sri Lanka to attract foreign investment for the development of new industries, which is a factor contributing to its low level and rate of urbanization However, like other Asian countries, Sri Lanka is expected to experience increasing urbanization in the future. National statistics are shown in Table 12.1.

This chapter examines issues concerned with urbanization in Sri Lanka. It presents three cases studies based on projects located in the Colombo Core Urban Area that demonstrate sustainable aspects of urban region development.[1] The case studies examined are the neighborhood health and environment improvement project (Green Star Homes Project) and the Clean Settlements Program, both in the Colombo Municipal Council (CMC) area, and a community-based solid waste management program in Dehiwala Mount Lavinia Municipality to the south of Colombo City. The applications of lessons learned from these projects are presented in the final part of the chapter.

COUNTRY CONTEXT

History

The history of Sri Lanka dates back over 3,000 years. During the early stages, indigenous Sinhalese and Tamil kings controlled various separate, and often competing, kingdoms on the island. In the early years of human settlement, the most important settlements on the island were Anuradhapura and Polonnaruwa, each of which had their own local governments and dated back to the 3rd century BC (de Silva 1981; Codrington 2000). Chinese, Arab, and Persian traders were active in the vicinity of Colombo as early as the 5th century AD Arab traders dominated the seas around the island. There is a belief among

Table 12.1: Country Development Profile, Sri Lanka

Human Development Index (HDI) rank of 177 countries (2003)^	93
GDP growth (annual %; 2004)	6.00
GNI per capita, Atlas method (current $; 2004)	1,010
GNI, Atlas method (current $ billion; 2004)	19.6
GDP per capita PPP ($; 2003)^	3,778
GDP PPP ($ billion; 2003)^	72.7
Population growth (annual 2005-2010 %)#	0.69
Population, total (million; 2005)#	19.37
Urban population, total (million; 2005)#	4.07
Urban population percent of total population (2005)#	21
Population largest city: Colombo (2005; million)	0.65
Population growth: 8 capital cities or agglomerations > 750,000 inhabitants 2000#	
- Est. average growth of capital cities or urban agglomerations 2005–2015 (%)	13
- Number of capital cities or urban agglomerations with growth >50%, 2005–2015	0
- Number of capital cities or urban agglomerations with growth > 30%, 2005–2015	1
Sanitation, % of urban population with access to improved sanitation (2002)**	98
Water, % of urban population with access to improved water sources (2002)**	99
Slum population, % of urban population (2001)**	14
Slum population in urban areas (2001, million)**	0.60
Poverty, % of urban population below national poverty line (1996)**	15.0
Aid (Net ODA received; $ million; 2003)^	671.9
Aid as a share of country income (Net ODA/GNI; 2003 %)*	3.7
Aid per capita (current $; 2003)^	35.0

GDP = gross domestic product, GNI = gross national income, ODA = official development assistance, PPP = purchasing power parity.
Sources: See Footnote Table 3.1, World Bank (2005); Organisation for Economic Co-operation and Development (2003); United Nations (2004, 2005).

Sri Lankan Muslims that their ancestors established themselves in the early part of the 8th century in Colombo, Galle, Baberyn, Jaffna, Trincomalee, Puttalam, and Kudiramalai (Hulugalle 1965).

Sri Lanka was under colonial rule, variously from the Portuguese, Dutch, and British from 1505 until 1948. Ceylon (Sri Lanka) achieved independence from the British in 1948.

Politics and Government

Tensions between ethnic groups and a civil war lasting more than 2 decades have dominsted politics in Sri Lanka since independence. Public adminis-tration after independence was led by a group of westernized elite persons who replaced the colonial rulers. This group was brought together to form the first post-independence government by the United National Party (UNP),

which pursued anticommunist intercommunal policies. In spite of the inter-communal orientation of UNP and the liberal political ideology of the elite leadership (Pinnawala 2004), one of the first acts of this government led to the disenfranchisement of Tamils of Indian origin in 1948. This began the process of diminishing the political and economic status of the country's Tamil population (van Horen 2002).

By the early 1980s, militant groups were operating in Tamil areas of the country. Their actions were limited to the consolidation of their posi-tion in the Tamil community and engaging in low-level violent actions. In July 1983, riots broke out throughout the country. At the end of the rioting, approximately 3,000 Tamils had been killed and more than 100,000 had fled to India (Hoole et al. 1989; Singer 1990). This was a turning point for many Tamils, who were thereafter convinced that only a totally separate state— *Tamil Eelam*—could protect them. Since then, Sri Lanka has become a coun-try troubled by civil unrest, making it difficult to provide stable government and a secure environment for investment and development.

In December 2001, a new Government, led by the United National Front came to office. The Government gave high priority to a political settlement to the civil conflict plaguing the country and signed a memorandum of under-standing (MOU) with the Liberation Tigers of Tamil Eelam (LTTE) to end hostilities, with the Government of Norway working as mediator. With this MOU, popularly known as the Peace Agreement, the Government and LTTE agreed to formally cease hostilities, restore normality to the country, and pro-vide an environment for direct talks between the two parties. Although the peace process is fragile, its gradual progress has raised hopes for sociopoliti-cal and economic stability (ADB 2002a; ADB 2004a).

Although the Government was able to stabilize the economy, which was contracting under the previous administration, dialogue with the LTTE did not work as expected after the peace agreement due to changes in the Gov-ernment and political environment. However, discussions between the two parties continue.

The instability as a result of hostilities with LTTE has made it extremely difficult to maintain stable government; many local government systems became inoperable. Hundreds of thousands of people have been displaced, seeking refuge in urban centers around the country and overseas. The ability of local governments to provide and maintain basic services, sound financial management, and well-managed development has been severely curtailed. Despite early attempts to encourage decentralization, the national security sit-uation and political structure had led to the maintenance of a strongly central-ized government system. As a result, local governments, especially munici-palities, have not been able to provide key strategic infrastructure, leadership,

and governance needed to support regional and local economic development. The weakness of local government to provide even basic support to communities became very apparent after the tragedy of the December 2004 tsunami.

Decentralization

A policy of political decentralization was initiated in 1965 by a UNP government in coalition with the Federal Party, the main Tamil political group, partly in an attempt to establish more efficient structures of government, but mainly to address Tamil demands for autonomy. District development councils (DDCs) were established and granted some administrative powers, although real political authority was not granted to the districts. J. R. Jayawardhene, who came to power as Prime Minister in 1977 and installed himself President, had scant respect for these councils and appointed ministers, called district ministers, from his party to oversee development work of the districts. Even though the Tamil leaders were not happy with the operations of DDCs—especially their weakened positions as a result of the above move by Jayawardhene—they took part in the DDC elections held in 1983.

The local elections were a disaster and led to a period of civil unrest. In 1987, as a result of the Indian intervention, Sri Lanka amended its Constitution and established eight provincial councils with substantial political and financial autonomy. These were created to bridge the gap between government structures at the national and local levels, and to facilitate the process of decentralization (van Horen 2002).

In addition to devolution of political power through provincial councils, another form of decentralization was undertaken, mainly of development and service activities of the national Government. Decentralized district coordinating committees (DCCs)—not to be confused with the now-defunct DDCs, which were elected bodies—were established and headed by the chief government administrator in the district (known as the district secretary). DCCs coordinate work of national agencies working in the provinces (technically known as line agencies) and are also responsible for planning and policy formulation, determining district priorities and overall coordination of public sector activities. The implementation of plans and policies ideally involves these government bodies as well as *pradeshiya* and *gramodaya mandalayas*—subnational public authorities entrusted with wider functions and responsibilities than local government bodies, covering regulatory, service-oriented, and development activities.

Despite progress made on decentralization, many challenges remain. Administrative decentralization is limited, with control over many local government functions remaining with central Government (Asian Resource

Centre 2002). Many layers of public administration and overlapping responsibilities between governments lead to inefficiencies in the delivery of public services. The national budget situation creates enormous financial management difficulties for local governments, which are often short of funds to meet salary payments and provide basic services. Most local governments are poorly equipped to provide even a basic level of services due to weak management structures and lack of skilled personnel. Revenue generation at the local government level is constrained by regulation of local taxation systems, poor asset appraisal and valuation, and the failure of the land administration system. A significant proportion of local taxes are never collected because the status of ownership remains unclear or local governments are unwilling to impose penalties for not paying taxes.

Population and Urbanization

The current population is approximately 19 million, with an annual population growth rate of 1.1%. Population data, by district, are shown in Table 12.2.

The urban population is distributed throughout 134 cities and towns. Colombo accounts for about 20%. Urban populations are expected to grow from 4 million to 6.5 million by 2030, at which time 30% of the population is expected to be living in urban centers (Figure 12.1).

Figure 12.1: Trends in Urban and Rural Population, Sri Lanka
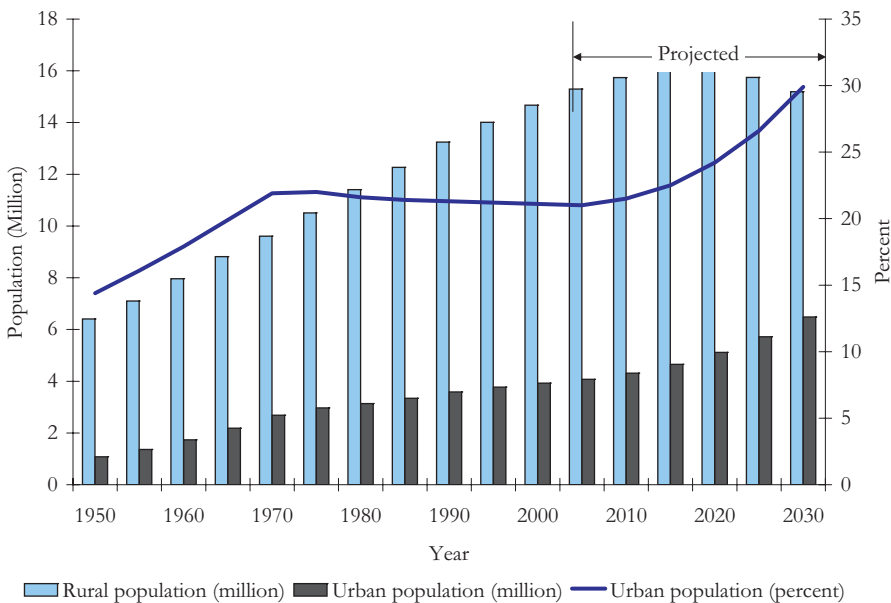
Table 12.2: Population Data by District, 1981 and 2001[2]

District	Population		Average Annual Rate of Growth (%)	Population Density (per km²)	
	1981	2001	1981–2001	1981	2001
1. Colombo	1,699,241	2,234,289	1.3	2,605	3,305
2. Gampaha	1,390,862	2,066,096	1.9	994	1,541
3. Kalutara	829,704	1,060,800	1.2	516	673
4. Kandy	1,048,317	1,272,463	1.0	554	664
5. Matale	357,354	442,427	1.1	180	227
6. Nuwara Biya	603,577	700,083	0.7	354	410
7. Galle	814,531	990,539	1.0	487	613
8. Matara	643,786	761,236	0.8	516	599
9. Hambantota	424,344	525,370	1.1	164	210
10. Jaffna	738,788	490,621	-2.0	795	528
11. Mannar	106,235	151,577	1.7	53	81
12. Vavuniya	95,428	149,835	2.2	36	81
13. Mullathivu	77,189	121,667	2.2	39	50
14. Killinochchi	91,764	127,263	1.6	80	106
15. Batticaloa	330,333	486,447	1.9	134	186
16. Ampara	388,970	589,344	2.0	86	140
17. Trincomalee	255,948	340,158	1.4	98	135
18. Kurunegala	1,211,801	1,452,369	0.9	254	314
19. Puttalam	492,533	705,342	1.8	165	245
20. Anuradhapura	587,929	746,466	1.2	82	112
21. Polonnaruwa	261,563	359,197	1.6	77	117
22. Badulla	640,952	774,555	0.9	227	274
23. Monaragala	273,570	396,173	1.8	49	72
24. Ratnapura	797,087	1,008,164	1.2	246	312
25. Kegalle	684,944	779,774	0.6	412	463
Total, Sri Lanka	14,846,750	18,732,255	1.1	230	299

km² = square kilometer.
Source: 2001 Census of Population and Housing, Department of Census and Statistics, Sri Lanka.

Urbanization has affected almost every part of the country since independence, with urbanization rates rising sharply prior to the conflict in the north. Thereafter, urbanization levels stabilized and fell slightly until the Peace Agreement in 2002. Sri Lanka has not experienced the levels of urbanization that have occurred in other Asian countries. This is partly explained by the high levels of migration to the Middle East, mainly by females employed as domestic workers and to refugee camps in India. Migration rates are projected to rise in future, especially with the growing demands for employment in new manufacturing areas located in and close to the capital.

Urbanization has been greatest in the southwest, especially in Colombo. Middle-sized towns with populations of 20,000–50,000, however, are the fastest-growing component of the urban sector. The urban poor lack access to basic amenities and endure poor-quality physical environment. Few own their dwellings, and those in the lowest-income categories do not have their own shelter; many share accommodation, mostly in urban shack settlements (Gunatilleke and Perera 1988).

Economic and Social Development

The Economy

The year 1977 marked an important turning point in the economic direction of the country. Sri Lanka adopted an economic strategy of liberalization in which markets were opened to foreign investment through tax, tariff, trade, and fiscal reforms. Simultaneously, the Government centralized political control around the presidency. However, it took many years for structural changes to occur in the economy because many state-owned enterprises (*parastatals*) were poorly managed during the socialist period of government.

In recent years, the structure of the economy has significantly changed as the result of neoliberalist policies. The gross domestic product (GDP) in 2003 was $72 billion, with a GDP per capita of $3,778. The share of primary industries (agriculture, forestry, and fisheries) to GDP fell from 23% in 1995 to 19.1% in 2003. During the same period, the manufacturing contribution went from 15.7% to 26.2%. Manufacturing in 2003 contributed 78% of total exports estimated at $5.3 billion (USAID 2004). Services now contribute more than 54% of GDP and are the fastest-growing sector. However, the economy is still experiencing many structural problems that significantly slowed the growth rate over the last decade.

Like the Philippines, remittances to Sri Lanka make a significant contribution to export earnings. In 2002, private remittances to Sri Lanka have exceeded foreign direct investment and comprised about 15–20% of export earnings, or 5% of the gross national product (Sriskandarajah 2002). Labor migration due to the conflict has left many Sri Lankans displaced with no local livelihood, spawning the migration of household members abroad (Hyndman 2003; Brun 2002).

Economically, Sri Lanka suffered a 1.4% contraction of GDP in 2001 due in part to external factors, such as falling export demand from the global slowdown, and internal factors, such as poor agricultural yields caused by continuing drought. Continuing political instability in 2001 further damaged the ailing macroeconomy, reflected most directly in the unsustainable fiscal

deficit of nearly 10% of GDP. This substantially limited the Government's development resources and undermined prospects for future growth and private investment. The 2004 tsunami also has had a devastating impact on some sectors of the economy, especially the fishing industry.

Paralysis in decision making caused capital expenditures to decline to less than 5% of GDP and even impaired counterpart funding for foreign-financed projects (ADB 2002a). The LTTE attack on the country's only international airport in Colombo caused tourism and shipping to plummet in the last half of 2001, with power cuts of up to 8 hours daily affecting production levels. The new Government, elected in December 2001, responded to these developments in its first budget, announced in March 2002. It focused on bringing back fiscal discipline with a deficit target of 8.5% of GDP, excluding privatization proceeds and foreign grants, mainly through revenue reforms. The economic program initiated by the UNP Government, however, did not continue due to the dissolution of Parliament in November 2003, leading to a new general election in April 2004.

The effectiveness of Sri Lanka's plans for economic recovery, in addition to the economic direction the budgets will adopt, will largely depend on the progress of the peace process. Cessation of hostilities and continued peace would help keep defense expenditures under control and help the Government achieve its ambitious fiscal targets. A permanent peace agreement between the Government and LTTE would also allow higher levels of rehabilitation work in the north and east to commence.

Since 1997, every Sri Lankan budget has basically followed the same economic fundamentals and committed to undertake reforms to put the country on a path toward sustainable growth. The reforms have generally been in line with the ongoing policy dialogue in the infrastructure and finance sectors and may even be accelerating. ADB has indicated its support for the Government's reform agenda through the lending and nonlending pipeline (ADB 2004a).

Employment

The employment structure of Sri Lanka has changed significantly over the last decade. The proportion of labor in agriculture fell from 37.4 % in 1996 to 34.1% in 2004; in manufacturing, it has risen from 14.6 % to 16.7%, and in services, from 48.0% to 49.2 % (Department of Statistics 2005). The national labor force in 2004 was approximately 8 million, of which 1 million comprised the urban labor force.

Little information on employment and skills needs in urban areas is available. The nation has experienced significant skills loss through migration

(Lowell and Findlay 2001), which is undermining the capacity of institutions, especially local governments, to provide essential public services. There is a significant lack of skills in the field of urban management, especially those related to the implementation of urban development and infrastructure projects, asset appraisal and management, and urban finance (ADB 1997).

Urban unemployment is about 8.8% but this disguises a very large number of people who are underemployed, mainly in the informal sector. Majority of the urban poor work in the informal sector as self-employed income earners or as casual laborers (ADB 2004a). Most of them have no productive assets and depend only on their labor and skills to survive. Importantly, the income flow in the urban sector is irregular and seasonal, with employment in low-paying industries subject to unpredictable changes (Gunatilleke and Perera 1988; Ali and Sirivardana 1996). The proportion of youth in the informal sector is about 30%, compared with 40% for the employed population as a whole (Department of National Planning 2002).

Social Development

The health infrastructure is well developed, covering all parts of the country, with well-organized health and nutrition facilities and service networks island-wide that the poor can access. These services include preventative health care, treatment in outpatient facilities, and curative care in hospitals. Social indicators show a total fertility rate (births per woman) of 1.9, a maternal mortality rate (per 100,000 births) of 92, and an infant mortality rate (per 1,000 live births) of 16 (WHO 2004). Life expectancy at birth is 73 years (UNICEF 2003). However, more than one fifth of the total population is undernourished. The high prevalence of underweight children below 5 years of age is a source of concern, although it decreased from 38% in 1993 to 29% in 2000 (ADB 2004a).

The population below the poverty line is 22.7% (Sri Lanka Census Department 2002). Extreme poverty, measured as the proportion of the population living on less than $1 a day, is the lowest (6.6%) among South Asian countries.

In terms of access to resources, in 2002, the population using improved drinking water sources was 78% and access to adequate sanitation was 91% (UNICEF 2003). In these respects, Sri Lanka has made good progress toward achieving the Millennium Development Goals and targets.

The adult literacy rate is currently 91.4%, and primary school enrollment is universal. Children of the urban poor can attend government schools, which are generally among the better-equipped schools in the country and compare favorably with rural counterparts. Poverty does not present an

insurmountable barrier to education because students are given free text-books, subsidized transport, free school uniforms, and a food stamp for a mid-day meal (Ali and Sirivardana 1996; Gunatilleke and Perera 1988).

Under the current economic policy framework, the Government will continue economic restructuring and reform to put the economy on a more efficient footing. The reform focus will be on commercializing state-owned enterprises, creating a balance between the private sector and public interests, and improving the institutional framework to reap larger benefits from technology transfers and trade. Regional inequality has increased and in some provinces, poverty levels have also increased, despite overall improvements in living conditions (ADB 2004a).

National Transportation Network and Urban Infrastructure

The 2004 tsunami devastated large parts of the country's coastal infrastructure (roads, railway, power, telecommunications, water supply, fishing ports).The overall loss of assets has been estimated at 4.4% of GDP, with reconstruction costs rising to $1.5 billion, or 7% of GDP (ADB 2004). However, not only the loss of infrastructure from the disaster poses significant challenges to the development of the country. Much of the country's infrastructure has been damaged or neglected as the result of civil unrest, political instability, and poor economic management over many years.

Sri Lanka has among the highest density of roads in Asia. However, poor maintenance has resulted in a degraded urban and rural road network across the country. The World Bank-funded Road Sector Assistance Project will help lower transportation cost across the country by improving 620 km of national roads by reducing the poor condition of national highways from 52% in 2005 to 35% in 2010 (World Bank 2005). This project is closely coordinated with ADB and the Japan Bank for International Cooperation. While developing the national road network is a high priority for the country, improving local urban roads networks is plagued by a lack of funds for maintenance. Improved revenue-raising and tax collections, as well as community partnership approaches, are required to improve the quality of urban and rural roads.

The establishment of a Road Maintenance Trust Fund, which is a financing mechanism to manage budgetary allocations to national and provincial roads, will be important to maintaining the national road network. The Government will increase annual maintenance expenditure from $13 million in 2005, to $30 million in 2006, and $46 million in 2010 (World Bank 2005).

While the level of urbanization in Sri Lanka is low compared to that of other Asian countries, urban settlements face similar infrastructure and maintenance problems as other cities in the region. Data on urban infrastructure

are poor. According to the UN indicators shown in Table 12.1, most urban populations have access to basic water supply and sanitation services, but the quality is poor or intermittent. Other statistical data suggest that more than 12% of urban populations have inadequate water and sanitation services. Drainage systems in low-lying areas are poorly maintained, giving rise to health problems in poor urban communities.

The problems associated with urbanization are most prominent in the Greater Colombo Area, where 43% of the population lives in slums and shanty settlements lacking proper basic facilities, such as water supply, lighting, and toilets. The situation of the shanty settlements around Colombo is serious because they are located in areas unsuited for residential purposes, such as inside canal banks, road reservations, and flood-prone areas (ADB 2000). Most of these settlements lack basic facilities, have poor road access, few community facilities, and improvized housing structures. Less than 25% of wastewater in the Colombo Municipal Council area is treated. More than 900 tons of solid waste daily are collected and disposed of through open dumping without any sanitary consideration.

Conditions in the small- and medium-sized (secondary) towns outside Greater Colombo are not much different. Improvement and expansion of water supply, sanitation, stormwater drainage, and solid waste collection and disposal are considered priority investment areas by urban local governments; however, most lack the capacity and means of funding improvements in urban infrastructure. There is a tendency to give priority to improvement of roads and transportation and development of bus terminals because these are seen to generate greater economic opportunities (ADB 2000). Smaller towns lack good telecommunication infrastructure, which is a significant impediment to urban development.

Sustainability and Urban Development

Like those in other Asian countries, many urban settlements in Sri Lanka are developing in ways that are not sustainable. Land planning, management, and administration are weak. Urban household density in Colombo is in the order of 17 persons/ha and more than 550,000 live in slum communities, with the poorest of slum dwellers occupying 2.18 perches (55 square meters [m^2]) of land per household (Gunesekera 2003). Although these are much lower than densities in other South Asian cities, such as Mumbai (24 m^2 per dwelling), these are still high and result in poor living conditions for more than 25% of the city's population.

Groundwater pollution through industrial and domestic sewage contamination has made much of the capital city's water supply unfit for drinking

(IGES 2005). There has been a rapid fall in the groundwater table, with rising levels of salinity resulting from excessive drawdown. More than 22% of households in Colombo lack basic sanitation services. Air-pollution levels in the capital and other cities continue to rise due to the failure to enforce conditions on environmental emission by manufacturing industries and large numbers of two-stroke vehicles operating in the city. Similar environmental problems are emerging in other Sri Lankan cities.

The 2004 Asian tsunami had a devastating impact on Sri Lanka's coastal communities and the country's economy. The livelihood and homes of more than 450,000 people were affected by the disaster, with more than 27,000 lives lost. The estimated overall damage is $1 billion, much of it in housing, tourism, fisheries, and transportation (World Bank 2005).

Poverty

While absolute poverty in the rural sector appeared to remain unchanged during 1969–1985, available data for urban areas show a significant reduction in urban poverty. According to the Labor Force Socio-economic Survey (LFSS), the levels of poverty are understood in terms of four basic categories (Gunatilleke and Perera 1988). Nationwide estimates of poverty derived from the 1985/1986 LFSS indicate that 50% of households were poor in terms of nutritional deficiency and 24% were nutritionally at risk. In terms of minimum per capita food expenditure, the incidence of poverty is estimated at 22.7% (Sri Lanka Census Department 2002). Urban poverty is about 15%, but has been on the decline according to both a consumer finance survey and LFSS data.

A poverty reduction partnership agreement between the Government and ADB was made in 2002. The poverty reduction partnership agreement is fully consistent with the Government's poverty reduction strategy as well as the relief, rehabilitation, and reconciliation framework. The Government and ADB agreed that the impact of ADB's assistance on poverty reduction would be stronger if policy and institutional reforms improved the economic and sector investment environment. Poverty reduction is currently focused on a number of economic sectors, including agriculture and natural resources, energy, private sector development, social sectors, transport, and governance (ADB 2004a).

In this regard, the public assistance program for the disabled and destitute is important. A monthly subsistence allowance is given to those who cannot work due to poor health, old age, or disability, and to those families who have lost their sole income-earning member. This program is being evaluated by the Government and will likely be restructured (Ali and Sirivardana 1996; Gunatilleke and Perera 1988).

International Development Assistance

Official development assistance (ODA) plays a major role in the development of Sri Lanka. ODA in 2003 was $671.9 million, equivalent to 3.7% of GDP. This compares with 9.1% in 1990. Sri Lanka is heavily dependent on foreign assistance to support the development of several strategic projects to develop the economy.

At a conference in Tokyo in 2003, the International Monetary Fund, World Bank, ADB, the Government of Japan, the European Union, and the Government of the United States pledged a total of $4.5 billion to support strategic development projects related to the poverty reduction strategy program laid out in the "Regaining Sri Lanka," a Government action paper, and studies commissioned by the donor community that, together, provide a basic framework for economic revival. While implementation of previous aid projects has been inconsistent, the Government believes it can improve this record by streamlining tender processes and improving project management skills.

ADB has funded several important projects to support the development of the urban sector: Capacity Building in Urban Infrastructure Management, Local Government Infrastructure Improvement Project, and Basic Social Infrastructure Development. The World Bank has supported projects for Improving the Rural and Urban Investment Climate, Community Development and Livelihood Improvement *Gemi Diriya*, and road sector assistance projects. United Nations (UN) agencies and bilateral development partners have a wide range of development projects supporting the urban sector in Sri Lanka.

GOOD PRACTICE CASE STUDIES

The case studies are from projects initiated to deal with environmental and health-related problems. They all are local government authority-community partnerships using community action plans to varying degrees. Two are projects that are facilitated by the same voluntary organization.

According to a survey carried out by the Sustainable Township Program, low-income settlements in Colombo do not have access to most basic municipal services. About 56% of households rely on common water taps and, on average, there are 40–100 households per tap. About 67% of households in low-income settlements either share or do not have access to toilets. In the case of garbage collection, 66% of low-income communities do not have access to municipal waste collection services and throw garbage into nearby canals, drains, or reservation lands. In most low-income settlements (about 70%), paved roads and improved storm and wastewater drains have not been constructed (Prema kumara, undated).

Figure 12.2: Map Showing Location of the Case Studies

SRI LANKA

Study Site

National Capital

COLOMBO

Dehiwala
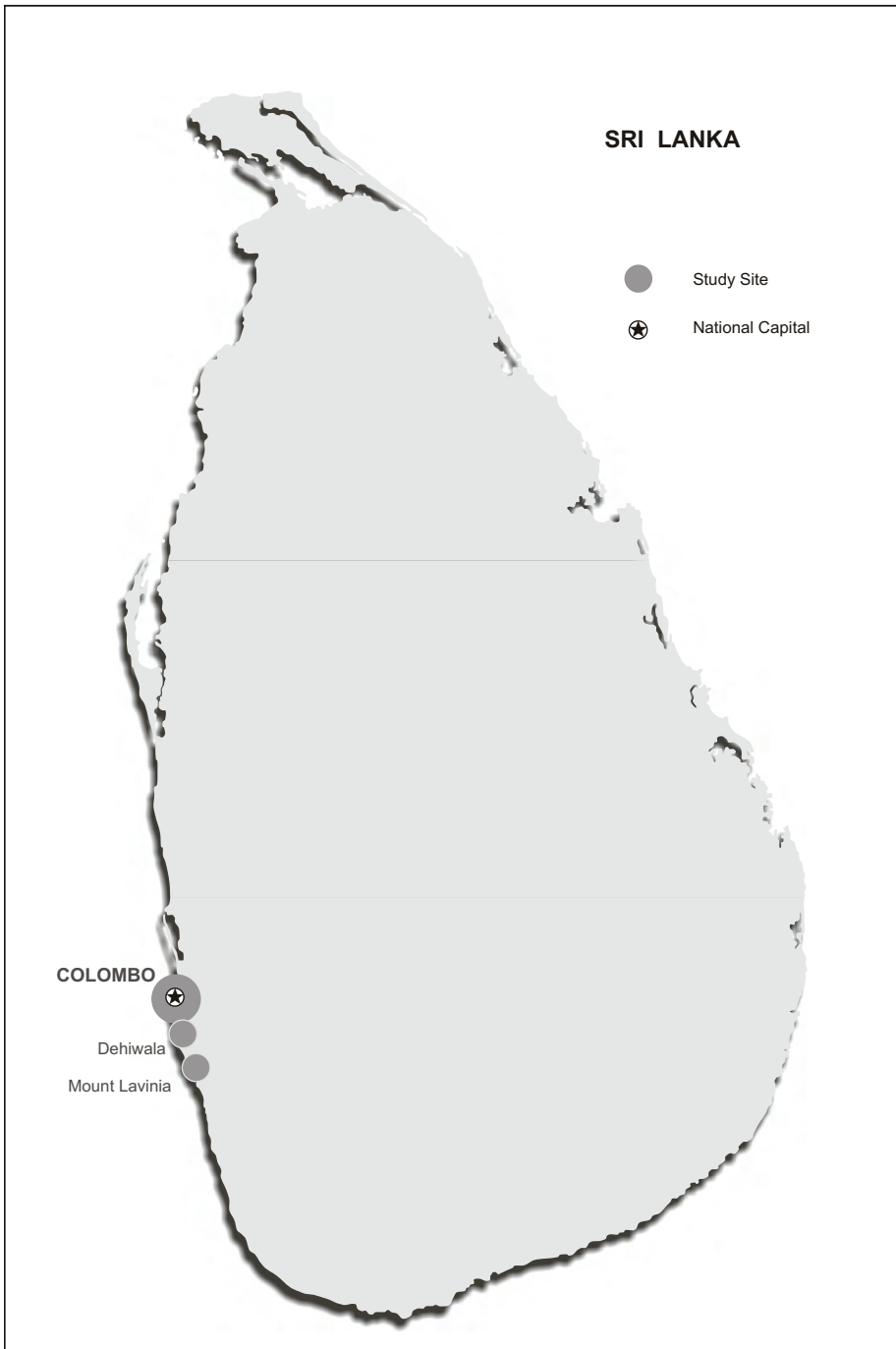
Mount Lavinia

Community-based Solid Waste Management in Low-income Settlements in Dehiwala Mount Lavinia Municipality

One of the major problems in Sri Lanka is inefficiency in collection and disposal of waste in urban areas. There is a scarcity of land for dumping or landfill sites. Waste management is still a function of the local authorities, many of whom have been unable to deal with health and sanitation issues that are aggravated by environmental pollution

GOOD PRACTICE	
Good Governance	✓
Urban Management	✓
Infrastructure/Service Provision	✓
Financing and Cost Recovery	
Sustainability	✓
Innovation and Change	✓
Leveraging ODA	

from urban waste. Formulation of a sustainable waste management system has become a priority for local and central government agencies involved in urban development in Sri Lanka. This case study examines the community-based solid waste management work of the Dehiwala Mount Lavinia, which is the second biggest urban concentration in the country.

Dehiwala Mount Lavinia is part of the Colombo Core Area (CCA) and lies to the south of Colombo City. The area served by the Dehiwala Mount Lavinia Municipal Council (DMMC) generates about 150 metric tons of solid waste per day. The municipal council collects about 75% of the waste. Many under-serviced communities in the municipal area either do not receive waste disposal services or have only limited access to such services. Limited institutional and material resources—mainly caused by budgetary problems and the lack of suitable land for waste disposal—are some of the major con-straints the council faces in the provision of an effective waste disposal ser-vice to the community. Community-based waste collection, therefore, is not only important as an attempt at urban governance good practice but also to relieve the burden on the council.

The DMMC composting project is part of the Sustainable Colombo Core Area Project funded by the United Nations Development Programme (UNDP) and implemented by the UN Human Settlements Programme (Prema kumara 2000). The municipal administration started its first commu-nity-based waste management project in 1999 in a shanty community called Badowita. The objective was to get the community to carry out compost pro-duction from domestic garbage. The project was a three-way partnership that brought together the community, the municipal council, and an NGO called Sevanatha. Sevanatha was selected for its experience in urban good practice activities and its familiarity with waste management work using compost bins (Prema kumara 2000). Project design was participatory and facilitation and implementation was by the NGO. There had been previous efforts, for

example, in Colombo City (Jayaratne 1996); however, this project differs in its enterprise component.

The compost project was started in two communities as pilot projects. One was in a shanty settlement called Badowita. Majority of the settlers are from families living along canal banks in Colombo, relocated in 1993–1994 as part of the Greater Colombo Canal Improvement Project. According to 2001 population data, the settlement had about 1,400 households (UNHS 2002) composed of about 4,500 persons. The other pilot project was in Udyana, a middle-income area close to the city center. The municipal ward is also called Udyana. This is a smaller community consisting of about 200 families, of which about 13% are illiterate. As Badowita is a shanty community, the people living there do not own land; the land is owned by the Sri Lanka Land Reclamation and Development Corporation, a government agency. The shanty community is also known for its high crime rate, mainly drug and alcohol related.

Strategy

The approach to planning and implementation was participatory and evolved in three stages. In the first stage, DMMC formed a task force concerned with solid waste management and prepared a strategic action plan for solid waste problems, a community action planning program with Sevanatha. During the first 2 months in 1999, brainstorming sessions were organized for city stakeholders, including the electoral ward members in the DMMC.

During the implementation stage, Sevanatha carried out a needs assessment and an assessment of aspirations through informal meetings, discussions, and interviews of members of the households. Also, formal meetings with the officials of community-based organizations (CBOs) were held to explain the need for waste separation and the associated benefits.

Women were given training on how to segregate waste at source and compost the organic waste in barrels (to be provided). Initially, 50 families from each community were selected for compost bin distribution.

In addition, neighborhood cleaning programs, art and photograph exhibitions for young people, and health programs were introduced to encourage the participatory families to take part. The following are the main outcomes of the community-based solid waste management program of the *Dehiwala* Municipal Council:

- an action plan developed by the stakeholders with the participation of the target community (community action plan);

- an institutional setup (community development society, etc.) linking the community with the other stakeholders to foster communication and coordination of activities;
- clear division of responsibilities for each stakeholder (household, small group, core group, local authority); and
- availability of funds from donors.

The compost was intended for use by community members in their home gardens. To deal with nonbiodegradable waste, the project adopted a commercial approach. A recycling center to buy nonbiodegradable waste from households was established with funding support from JICA and assistance from the Municipal Council. The community development council of the community now successfully operates it.

Achievements and Problems

The project was successful in organizing and changing the waste disposal behavior of households. Within a year, 40% of the households in the low-income settlement and 60% of the households in the middle-income area were using compost bins. In addition, less waste was being discarded along the roadside. Composting is now an income-generating activity in Badowita. This low-income settlement today has a waste collection center constructed with funding support from JICA and the municipal council. The center office was constructed by the community on a labor and resource-sharing basis on land provided by the Land Reclamation and Development Board. The center buys waste from the households for composting.

The community, through its strong federation of CBOs, was able to mobilize support from the Urban Settlements Improvement Project and the Sri Lankan Land Reclamation and Development Corporation of the Ministry of Housing, the JICA volunteer program, Sevanatha, and the Sustainable Sri Lankan Cities Program to make this participatory approach a success as well as a reality.

A working group represented by the above stakeholders developed a strategy and action plan to manage the solid waste generated in the settlement. The waste collection center is managed and operated by the community's federation of CBOs as an income-generating activity with a percentage of profits from the resale of recyclable items going toward community development projects. The federation earned the equivalent of $17,500 over a 5-month period in 2001–2002 and boasts a litter-free internal road network and a garbage-free canal (UNHS 2002).

The project in Badowita is considered sustainable; it has a strong link to the University of Sri Lanka, which will continue supporting and

monitoring the community. The project model is also considered transferable (ADB 2002b). The area had a very strong and active community leadership, active community development society, and supplementary support from external agencies.

The Integrated Program of Action to Improve Health and Environment Management in the Colombo Municipal Area (Green Star Homes Project)

There are more than 1,600 under-served settlements (slums and shan-ties) in Colombo City, housing about 51% of the total residential popula-tion. Although a major feature in the cityscape, they are relatively small—75% of them have fewer than 50 hous-ing units. Large settlements with more than 500 units account for only about

GOOD PRACTICE	
Good Governance	✓
Urban Management	✓
Infrastructure/Service Provision	✓
Financing and Cost Recovery	
Sustainability	
Innovation and Change	
Leveraging ODA	

0.7% of the urban poor settlements in Colombo. One of the major problems in these settlements is disease caused by poor sanitary conditions. During the monsoon periods in April–June and September–November, dengue and other mosquito-borne diseases become a major health problem. In 2004, there were 4,347 officially recorded dengue cases, including 22 deaths, a 40% increase from 2003 (Gunarathna 2004). The CMC spends more than $50,000 in mate-rial and another $160,000 for wages annually in mosquito control alone,[3] but officials admit that the budget is seriously inadequate (Gunarathna 2004). However, there has not been an increase in the budget, due mainly to public lethargy and a sectoral approach to tackling the problem.

The Integrated Program of Action to Improve Health and Environment Management in the Colombo Municipal Area was initiated as a response to the problem. Better known as the Green Star Homes Project, this project was inaugurated in July 2001. It is supported by the Sustainable Cities Pro-gram of UNDP, which has partnered with the Colombo Municipality, a con-sortium of leading private sector companies, and a group of nongovernment orgranizations (NGOs) operating in Colombo.[4] The program is probably the largest community mobilization and participation effort undertaken by CMC. It is the first mosquito breeding-site elimination project launched to counteract the fast-spreading and deadly dengue epidemic. Three hundred CMC staff, including doctors, nurses, midwives, laborers, public health volunteers, members of the Leo Club, and schoolchildren contributed to its success.

Strategy

The activity began with the formation of a working group, which included personnel representing relevant CMC divisions, private sector entities, and NGOs. The strategy developed by the working group was two-pronged. The first step was to carry out a campaign to destroy all mosquito-breeding places by direct intervention of CMC and the other groups to obtain community cooperation to clean their home environments and keep them mosquito-free. As the latter required creating awareness at the neighborhood and household levels, special promotional material was designed. One of the major tools to acquire community cooperation was called Green Star Sticker certification, which was in the form of a sticker that can be displayed at the site, often on the front wall of the house.

To receive the Green Star Certificate, households had to ensure that no mosquito breeding places would be found on their premises. This would require the householders to remove overgrown bushes and hedges, and maintain clean road frontages, drains, and gutters. Announcements in all three national languages were placed at various vantage points. The project also took into account the leading role that women play in keeping the environment clean and eliminating the mosquito breeding areas around their houses and settlements. Initially, only the CMC wards that had dengue cases in that year were chosen. In the second round, the CMC wards that had dengue patients in the previous years were chosen, while in the third round, areas with no history of dengue were included.

The project, although called a community partnership, did not use community participation strategies in the implementation. There was neither a community action plan nor community mobilization. The working group was the decision maker and there was no inclusion of stakeholders. Stakeholders only shared the tasks and responsibilities and, in the case of the private sector, part of the cost as determined at the working group level.

Achievements

In its first phase, 45,410 households were checked, and 10,316 houses and institutions received certification. More than 1,000 notices under the Mosquito-borne Diseases Regulations were issued to unhygienic households and 675 were fined within 3 years for noncompliance under the Mosquito-borne Diseases Regulations of the city. There was an immediate favorable response from the community. The suspected cases reported during the monsoon period of the first year of operation fell from 80 cases in July to zero in November (ADB 2004b).

Clean Settlements Program in the Colombo Municipal Council Area

The Clean Settlement Program was started as a pilot project in 1992 by the Colombo Environment Improvement Project, with the assistance of the Metropolitan Environmental Improvement Program (MEIP) of UNDP. The project was part of the community empowerment component of its community-based environmental management action. The

GOOD PRACTICE	
Good Governance	✓
Urban Management	✓
Infrastructure/Service Provision	✓
Financing and Cost Recovery	✓
Sustainability	
Innovation and Change	✓
Leveraging ODA	

cornerstone of the MEIP approach in Colombo was the preparation of the Environmental Management Strategy (EMS). The objective of the EMS was to provide a citywide strategic framework within which public and private agencies and community groups could implement planned environmental improvement and investment activities. The first pilot project was in two under-serviced settlements, Gajabapura-Bo-Sevana and Stadiumgama. These two communities had been already earmarked for upgrading. The NGO Sevanatha was the implementing agency in the pilot projects. In 1996, the program was extended to another area, Jayagathpura in the Moratuwa Municipal, south of Colombo. Later, the operational responsibilities of the project were taken over by the Ministry of Housing and Urban Development, which runs it at present.

Strategy

The entire project plan was formulated through a participatory process that brought the community, the municipal council, and other stakeholders into constant dialogue. As the first step, Sevanatha organized a community workshop that brought together selected members, health officials from the municipality, and housing officers from the National Housing Development Authority. The workshop's objective was to allow the community and the local authorities to jointly identify problems and develop a community action plan.

The action plan gave the responsibilities of the activities of the project to the community development society of the beneficiary community. In the pilot projects, Sevanatha served as the facilitator in community mobilization work and linking local government and other agencies with the community development society. The action plan contained both long- and short-term solutions to environmental problems of the community. The short-term solutions were to be executed by the community without external assistance. Examples included repair of damaged common toilets, water taps, and drains.

Long-term solutions or permanent remedies were to be done by the communities in partnership with external key players and using outside assistance.

As part of institutional development and community mobilization, a savings and credit scheme for women was established. A community center equipped with a reading room and sanitary toilets was built for community use. Many families also improved their homes, facilitated through the availability of information and frequent contact with representatives of Sevanatha and local and state agencies. These were followed by environmental improvement activities, such as garbage disposal and neighborhood cleanups. There were also campaigns aimed at raising public awareness, which included meetings, simple newsletters, and music and drama classes for children. MEIP also undertook a public awareness-raising campaign using meetings, simple newsletters, and music and drama classes for children. The newsletter, called *Thorathuru Malla,* meanin*g* "Information Basket," now reaches about 400 organizations throughout the country.

Achievements

The Clean Settlements Project has evolved into a stand-alone project funded by the World Bank. It has been scaled up and, as stated earlier, is currently run by the Ministry of Housing Construction and Public Utilities. It has secured an International Development Association grant and receives funds from other donors, such as the Norwegian Agency for Development Cooperation.

As a result of the cumulative impacts of the various waste-related CMC initiatives, the daily tonnage of garbage in Colombo has been reduced from 780 to 680 a year. This is an indication of the positive impacts of building partnerships with the community. Wayside dumps in Colombo City have been reduced to 300, with the introduction of individual plastic bins for household waste (ADB 2004b). The process and the partnerships forged under the pilot projects have made a substantial impact by changing a government-controlled environmental service delivery process into a community-managed process. The Clean Settlements project has been successful in providing a platform for low-income settlements to plan and manage their own environment.

Lessons from the Case Studies

Lack of or Inadequate Inter-Institutional/Organizational Cooperation. This is primarily a question of priorities, logistics, and coordination. Given the existence of a multitude of institutions in Sri Lanka, it is not always easy to arrive at a consensus in a short time. Each agency has its own development priorities and often wants to accelerate its pace of achievement. As a

result, approaches to problem solving are sectoral and compartmentalized. For example, in many cases, officials from both the energy and industry sectors in the Government and in the private sector have seen environment issues as a delaying factor. Many months of often painstaking consultation were required to develop strategies that majority of the stakeholders could embrace. Generating cooperation of stakeholders is not the main problem. The problem is sustainability, that is, long-term maintenance of the efficient mobilization and cooperation that is achieved by these actions.

Difficulties with Partnerships. In the case study areas where this partnership was attempted, some groups were evidently not comfortable working together. Some factors that led to these problems were organizational and institutional cultures and work ethics. Transparency of actions and efficient communication leading to efficient action (means, ends, relations, and realization of objectives) have been often found to be areas of conflict. On the one hand, the private sector was concerned with results and efficiency of actions. On the other hand, the public sector, which functions under the constraints of an institutional culture burdened by a plethora of restrictive regulations, was more interested in proper procedures. The result was that the two groups in the Dehiwala Mount Lavinia Municipality case study found it difficult to find common areas of action (Sevanatha et al. 2004).

Community Consultation and Involvement to Build Trust and Identify Priorities. The common misconception in officialdom is that a community, especially in underserved areas, lacks the organizational capacity and resourcefulness to become involved in environment-related activities and services that do not bring direct economic gains. The success of the cases discussed, at least in the short term, shows that this is not the case; these communities can be effectively mobilized if a correct approach is used and awareness is created.

Lack of Real Devolution along Agency Lines. Some problems faced by the programs were due to local government agencies being given tasks to perform without real authority. There are limitations constraining financial and budgetary work that impede local authorities from investing in innovative and locality-specific action. Furthermore, crosscutting power and authority is a feature in Sri Lankan devolution where one agency oversteps the activities and authority of other agencies. National-level agencies, therefore, often come into conflict with local governmental authorities, which delays work. There are also problems of local authorities not generating enough income to fund their work, making them dependent on donor agency support. This affects the continuity of many programs especially if adequate levels of community participation are not achieved. Local politics and politicians are also part of this; politics affects CDC work (Russel 1999).

Combining Household Environmental Management with Income-generating Activities. This can be done through activities based directly on environmental management, such as recycling, or through programs that create community-based enterprises, enabling household members to simultaneously earn an income and to obtain essentials, such as food, clean water, and building materials; economic provisions, such as credit mechanisms, help.

Community Participation and Partnerships of Stakeholders are not only Structural, Technical, Financial, and Institutional Issues. Behavioral aspects also need to be considered. Urban solid waste management is primarily about changing behavior. Therefore, capacity building at every level (household, community, municipal, and national) is necessary to facilitate behavioral changes of interest groups. Another behavioral/attitude change needed is in terms of the relationship/partnership between the private sector and government agencies. In case study areas where this partnership was attempted, the two groups were evidently not comfortable working together. There was mutual suspicion and distrust (Sevanatha et al. 2001).

Women Are Key Players in Household Garbage Management. This may be because solid waste generated in poor households is mainly from kitchens. This makes women the most important partner in waste management actions in underserved communities. The fact that in these communities women are the greater contributors to household budgets is another important factor.

Financial Management Continues to be a Problem with Many Urban Development Projects. Management and delays in the disbursement of government funds to be available for timely inputs into projects were a problem common to all case studies. Management of funds, especially disbursement of government counterpart funds to projects, was unsatisfactory. A common complaint of the donor agencies in Sri Lanka is the high levels of underutilization of funds and wastage of funds. There are a number of reasons for this--with corruption and delays caused by outdated regulations and other institutional bottlenecks being the most cited. The problem is linked to lack of institutional capacity—especially poor budget, planning, and financial management systems—and the lack of political will to devolve power and responsibility.

STRATEGIES FOR ENHANCING SUSTAINABLE URBAN DEVELOPMENT

Three strategic thrusts are needed to support sustainable urban development in Sri Lanka. The first is a focus on partnership building (UN-HABITAT

1998), which brings together four actors—the public and private sectors, NGOs, and local communities. The second is a commitment to decentralization. The third is capacity building to support decentralization and strong local government. This includes institutional and individual capacity building to maximize the utilization of the nation's human resources and to encourage more community-based (bottom up) approaches to development.

Development Partnerships

The Millennium Development Goals and the Johannesburg Earth Summit (2002) identified the importance of developing partnerships to support economic and social development. The strategic thrust on the development of partnerships in Sri Lanka is not driven so much by developmental ideologies but more by the shortage of financial and skilled human resources the country is experiencing. While the private sector is a potential source of funding, the NGO sector has the added advantage of possessing the necessary skills and capacities for work in the areas of community mobilization and participatory development actions, something lacking in the public and private sector agencies.

A major problem experienced with many urban development projects in Sri Lanka, especially those supported by overseas funding, is that their sustainability is undermined by the lack of funds beyond the life of the project. This problem can be partially overcome through engaging in partnerships, especially with the business sector. The major benefit of partnership building is that the participation of various stakeholder groups often leads to cooperative action and long-term commitment to projects. The Sri Lankan urban development experience shows that success comes when these partnerships are established across multiple sectors, comprising institutions and community groups. For example, MEIP was successful (Sohail and Boldwin 2004) because it managed to obtain the widest possible involvement of stakeholders (UN-HABITAT 1998) and achieve institutional integration by establishing an apex body (Sohail and Boldwin 2004). This project, which is now being adopted elsewhere, demonstrated effective partnership building leading to integrated sector and institutional efforts in planning and interdisciplinary input into project work.

A critical element of stakeholder participation is the need to achieve and maintain a sense of project ownership. For different stakeholders, ownership means different things, ranging from involvement in decision making to immediate material benefits generated by development actions. The case studies show that community-based environmental improvement programs in Sri Lanka have generated economic benefits along with household and

environmental improvements. This strategic linkage is based on the assumption that many poor households have pressing economic needs that are fundamental to their immediate survival.

Material benefits are particularly important in getting community support for partnership building. Partnership building has had a modicum of success in Sri Lanka's urban development projects. Institutional and ideological issues create barriers to establish effective partnerships. These issues, in turn, lead to suspicion and mistrust, which has led to the breakdown of many partnerships between the private and the public sectors on urban development activities in Colombo (Riley and Wakely 2003; Sevanatha et al. 2001). To overcome some of these problems, change management programs should be introduced in all development projects involving institutional partnerships. Change management can improve trust building and openness in urban partnerships. The failure to change institutional, business, and community attitudes; beliefs; customs; and habits is the reason many urban partnerships in Sri Lanka continue to fail.

Decentralization of Government

If the political-administrative decentralization system is to work effectively, each DDC should have complete control of all funds allocated to that district; however, this conflicts with the spirit of political devolution through provincial councils. The result is that devolution has been undermined. In some cases, this has led to conflict between provincial councils and the central Government, especially when two opposing parties control the Government and the provincial councils. The lack of proper devolution has affected the working of the local bodies as noted in the case studies.

The effective decentralization of the administrative decision-making process requires a highly skilled cadre of staff with management and professional expertise. Officers and personnel possessing the ability to perform "superior" services should be transferable between any district and region. All middle- and junior-level personnel agreeing to serve in a particular district or region should be integrated with or brought together into a separate district or regional service to be set up in each administrative district or region. These officers would be expected to serve in a single district or region during their careers. To operate a two-tier public personnel management system, each service should temporarily release an adequate number of officers to fill positions in various districts for specific periods. However, a number of issues have to be dealt with if the system were to work efficiently.

To be in line with the current trends of devolution, provincial and regional services need to be placed under provincial administration. This will require

substantial effort in changing the mind-set of the administrators, who prefer a national service that carries better prospects and opportunities and a greater sense of power and authority. To match the national service and to attract personnel, the provincial councils will need an allocation of funds, necessitating additional sources of income. The success of this will, therefore, depend on careful and long-term planning of training and addressing financial issues.

Training and organizational support for decentralization is critical. Since the required skilled workforce is in short supply, immediate steps need to be taken to train an adequate number of persons who have the relevant skills. Public service training should be accorded the highest priority at the policy-making levels. A national training policy that would set goals and determine priorities for the public service training effort must be formulated. Strengthening the capacities of district training units attached to the district secretariats is also critical. This will ensure the availability of adequate trainers at the district level. Mini-libraries should also be set up at these training units.

In addition, training activities undertaken by the different agencies should be coordinated and rationalized to avoid duplication of effort and waste scarce training resources. A coordinating mechanism should undertake such an exercise because even apex training institutions cannot undertake all the training required. Government organizations need to ensure adequate training, designing of curricula, and monitoring the performance of such training. While providing additional and more competent cadres, immediate action should be taken to strengthen the existing institutional capacities and streamline the present operations systems at all subnational levels.

Building Institutional Capacity to Support Decentralization

Sri Lanka must adopt six key ingredients or pillars to build institutional capacity. The long-term impact of any capacity-building intervention on poverty reduction is dependent on the extent to which poor urban communities' productive asset portfolios are built, as well as the capacity for their management. Five categories of assets or resources need to be put in place during the capacity-building process to ensure the continuity of capacity building. These are building up physical assets, building up natural assets, strengthening human capital, strengthening social capital, and building up a viable local economic base. In addition, the extent to which capacity building makes a positive impact in reforming governance institutions needs to be assessed (Figure 12.3).

By combining case study methods for evaluating capacity-building practice (Laquian 1983; Skinner 1987) and innovative techniques for evaluating urban poverty reduction interventions (Scoones 1998; Moser 1998; Grosh

Figure 12.3: Six Pillars of Institutional Capacity Building
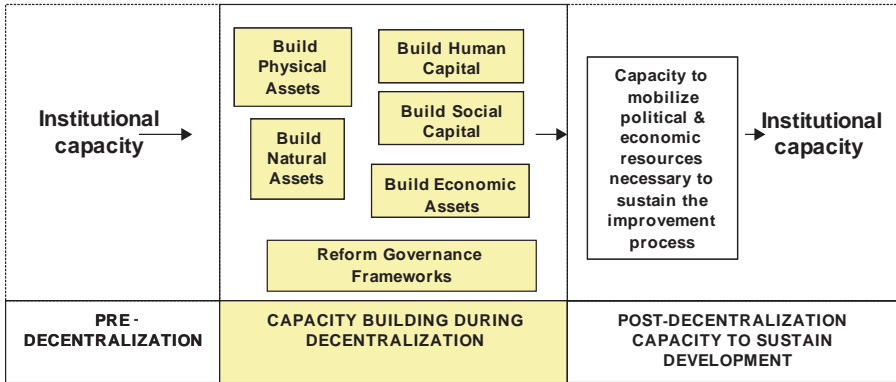
and Glewwe 2000), the extent to which capacity building has been built up in these five categories of assets and has contributed to reform the institutional framework at the six levels noted above can be examined.

As an illustration, the pre- and post-decentralization ingredients of institutional capacity in poor areas are analyzed to evaluate the extent to which institutional capacity was built as part of the capacity-building process, as well as an identification of factors supporting and constraining the building of these assets.

1. Building Physical Assets

A foundation for improving low-income settlements is the physical infrastructure that is either improved or put in place. This includes water and sanitation; garbage removal; a transportation system (roads, lanes, and footpaths); stormwater drainage; electricity; health and education facilities; community halls; and recreation facilities (Laquian 1983; Skinner et al. 1987; Mukhija 2001; Abbott 2002a). The improvement of infrastructure will also contribute to the success of good-practice activities. The community-based waste management case study in Dehiwala Mount Lavinia and the communities that are part of the Clean Cities case study in Colombo both show that improvement in housing conditions made people more conscious of proper waste disposal practices simply because people did not want garbage lying around their newly improved houses. This, in turn, worked as an incentive for members of the community to take part in the project activities.

2. Building Natural Assets

Building natural assets involves restoring and rehabilitating damaged physical environments as well as putting in place preventative measures designed

to avoid future environmental damage. Capacity-building initiatives are often weak in environmental management, with service delivery seldom being linked to longer-term environmental monitoring and education programs. At least four dimensions require attention in this regard. First, capacity building should include rehabilitation of damaged natural resources. Second, measures need to be put in place to ensure the prevention of future damage to those natural resources. Third, there should be a focus on environmental education of settlement residents. Fourth, given the limited capacity of local governments, community monitoring of environmental conditions is an important longer-term consideration (van Horen 2001).

Integrating these dimensions within a community-based approach to environmental management moves beyond attempts that place an excessive reliance on legal mechanisms to police development in environmentally sensitive areas. Rather, environmental management should reflect an attempt to involve low-income residents of low-income settlements in the planning and development process as stewards of the environment (Berkes et al. 2000; Grierson 2000; Curthoys 2002).

Capacity building of government agency officials, community leaders, and community members was a built-in component of both the Clean Settlement Program case study and community-based waste management case study. This was not present in the Green Star Homes Project, in which the educational and awareness components were disseminated through public media and other formal means, such as posters. There was no close community interaction as in the other two cases. Green Star Homes Project did show that initial progress failed to maintain the momentum generated, which can be attributed to inadequate attention to capacity building.

3. Building Human Capital

Building human capital encompasses ensuring settlement residents' health status, which determines capacity to work, and strengthening knowledge and skills. Human capital development is closely linked to economic and social infrastructure provision. Social services, such as education, ensure that people gain skills and knowledge, while economic infrastructure, such as water, transport, electricity, and health care, ensure that they are able to use these skills and knowledge productively.

Raising levels of knowledge and skills makes a crucial difference in the urban poor's ability to overcome poverty insofar as higher levels of knowledge and skills mean an increase in returns to labor (Moser 1998; Mitlin 2003). While meeting basic health and safety needs is necessary, it is not a sufficient prerequisite for building longer-term improvement processes (Laquian 1983; Skinner et al. 1987; Durrand-Lasserve and Pajoni 1993).

Health levels play a crucial role in the ability of the poor to work—health being positively correlated with people's capacity to work.

4. Building Social Capital

Social capital involves the development of networks, associations, social interaction, and community engagement for some form of mutual bene-fit. Network building was successfully carried out in the compost project (Case Study 1) and the Clean Cities project (Case Study 3). Of course, both programs benefited from these communities having preexisting and well-established community-level organizations. There is a danger that these organizations become enmeshed in local politics, often as the result of local loyalties, particularly where political leaders come from within the com-munity and other relationships. In Sri Lanka, a politician who is influential and proactive can often overcome the lethargy of bureaucracy by drawing on political connections (patronage relationships). Such relationships were not uncommon in the case study areas. Network building of the Green Star Homes Project was not a success, especially as regards networking with private sector stakeholders.

5. Strengthening the Local Economic Base

Building economic assets involves strengthening the productive base of the community, which includes ensuring land tenure security, improving hous-ing quality, strengthening microenterprises, providing access to credit, and increasing income-earning opportunities. A prerequisite to ensure the con-tinuity of the improvement process is the economic viability of capacity-building initiatives. In capacity building, capital costs are commonly treated as outright grants to end-users, given the low-income levels of informal set-tlement residents. Internationally, one major shortcoming of capacity build-ing has been the limited ability to recover the operating costs of ongoing service provision.

Recent experience in water and sanitation projects provides some insights on economically sustainable approaches. Although cost recovery is not one of the major objectives of the community-based waste management case study, it has a cost-recovery component in the form of the waste collection center, which has managed to establish its own office through community contract-ing. Projects with the best cost-recovery records are those in which residents play a primary role both in initiating projects and in making key decisions regarding affordable service levels, cost recovery, and ongoing management. Capacity-building literature has long argued that the prerequisites for suc-cessful cost recovery are affordable standards of service provision, effec-tive development management systems, and meaningful participation of

settlement residents in decision making (Laquian 1983; Payne 1984; Skinner et al 1987; Devas and Rakodi 1993; Kessides 2002).

Financial constraints on utility providers and users need to be removed. For instance, this could include providing credit to households for initial connection costs, offering poor households flexible bill payment options, and targeting one-off subsidies for the households most in need. Also, officially imposed service standards need to be adjusted to better reflect affordability and needs of poor households (Kessides 2002). Private companies could provide services, including water, electricity, and telephones, and residents could pay the consumption costs for these services.

6. Reform of Governance Framework

Building on the seminal works on governance in developing countries (Sivaramakrishnan and Green 1986; World Bank 1989), the theoretical work on urban governance is well-developed (Friedmann 1999; Friere and Stren 2001). Most empirical research on governance focuses on performance in terms of service delivery and management—in which performance is generally poor (Ruble et al. 2002; Laquian 2005). Analyses of governance institutions in developing countries reveal that they are too rigid and are insufficiently adaptive to changing imperatives at the micro- or metropolitan levels (McCarney 1996). Thus, they are poorly equipped to manage poverty reduction interventions, such as urban improvement initiatives, effectively. Consequently, even after capacity building has taken place, governance institutions typically fail to facilitate the effective integration of low-income settlements into the urban fabric or ensure the continuity of the settlement improvement process.

The six areas noted above are critical for ensuring the longer-term continuation of the process and the subsequent improvement in urban areas. Attributes of capacity building that form each of these pillars are presented in Table 12.3. This is particularly important in the context of decentralization. Some countries in Asia have decentralized power to the local level, but have not built capacity at this level, with the consequence that local government is unable to deal with issues at the local government level. Not every single item noted in the table needs to be addressed, but all six areas do need to be engaged.

If institutional capacity is *not* developed, then it is only a matter of 2 or 3 years before the infrastructure starts falling apart and the community will be no better off than before the development intervention began. Similarly, a local government that lacks the capacity at the local level does not have the capacity to engage with, and deal with issues that have been devolved to the local level.

Table 12.3: Attributes of Institutional Capacity Building

Building Physical Assets	▪ Water: access to potable water. ▪ Sanitation: sewerage disposal system for each household. ▪ Garbage removal: garbage removed from settlement on regular basis. ▪ Storm water drainage: adequate to prevent damage to housing and infrastructure. ▪ Flood protection: in areas susceptible to flooding. ▪ Roads, lanes, and footpaths: adequate circulation system. ▪ Electricity: public lighting, community facilities, and household access to electricity. ▪ Health facilities: buildings from which health services can be delivered. ▪ Education facilities: buildings for schools. ▪ Community facilities: buildings for community meetings and community activities. ▪ Housing: good quality construction and materials. ▪ Economic viability: no outstanding debt, consumption costs paid. ▪ Flexible bill payment: given reliance on irregular informal sector incomes. ▪ Service standards: must reflect affordability levels.
Building Natural Assets	▪ Rehabilitation of damaged natural resources. ▪ Protection of existing environment. ▪ Community education in respect of environmental protection. ▪ Community monitoring of environmental conditions.
Building Human Capital	▪ Health of settlement residents. ▪ Build knowledge and skill levels to ensure livelihood opportunities. ▪ Organizational skills of area leadership. Areas of competence and how they are used.
Building Relational Assets	▪ Level and effectiveness of social organization within area. ▪ Internal networks: build strong relationships between organizations within slum. ▪ Nature of relationship between slum-based organizations and external organizations. ▪ Extent of dependence on external NGOs and support agencies. ▪ Effectiveness of networks (in facilitating delivery and management of services). ▪ Nature of collaboration between service providers, NGOs, and communities.
Building Economic Assets	▪ Access to credit: ensure women and microenterprise access to credit. ▪ Increase the number of microenterprises and their income-generating potential. ▪ Security of tenure: range from certificate of ownership to legal title. ▪ Housing: extent to which land or rooms are rented out as means of earning income.
Reform of Governance Framework	▪ Upgrading should contribute to policy reform. ▪ Upgrading should contribute to reform of regulations in respect of informal settlements and slums. ▪ Upgrading should be replicated in other parts of the city. ▪ Adaptive regulatory system: regulatory framework must be flexible so as to be able to adapt to on-the-ground changes, thereby ensuring its relevance to the poor.

CONCLUSION

Sri Lanka has undergone a long and difficult period of development since it obtained independence from Britain in 1948. Two decades of conflict with the LTTE and the devastating effect of the 2004 tsunami have slowed economic development of the nation and resulted in hundreds of thousands of people being displaced and homeless. The Peace Agreement with LTTE in 2002 provided a fragile but important respite for the country to develop a more sustainable future.

The level of urbanization in Sri Lanka is lower than those in most Asian countries; however, many urban areas of the country are experiencing serious environmental and urban development problems. With further improvements expected in the economy in future, urbanization rates are projected to rise. This will present a significant challenge to national and local governments in trying to ensure that urban and regional development is sustainable. Most local governments do not have the capability to manage and provide basic services to meet the needs of communities and/or support local economic development. The general failure of central Government to fully embrace decentralization also presents significant challenges to the development of the country.

In the context of decentralization, building institutional capacity is critical to ensure that the longer-term development process continues. If institutional capacity is built and the six areas noted earlier are addressed, then the long-term improvement process has a good chance of continuing. If the six areas are addressed and skills and knowledge are developed within local governments and poor communities, then both local governments and poor communities will be able to work toward a more sustainable future.

Notes

[1] Colombo core urban area, alternatively called Colombo core area or Colombo urban area, consists of the municipal council areas of Colombo City, the City of Sri Jayewardenepura (capital city), and Dehiwala Mount Lavinia. The total land area is about 7,500 hectares.

[2] See: www.statistics.gov.lk/population/tables.pdf.

[3] One third of Colombo Municipal Council (CMC)'s annual budget is spent on waste collection (Jayaratne 1996). According to CMC Chief Medical Officer, Pradeep Kariyawasam, the disease outbreak control programs of the council cost about $250,000 annually.

[4] The Sustainable Cities Program has been operating in Sri Lanka since the early 1990s and, along with the CMC, is one of the main sources of project funding.