

**Sri Lanka**  
**State of the Economy Report 2014**

**Chapter 7**  
**Urbanizing Asia**

*by*  
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# 7. Urbanizing Asia

## 7.1 Introduction

**R**apid industrialization in Asia has been accompanied by greater urbanization with the shift of surplus rural labour to centres of economic activity. In turn, countries that have managed the growth in urbanization successfully have also been able to harness opportunities for greater economic growth. While more newly industrialized countries in Asia such as China and India still do not have a majority urban population, the number of urban inhabitants continues to grow. By contrast, Asian 'tiger economies' such as Singapore, Taiwan and South Korea now have a majority of urban population. It is estimated that by 2015, approximately 47.6 per cent of the population in Asian countries will be urbanized, and this figure is set to increase up to 53.1 per cent by 2025.<sup>1</sup> Therefore, more than a half of the population in Asian countries will be living in urban areas by 2025.

As Sri Lanka aspires towards rapid economic growth in the transition up the middle incomes ladder, the country is also faced with the challenges of an increasing urban population. Managing urbanization has become an area of policy priority post-2009 with the easing of security-related measures allowing a greater flow of people into the main metropolitan regions of the country, namely Colombo and Kandy, and the opening up of the Northern and Eastern regions. As a result, rural to urban travel and migration has been greatly facilitated. In addition, increasing numbers of tourists, and the emergence of a health conscious urban population, is placing greater demand on urban cities that are clean, free of slums and

shanties, and offering greater recreational opportunities. These trends demand more sophisticated urban infrastructure.

Urbanization holds both positive as well as adverse implications. The former include the prospects of better wages, greater productivity, etc. whilst the negative consequences can include congestions, housing issues, pollution, waste management, overburdened infrastructure, etc. Good practices in dealing with urbanization are evident from the more urbanized Asian economies. For Sri Lanka, eliminating the negative impacts of urbanization while maximizing the positives will be a challenge

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<sup>1</sup> UN (2014), "Population Estimates and Projections: On-Line Data, Country Profiles", United Nations Department of Economic and Social Affairs, [http://esa.un.org/unup/unup/index\\_panel3.html](http://esa.un.org/unup/unup/index_panel3.html), visited online 25th April 2014.

in the years to come. This Chapter attempts to examine the issue of urbanization in the context of economic growth and development, the best practices to manage urbanization, and policy recommendations to ensure that there is adequate planning for the future.

## 7.2 Consequences of Urbanization

The level of urbanization refers to the proportion of the urban population out of the total population of a country. The rate of increase in the urban population is known as the urbanization rate and is calculated by the difference between the urban annual growth rate and the total annual growth rate. The precise demographic definition of urbanization is the increasing share of a nation's population living in urban areas (and thus a declining share living in rural areas). Most urbanization is the result of net rural to urban migration.<sup>2</sup>

In the past few decades, many parts of the world, including Asia, have been experiencing rapid urbanization. The expansion of existing cities and the formation of new ones can be directly accredited to high rates of economic growth and industrialization. Although urbanization is capable of bringing about positive consequences, it can also have some very adverse effects.

### 7.2.1 Positive Consequences of Urbanization

Urbanization can bring about higher productivity in economies through many positive externalities and economies of scale. For example, available evidence suggests that the productivity of urban areas of Asia is 5.5 times higher than that of rural

areas.<sup>3</sup> Urbanization can encourage agglomeration, bringing resources together and allowing industries to produce goods and services at higher levels of productivity. At the same time, as more industries cluster together, it can generate higher wages for employees in urban centres of economic activity. Indeed, much of rural to urban migration hinges on better employment opportunities and higher wages.

Urbanization results in high population density that has its own advantages. When people live close-by with a well-developed transportation network, the commuter time from one place to another is reduced significantly, allowing people to allocate their time for more productive purposes. It also has other advantages. In an urbanized setting, with paved roadways and walking paths, people will be more inclined to walk or cycle, rather than driving. These elements are applicable for health conscious communities, hence to a certain degree, urbanization can also promote a more mobile and healthy lifestyle.

It is easy to provide essential facilities such as electricity, telecommunication, pipe-borne water, safe sanitation, and safe drinking water to an urban

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<sup>2</sup> A nation's urban population can grow from natural increases (births minus deaths), net rural to urban migration, and reclassification (as what was previously a rural settlement becomes classified as urban, or as an urban settlement's boundaries are expanded, bringing into its population people who were previously classified as rural).

<sup>3</sup> Wan, G. (2012), "Urbanization Can be Good for the Environment", viewed at <http://www.asiapathways-adbi.org/2012/12/urbanization-can-be-good-for-the-environment/>, visited online, 4th May 2014.

## Urbanization can encourage agglomeration, bringing resources together and allowing industries to produce goods and services at higher levels of productivity.

area as compared to other areas. Since people live close by, the provision of these facilities will be cost effective as compared to a rural area. Also, urbanization is characterized by the provision of safe housing. Countries that manage urbanization successfully are committed to the removal of poor housing conditions such as slums from urban areas and providing safe and affordable houses for people. Therefore, urbanization holds the possibility of increasing the quality of life, and standard of living for people.

Urbanization can also generate revenues. With industries operating at a greater level of efficiency, and an educated and healthy workforce earning higher wages, urban areas are capable of generating required revenue for further expansions of urban infrastructure. Furthermore, urbanization can bring about innovation. Green infrastructure and green technologies - especially with regard to transportation, better and efficient ways of solid waste management, etc. - can result in the introduction, as well as development of many innovation opportunities.<sup>4</sup>

## 7.2.2 Negative Consequences of Urbanization

Urbanization comes about as a result of increased rural to urban migration. This type of migration is mainly for better employment opportunities, but with lack of education and skills, the migrants can be drawn into low quality jobs. In turn, this can result in such migrants living amongst poor housing conditions, leading to the problem of slums and shanties. The prevalence of slums with low standard houses and poor living conditions causes many other problems. Slums are located on land which the slum dwellers do not own. Most often, these lands are owned by the government, making it much harder to evict them as already marginalized populations. Slums do not have proper sanitation and drinking water facilities, and hence generate a whole web of health issues. Crime and drugs issues also tend to be associated with the existence of slums, making surrounding urban neighbourhoods unsafe.

Urbanization can also create environmental problems. A high population density, emissions from motor vehicles and industries, rising temperatures, water pollution, and loss of natural habitats are some of the significant environmental issues associated with rapid urbanization. While factories and automobiles are symbols of urbanization, they are also the sources of emission of Green House Gases (GHGs) that contribute to global warming. The temperature also tends to increase in urban settlements mainly due to factors such as paving over formerly vegetated land, and increasing number of residences and high-rise apartments and industries. Higher densities of suspended particulate matter in the air around urban areas contribute heavily to respiratory problems, creating health issues as a by-product of unplanned urbanization. If the drainage systems are not built properly, urban areas tend to accumulate more rain water than surrounding areas, resulting in floods.

<sup>4</sup> *Ibid.*

Industrial waste, solid waste, and hazardous waste from hospitals can easily get into water bodies, which can cause outbreaks of epidemics. Indeed, solid waste management is a serious issue in dealing with urbanization. An increased population leads to more waste, and if proper waste management is not in place, waste tends to get accumulated creating environmental and health issues. Furthermore, it will hinder efforts towards 'clean cities'.

Urbanization requires large amounts of land for houses and other urban infrastructure. This will result in damaging the forests cover and other natural habitats surrounding urban areas. It is possible that the destruction of these natural habitats will ultimately result in the extinction of fauna and flora. In a well-planned urbanization process, infrastructure is created in a practical way to accommodate the population and their rising needs, with most of the utilities including electric grids, sewer facilities, gas lines and roads. When the rural to urban migration increases rapidly, the urban infrastructure available might not be adequate enough, especially if the industrialization fails to generate sufficient employment opportunities. This will result in a poor cohort in urban areas, vulnerable to both social and economic shocks. As this proportion of people increases in a city, the government has to allocate separate funds for their social security and welfare, placing an additional burden on its urbanization efforts.

From a social science point of view, urbanization with its associated busy lifestyles can damage the social cohesion and family kinships that can be seen in a rural society, especially among the Asian countries. Most Asian families continue to be closely linked, with several generations living together. But

urbanization and congested lifestyles can force families to move out from urban areas leaving their elders behind. This could create additional burdens on the welfare systems, especially to look after elders. On the other hand, in most Asian families, the elders take care of small children. When young families move into urban areas, the infrastructure needs to cater for the care of small children, especially day care centres when parents are away at work.

## 7.3 Sri Lanka's Urbanization Trends and Challenges

Sri Lanka's urbanization holds some unique characteristics mainly because it is an island,<sup>5</sup> primarily composed of urban settlements that are found along the coastal areas. The distinct feature of urbanization in Sri Lanka is that there is a low density urban sprawl and ribbon development along the main roads of coastal areas.<sup>6</sup> Approximately 25 per cent of the population lives less than one kilometre from the coast that accounts for only 5 per cent of the land mass of the country.<sup>7</sup> The emergence of urbanization along the coastal belt areas has allowed the preservation of forests and other greenery in the countryside, despite a gradual transition of the economy from a primarily agrarian-based one to manufacturing and services. However, over the years, urban centres along the coastal belt of the country have lost their greenery, including mangroves and other coastal vegetation - the results of which were prominently visible during the Asian Tsunami of December 2004.

Unlike most of the other countries, an 'urban area' in Sri Lanka is not based on any definite criterion

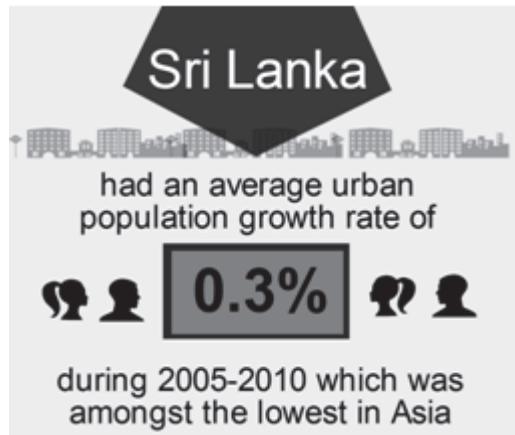
<sup>5</sup> Urban population refers to people living in urban areas as defined by national statistical offices. As such, urbanization is the process of the increase in the number of people that live in urban areas.

<sup>6</sup> The term 'urban sprawl' suggests that metropolitan growth is ugly, inefficient, and the cause of traffic congestion and harm the environment. 'Low density' suggests residential subdivisions. Low density development may take up space while increasing the travel time. Ribbon development exists when extensive commercial development occurs in a linear pattern along both sides of the major arterial roadways [Holcombe, G. R. (2014), "Urban Sprawl, Pros and Cons: In Defence of Urban Sprawl", Property and Environment Research Center, US].

<sup>7</sup> World Bank and UNHABITAT (2012), "Turning Sri Lanka's Urban Vision into Policy and Action", World Bank, Colombo.

as regards the size of population, population density, proportion of the male population in non-agricultural occupations or status of civil administration.<sup>8</sup> In Sri Lanka, 'urban status' is conferred on an area by the Minister in charge of Local Government purely for local administrative purposes. However, ministerial discretion seems to be based on the nature of the development of the locality or its amenities and urban character.<sup>9</sup> Hence, the defined urban areas are classified administratively. With administrative classification to demarcate urban areas, 89 urban settlements were classified as rural settlements after the 13th Amendment to the Constitution in 1987. These downgraded Town Councils included some of the most dynamic and densely populated suburbs of Colombo such as Maharagama and some fast growing small towns in the Dry Zone.<sup>10</sup>

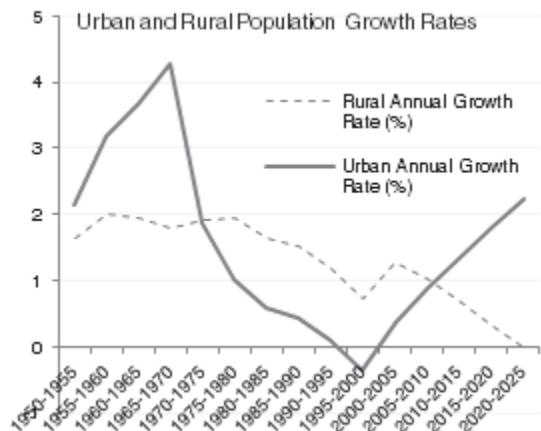
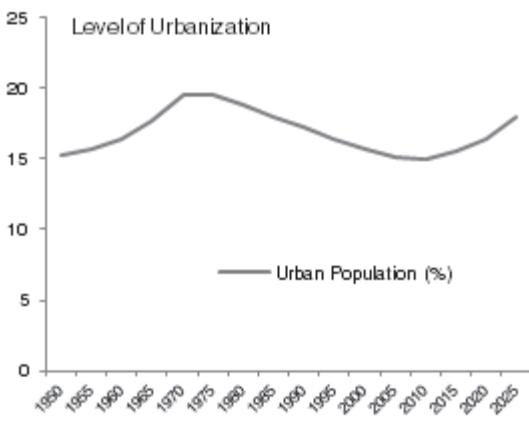
Sri Lanka had an average urban population growth rate of 0.3 per cent during 2005-2010 which was amongst the lowest in Asia. With the end of the North/East conflict, the rural to urban migration



increased, leading to a higher urban population growth rate. This is not expected to bring about rapid rates of urbanization although an increasing trend will be clearly evident with an urbanization level of 18 per cent expected by 2025 (Figure 7.1).

Even though the urban population is not increasing significantly for Sri Lanka, the annual urban population growth rate is currently on an increasing trend, while the rural annual population growth rate is decreasing, although it is still positive (Figure 7.1).

**Figure 7.1**  
**Sri Lanka's Urban Population Trends**



Source: UN, Department of Economic and Social Affairs, Population Estimates and Projections Section.

<sup>8</sup> Panditharathne, B., L., (1996), "The Development of the Sri Lankan Settlement System" in Groves A. Paul (ed.) *Economic Development and Social Change in Sri Lanka: A Spatial and Policy Analysis*, Manohar Publishers, New Delhi.

<sup>9</sup> Mendis, M.W.J.G. (1982), "Urbanization and Urban Development in Sri Lanka," Office of Housing and Urban Programmes, Sri Lanka.

<sup>10</sup> R.J.M Udaporuwa., (2010), "An Analysis of Urban Growth and Urbanization in the Sabaragamuwa Province of Sri Lanka," *Sabaragamuwa University Journal*, Vol 9, No. 1, pp. 115-132.

Therefore, the total number of urban inhabitants will keep on increasing for Sri Lanka.

### 7.3.1 Major Metropolitan Regions of Sri Lanka

The Sri Lankan economy is primarily concentrated around the Colombo Metropolitan Region (CMR). The CMR has the largest urban population as well as the highest level of urban population in the country. As a result, it also records higher economic density as well as higher productivity. The CMR has had a population increase from 3.9 million in 1981 to 5.8 million in 2012. The region comprises only 6 per cent of the total land mass, but contains 28 per cent of the population, accounts for 45 per cent of GDP, and 73 per cent of the industrial production.<sup>11</sup> The Southern and Central Provinces are the second and third highest contributors to GDP, respectively.

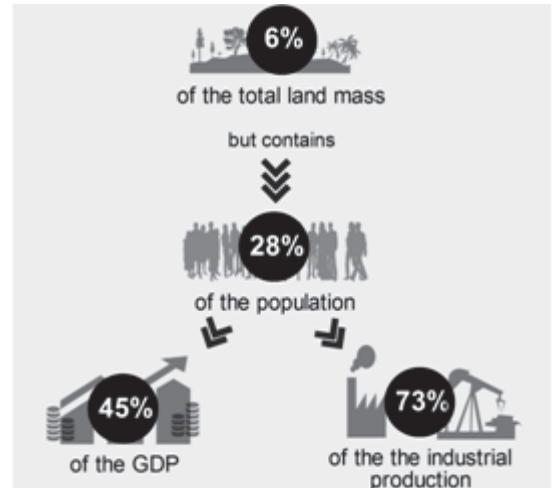
Most of the foreign trade passes through the Colombo port. The CMR generates capital, technology, human resources, advanced services and human capital to increase economic growth and help create jobs for labour in other parts of the country. Although from a global or Asian perspective, Colombo is still minuscule, it is symptomatic nonetheless of other growth patterns across countries in Asia. Both the urban and economic density of the CMR is expected to increase as Sri Lanka moves into an upper middle income country.

Manufacturing activities which used to be heavily concentrated around the outskirts of the CMR, have now started to spread to other administrative boundaries. In 2001, the CMR accounted for 53 per cent of manufacturing employment but by 2009, the share had fallen to 43 per cent.<sup>12</sup> Manufacturing is becoming an integral part of the economies of Galle, Puttalam, Kegalle, Ratnapura and Matara districts. These districts are geographically adjacent to the

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The region comprises only



CMR, and are seeing increases in employment due to manufacturing sector activities. The expansion in the neighbouring districts is partly due to increased costs of inputs and land associated with urbanization of the CMR. The spread to outer regions is being supported by developments in the road network, including recently constructed highways. The end of the conflict also provided opportunities to develop urban centres in the Northern and Eastern Provinces. The infrastructure in those regions was damaged and destroyed, with Trincomalee and Ampara recording the lowest infrastructure competitiveness.<sup>13</sup> More investments on urban infrastructure in these newly revitalized districts, including Jaffna, hold out the potential to increase trade, fisheries, agriculture and tourism in Sri Lanka.

<sup>11</sup> World Bank and UNHABITAT (2012), "Turning Sri Lanka's Urban Vision into Policy and Action", World Bank, Colombo.

<sup>12</sup> *Ibid.*

<sup>13</sup> ADB (2006), *Urbanization and Sustainability in Asia: Good Practice Approaches in Urban Region Development*, Asian Development Bank, Manila.

Tourism has been a source of economic growth in urban locations in the South and Central Provinces. It is now extending to the Eastern Province as well. The urban centres of Kandy, Galle and Trincomalee are of tourist importance and contain World Heritage Sites. Galle and Trincomalee are the most popular beach tourism destinations in Sri Lanka. Agricultural industries are important sources of economic growth for the Central, Sabaragamuwa and Southern Provinces. Handicraft manufacturing is a developing industry particularly in the Central Province that can benefit from rising numbers of tourists as it develops into a major urban centre. Improvements in urban infrastructure will also help the Northern, Eastern and North Central Provinces to raise economic growth from agricultural activities.

Thus, an urbanization process centred on the CMR, tourism and world heritage areas, agro-process industry-based regions, and areas that are recovering from the conflict holds the potential to support economic growth and development. In order to cater to the urban infrastructure demands in these regions, Sri Lanka should have a clear policy direction and a plan. The rising urban population will demand not only more urban infrastructure, but better environment and socio-economic conditions. In this context, the importance of greenery in urban infrastructure needs to be given due recognition with special emphasis on developing Sri Lanka's urban vision with more green infrastructure. The next section elaborates on current efforts to develop the country's main metro regions.

### 7.3.2 Sri Lanka's Urbanization Vision

As Sri Lanka aims for rapid economic growth to move up the middle income ladder, it will be accompanied by some structural transformation of the economy, with increased diversification away from agriculture and towards the industrial and services sectors. As part of the efforts to support

## Sri Lanka aims to focus on five metro regions – Colombo, North-Central, Southern, Eastern, and Northern – and nine metro cities – Ampara, Anuradhapura, Batticaloa, Colombo, Dambulla, Hambantota, Jaffna, Polonnaruwa, and Trincomalee.

such developments, Sri Lanka aims to focus on five metro regions - Colombo, North-Central, Southern, Eastern, and Northern - and nine metro cities - Ampara, Anuradhapura, Batticaloa, Colombo, Dambulla, Hambantota, Jaffna, Polonnaruwa, and Trincomalee.<sup>14</sup> These regions will be connected and integrated to become a country-wide system of cities. Thus the regions may grow together, but perhaps with different areas of specialization and different sizes.

The plan also takes into account sustainability. Environmental and cultural assets are to be safeguarded to maintain and promote tourism in Sri Lanka. Greener cities are to be promoted to manage issues of climate change and increase the quality of life in urban areas. Another important aspect of the plans is to provide housing that is affordable and safe. The government plans to increase the housing supply by 100,000 houses per year, with special attention paid towards vulnerable groups to ensure equitable urban development.

<sup>14</sup> Department of National Planning (2010), *Mahinda Chinthana: Vision for the Future*, Ministry of Finance and Planning, Colombo.

There are several major challenges related to the above urban development activities. These include (1) ensuring a sustainable urban environment, urban security, and addressing capacity gaps at the local government level; (2) improving access to basic infrastructure such as water, sanitation, drainage, paved footpaths and electricity; (3) addressing bottlenecks in local investment climate, productivity and competitiveness; (4) reducing poverty and inequality among low income families in urban areas; and (5) creating enough jobs. Therefore, any urban development policy for Sri Lanka must take into consideration these factors and address them in a sustainable manner.

At present, government efforts to address urbanization is focused on three key areas: mega development projects, urban regeneration projects, and city beautification and town centre development projects. All these development efforts are handled by the Urban Development Authority (UDA) under the Ministry of Defense and Urban Development, which is the apex body that overlooks all urban infrastructures in Sri Lanka. Investments for these projects are from the government itself, but there are many public-private partnerships, as well as private investments. All three key areas of urban

development are considered as equally important by the government.

There are more than 15 mega development projects associated with the town centres in Sri Lanka. Urban regeneration efforts include the construction of 30,000 low cost housing units within the next three years and another 40,000 units during the following three years. These are intended for relocation of households presently located in under-served settlements in the city of Colombo. In addition, urban housing requirements for middle income and high income groups are overseen by the National Housing Development Authority (NHDA). The NHDA recently made available its National Housing Policy for Sri Lanka, aiming to provide sustainable and adequate housing for all the citizens of the country.

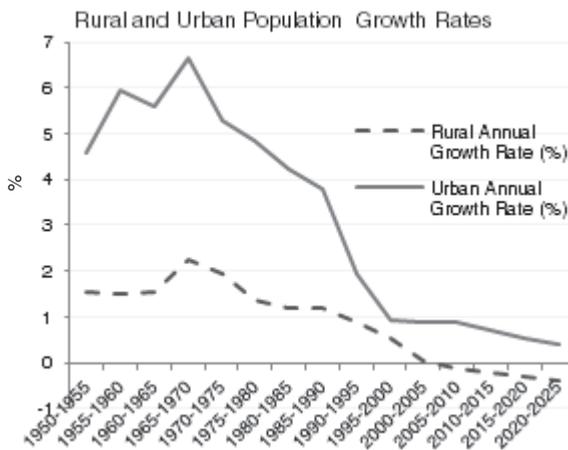
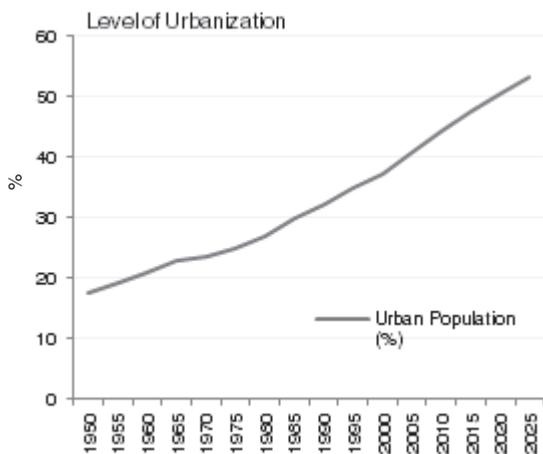
Thus, there are many development efforts under way according to the government's vision on a successful urbanization process for Sri Lanka. The government's goal is to develop a systematic network of settlements and cities in the country that are effectively linked with each other and with the rest of the world.<sup>15</sup> As a first step, it must aim to be an example in managing urbanization in the context of Asia. Therefore, in managing urbanization in Sri Lanka, it is important to reflect on the Asian context of urbanization.

## Box 7.1 Colombo City Beautification

As a part of the Colombo City Beautification project, the former 17th Century Colombo Dutch Hospital was transformed and restored into an arcade for restaurants and shopping malls. This was opened to the public in December 2011, with the second phase completed and opened to the public in June 2014. The Old Race Course restoration project was finished in two stages and was opened to public in March 2014 with several restaurants and a shopping mall. The restoration of the Arcade Independence Square was completed and opened in July 2014. This too accommodates shops, restaurants and a state-of-the-art cinema hall. The Beira Lake Restoration project currently underway will comprise of a boat service, a floating market, a public park and a scenic driving area when completed. In addition, the Colombo City Beautification project has seen a 'greening' of the city, including parks for leisure activities.

<sup>15</sup> Department of National Planning (2010), *Mahinda Chinthana: Vision for the Future*, Ministry of Finance and Planning, Colombo.

**Figure 7.2**  
**Urban Population Trends in Asia**



Source: UN, Department of Economic and Social Affairs, Population Estimates and Projections Section.

## 7.4 Urbanization: The Asian Context

The urbanization of Asia is a result of industrialization, and hold out the potential of greater economic growth for the countries that have managed urbanization successfully. As already mentioned, while the newly industrializing countries such as China and India still do not have a majority urban population as yet, the Asian tiger economies such as Singapore, Taiwan and South Korea have already reached this landmark. By 2025, over 53 per cent of Asia's population is expected to be urbanized (Figure 7.2).

At present, approximately 37 per cent of the urban dwellers in the world are to be found in the East Asian and South Central Asian countries, which constitute the largest urban population globally. In 1950, East Asia had the largest urban population of 121 million, but this amounted to an urbanization level of only 18 per cent. Whilst the absolute urban populations were much smaller in other parts of Asia, the levels of urbanization were similar, apart from a slightly higher level of 26.7 per cent in the case of Western Asia. Over the following decades, these figures clearly changed quite rapidly, with rising urban populations. In fact, by 2030, East Asia

is expected to record an urban population of 1,065 million people, with an urbanization level of 62.7 per cent (Table 7.1).

During 1950-2000, West Asia and South Eastern Asia recorded an annual urban population growth rate of 4.4 per cent (ranked 4<sup>th</sup>) and 4 per cent (ranked 6<sup>th</sup>), respectively, among other regions in



**Table 7.1**  
**Urban Population and Urbanization Level among Asian Regions**

Asian Regions	Urban Population (millions)			Urban Percentage/Level of Urbanization (%)		
	1950	2000	2030	1950	2000	2030
Eastern Asia	121	617	1065	18.0	41.6	62.7
South Central Asia	83	441	969	16.6	29.8	44.0
South Eastern Asia	26	196	407	14.8	37.5	56.5
Western Asia	13	122	238	26.7	64.7	72.4

Notes: The level of urbanization is also known as the percentage of urban, which is the proportion of urban population out of the total population of a country/region. The rate of increase in the urban population is known as the urbanization rate and is calculated by the difference between urban annual growth rate and the total annual growth rate.

Source: UN (2001), "World Urbanization Prospects: 2001 Revisions", United Nations Population Division.

the world. By 2030, these growth rates are estimated to decline to 2.2 and 2.4 per cent, respectively. By 2030, among the Asian regions, South Central Asia will have the highest urban population growth rate of 2.6 per cent. At the same time, rural population growth rates will decline in the Asian region in the coming years. Between 1950 and 2000, East Asia recorded an annual rural population growth rate of 0.9 per cent, whereas South Central Asia recorded 1.8 per cent, South Eastern Asia 1.5 per cent and Western Asia 1.2 per cent. By 2030, these rates will decline to -1 per cent, 0.6 per cent, -0.1 per cent and 1 per cent, respectively. Figure 7.2 further illustrates the urban and rural population growth rates for Asia.<sup>16</sup>

There is an inverse relationship between the urbanization rate and the level of urbanization where the rate of urbanization decreases as the level of urbanization increases. By 2030, Western Asia will record an urbanization rate close to 0.4 per cent, while South Eastern Asia, South Western Asia and Eastern Asia will record an urbanization rate between 1.3 and 1.4 per cent. This is in line with the level of urbanization discussed in Table 7.1 as Western Asia has the highest level of urbanization among other regions of Asia.

By 2030, as indicated in Table 7.1, Eastern Asia will have a level of urbanization of 63 per cent and South Eastern Asia will have a level of urbanization of 57 per cent. However, these two regions will also have the second and third largest rural populations in the world by 2030. This implies that by 2030, the two most populous regions in the world with urbanization levels above 50 per cent will still have space for further improvements in urban population growth. However, these increase in urbanization present many challenges to Asia, ranging from economic, social to environment issues.

By 2020, two-thirds of the Association of South East Asian Nations (ASEAN) population will be residing within five Mega Urban Regions (MURs). These are Bangkok-centred MUR (30 million people), Kuala Lumpur MUR (6 million), Singapore Triangle (10 million), Java MUR (100 million) and Manila MUR (30 million). The key drivers of global economic growth in the coming years and decades is expected to originate in emerging economies across the world, including in Asia. To meet the requirements of urbanization and economic development, significant new investments in infrastructure is required, particularly in the Asian region.<sup>17</sup>

<sup>16</sup> UN (2001), "World Urbanization Prospects: 2001 Revisions", United Nations Population Division.

<sup>17</sup> Institute for Sustainable Communities (2014), "Urbanization, Infrastructure and Economic Growth in Southeast Asia", <http://www.iscvt.org/news/urbanization-infrastructure-and-economic-growth-in-asia/>, visited online, 30th April 2014.

One of the main requirements in addressing urbanization is the provision of infrastructure. For example, only 6 per cent of urban infrastructure requirements of the ASEAN region are met as of today.<sup>18</sup> More needs to be done in terms of developing airports, seaports, and roads. While some countries are still lagging behind, there are Asian countries that have been successful in meeting the challenges of urbanization.

Urbanization in Asia has had certain similar characteristics. Countries that were previously agrarian-based have now become industrialized and experienced higher rates of urbanization. But, mismanagement of urbanization also leads to complex issues that need to be dealt with across Asia.<sup>19</sup> There are issues with the informal sector in many countries, especially in slum and squatter areas. Issues of pollution and congestion are also prevalent across Asia. While outcomes can be unique to individual countries, there are certain aspects that are common to many countries.

## 7.4.1 Best Practices of Urbanization: Lessons from Other Asian Countries

Many Asian countries have had successes in handling urbanization during the last several years. Their success hinges on reaping the benefits of urbanization while mitigating the economic, social and environmental issues. The experiences provide many best management practices that Sri Lanka could also reflect on. This section highlights the efforts of some Asian countries such as China, Japan, Malaysia, and South Korea. India is also a country that is in the process of addressing the issue of urbanization in a similar context to Sri Lanka.

### China

China is probably one of the fastest urbanizing countries in the world. Until 1978, migration to cities was effectively checked by the centralized state planning system, the household registration system and the commune system in agriculture.<sup>20</sup> The centralized planning system was the most important mechanism for the allocation of resources. The primary goal of the household registration system, which divided the population into rural and urban residents, was to control migration, but it also led to differences in employment, welfare and insurance entitlements among urban and rural populations.<sup>21</sup> The commune system existed throughout the countryside and had a crucial impact on all aspects of rural life. The commune system was not only a means to organize production; it also represented the lowest level of central state administration.<sup>22</sup>

China's economic reforms from the late 1970s greatly reduced the significance of the state planning system and the commune system. Economic reforms brought about rural industrialization which required facilities such as health and education. These activities have strengthened the urban-rural relationships, helping to bring about a rapid urbanization process in China. However, there are several unique characteristics of China's urbanization which also reveals the problems associated with urbanization.<sup>23</sup> These characteristics include: (1) a high rate of urbanization; (2) a large and growing urban-rural income gap; (3) too many cities, too few people; (4) skewed economic structure of cities; and (5) an emerging urban hierarchy.

Thus, China's urbanization process highlights pitfalls to be avoided. Urbanization in China was

<sup>18</sup> *Ibid.*

<sup>19</sup> Asian Development Bank (2011), *Asia 2050: Realizing the Asian Century*, Asian Development Bank, Manila.

<sup>20</sup> Reino, H. (1998), "Urbanization: Its Global Trends," *Economics and Governance*, Vol. 26.

<sup>21</sup> Henderson, V. J. (2009), "Urbanization in China: Policy Issues and Options," China Economic Research and Advisory Programme, Brown University and NBER, US.

<sup>22</sup> Kojima, R. (2007), "Urbanization in China," *The Developing Economies*, Vol. 33, No. 2, pp. 151-154.

<sup>23</sup> *Ibid.*

fuelled by rural industrialization and restrictive labour regulations in order to manage urban and rural labour movements. However, China's industrialization process attracted only a few industries to small and medium urban centres. The main cities with larger industries absorbed most financial and other resources, leading to skewed urban development. At the same time, it also led to urban areas with fewer people, limiting the productivity of urbanization in these regions.

### *Japan*

Japan already has a high urban population, and it is expected to increase further. The urban population percentage of Japan stands at 95 per cent at present, rising from 53.4 per cent in 1950. Even though the urban population percentage appears to have plateaued, it is expected to increase to a level approaching 100 per cent. The urbanized population in Japan has had a positive impact on economic growth in Japan, with the industrialization process playing a major role. The growth of urban areas is associated with the increase in human capital, rents and wages per worker, and hence contributing positively to overall growth in the economy.<sup>24</sup>

The development of solid transportation systems and fast economic growth from the 1950s to the 1970s saw the net migration rates of Tokyo, Osaka, and Nagoya increase significantly, allowing them to emerge as the three main regions. Japan's economic development with a successful urbanization process is strongly attributed to the transport infrastructure system that was put in place. Tokyo developed its railway system when it had a smaller urban population percentage, whilst considering the requirements of future urban population growth. At present, the average distance from station to station

is around 0.6 miles. Almost all areas inside the subway line can be easily accessed on foot. Therefore, urban citizens were given enough access, allowing their travel time to go down remarkably, and making each citizen's participation in economic activities that much easier.<sup>25</sup> Thus, a key message from Japan's successful urbanization is the importance of a well-planned transportation system to support productive economic activities in an urban setting.

### *Malaysia*

Malaysia's urban population is primarily concentrated around six major centres of Kuala Lumpur, Georgetown, Kota Kinabalu, Johor Bahru, Kuantan, and Kuching. Future expansion is also expected to be centred around these main metropolitan regions.<sup>26</sup> In 1970, the government made significant policy changes encouraging the movement of bumiputras ('sons of the soil') towards urban centres, to be absorbed into urban-based employment in order to eliminate the economic differences between the Malays and the non-Malays. This changed the population structures of the major city areas, especially Kuala Lumpur where 57 per cent of the population was migrants from rural areas. As Malaysia began to pursue export-oriented industrialization from the 1970s, it brought about significant changes on the economic front and urbanization. It led to an influx of FDI projects and export-orientation efforts which encouraged the development of FTZs and which saw the movement of people from rural to urban areas. Consequently, about two-thirds of all approved FDI projects were located in the three major urban nodes of Kuala Lumpur, Johor Bahru and Penang. Thus, an inevitable directional bias in the migration stream towards the major urban nodes marked the rapid industrialization in the country.<sup>27</sup>

<sup>24</sup> Eaton, J., and Z. Eckstein, Z., (1997), "Cities and Growth: Theory and Evidence from France and Japan", *Regional Science and Urban Economics*, Vol. 27, No. 4, pp.443-474.

<sup>25</sup> *Ibid.*

<sup>26</sup> Thong, L. B. (2005), "Urban Development in Malaysia: The Case for a More Holistic and Strategic Approach to Urbanization", paper presented at a conference on "Urban and Peri-Urban Developments: Structures, Processes and Solutions", University of Cologne, Germany, 16-19 October, 2005.

<sup>27</sup> Yusoff, R. B. B. (2013), "Urban Development Challenge in the Malaysian Context", Economic Planning Unit, Prime Minister's Office, Government of Malaysia.

In 2013, Malaysia released its Tenth Malaysia Plan (MP10). With cities estimated to have three times the productivity of rural areas, the MP10 identifies 12 National Key Economic Areas (NKEAs), most of which are sectoral, but one of which is Malaysia's largest urban centre - i.e., Greater Kuala Lumpur.<sup>28</sup> Malaysia is concentrating its urban transition to the 12 NKEAs rather than developing urban centres all over the country. Another unique feature is Malaysia's commitment to providing adequate and sustainable houses for its urban citizens.

### *South Korea*

While Tokyo started its urbanization with one million people, Seoul, one of the largest urban settlements in the world today, started its urbanization with only 190,000 people.<sup>29</sup> As an Asian tiger economy, South Korea had undergone significant industrialization as well as rapid economic growth.<sup>30</sup> By 1985, the largest cities in South Korea were Seoul (9.6 billion), Pusan (3.5 billion), Taegu (2 billion), Inch'on (1.4 billion), Kwangju (906 million), and Taejon (866 million). Urbanization in South Korea is highest in Seoul and the coastal cities of Pusan, Masan, Yosue, Chinhae, Ulsan, and P'ohang. The reason for urbanization in South Korea has been attributed to spatial polarization, dominance of large cities and urban restructuring.<sup>31</sup> The major reasons for urban migration have been identified as new employment or seeking a new job, job transfer and business opportunities, education opportunities, and convenience of living.

South Korea identified a few key regions for rapid urbanization through a master plan that was the cornerstone to their success in urbanization. To

alleviate overcrowding in Seoul's downtown area, the city government drew up a master plan in the mid-1980s that envisioned the development of four 'core zones' by 2000. Satellite cities were built around the main urban areas with adequate transportation facilities, allowing people to commute to and from the satellite city. Another policy measure found in South Korea is building more high-rise apartment complexes as a means of dealing with land issues and keeping urban areas affordable to a larger part of the urban population.

### *India*

With the second largest population in the world, India appears to be in the midst of an urban crisis with a rapid population increase and economic development.<sup>32</sup> India has under-invested in its cities in the past. To fulfill its urban vision, India will have to build 700 to 900 million square metres of floor space per year and 350 to 400 kilometres of metropolitan railways and subways per year.<sup>33</sup> If India can meet the challenges of urban development, there is enormous potential to benefit from an expected 250 million people in the working age population.

The issues associated with urbanization in India can be broadly categorized into those of inadequate infrastructure, growth mismanagement, and social divisions. One factor that ties in all of the elements is urban informality in India. In India, urban planners often underestimated the infrastructure requirements of the growing cities. To make things worse, the state gave authority to private contractors to build and manage urban infrastructure which at the end left the state with limited control.<sup>34</sup>

<sup>28</sup> Government of Malaysia (2013), "Tenth Malaysia Plan", Economic Planning Unit, Prime Minister's Office.

<sup>29</sup> The dislocation caused by the Korean War accounted for the rapid increase in the urban population during the early 1950s. During the post-Korean war period, rural people left their ancestral villages in search of greater economic and educational opportunities in the cities.

<sup>30</sup> Korea's rapid urbanization was made possible mainly because of a drastic change in its economic structure from an agrarian economy to an industrial economy. Nearly 80 per cent of the labour force was employed in the agriculture sector in 1960, but by 1996 this figure had fallen to 12 per cent.

<sup>31</sup> Choe, S. C. (1998), "Globalization and Urbanization in Korea", abstract presented at the Tokyo Workshop organized by the World Bank, 31 November to 1 December 1998, Tokyo, Japan.

<sup>32</sup> Dobbs, R. and S. Sankhe (2010), "Comparing Urbanization in China and India", *McKinsey Quarterly*, pp. : 1-3.

<sup>33</sup> The Planning Commission of India (2013), "The Challenges of Urbanization in India: Approach to the 12th Plan", Government of India.

<sup>34</sup> Roy, A., (2009), "Why India Cannot Plan its Cities: Informality, Insurgence and the Idiom of Urbanization", *Planning Theory*, Vol. 8, No. 1, pp. 76-87.

Other issues of urbanization in India include those of the predicted increase in urbanization and likely consequences to the environment, ecology and sustainability. There are issues associated with increased water and air pollution. Urban ecosystems are vulnerable to invasive species of both flora and fauna. There are other challenges due to the scarcity of water. Coastal cities and cities near rivers will have issues of flooding. The most vulnerable urban residents tend to be the poor. Issues of solid waste management also plague Indian cities and affect various ecosystems of India.<sup>35</sup>

In managing issues of rising urbanization and unplanned city development, India initiated a sustainable cities programme. Under this, city governments were given a constitutional status and were separated from provincial governments; state governments could not suspend or override city governments; Wardens and Councillors were to be elected; there were constitutionally defined powers for civic bodies; and city governments would collect taxes, duties and tolls which will be levied and the state finance commission would decide the resources allocation. There was also the development of sustainable technology programmes such as low cost sanitation, low cost housing, and rain water harvesting to help further alleviate urbanization related issues.<sup>36</sup>

Public-private partnerships (PPPs) can be an important means of developing infrastructure required by urban areas. India plans to develop infrastructure and urban services through PPPs.<sup>37</sup>

PPPs can promote sustainability of urbanization projects, while urban development and governance may also become easier. There are many PPP initiatives for achieving India's urban vision. However, there are some major concerns. Examples from the water sector in Maharashtra and Kerala states in India show that private companies when given authority can impose an additional burden on people by focusing only on profit making. In these cases, even though the government was supposed to be the 'guardian' of the project, private parties were allowed to increase tariffs, and impose many restrictions on the usage of water, limiting the accessibility to the utility services by urban people.<sup>38</sup> Official corruption is another main factor affecting PPP initiatives in India. Most of India's PPP attempts in the road development and power sector are prone to official corruption.<sup>39</sup> Therefore, India's experience also shows that the infrastructure management should be done very carefully. It is important to ensure control over projects and programmes so that people's welfare is always guaranteed and mismanagement of funds are minimized.

As the examples discussed above show, each country has its own strategy in dealing with urbanization. Their attempts are shaped by the socio-economic context of the country, economic resources and population growth rates. However, Sri Lanka can draw up on these experiences, especially in view of renewed policy attention on urbanization. The next section looks at Sri Lanka's current development efforts in urbanization and their relationship to the urbanization efforts across Asia.

<sup>35</sup> Aggarwal, S. and C. Butsch, (2011), "Environmental and Ecological Threats in Indian Mega Cities," *Applied Urban Ecology: A Global Framework*, pp. 66-81; Narain, V. (2009), "Growing City, Shrinking Hinterland: Land Acquisition, Transition and Conflict in Peri-urban Gurgaon, India," *Environment and Urbanization*, Vol. 21, No. 2, pp. 501-512; Nagendra, H., et al., (2014). "Urbanization and its Impacts on Land Use, Biodiversity and Ecosystems in India," *INTERdisciplina*, Vol. 2, No. 2, pp. 305-313.

<sup>36</sup> Chakrabarti, P. D. (2001), "Urban Crisis in India: New Initiatives for Sustainable Cities," *Development in Practice*, Vol. 11, Nos. 2-3, pp. 260-272.

<sup>37</sup> Ministry of Urban Development (2013), "New Models of PPP to Improve Urbanization," Government of India, <http://pib.nic.in/newsite/PrintRelease.aspx?relid=98678>, visited online 4th May 2014.

<sup>38</sup> Dongol, Y. (2013), "Intensive Public-Private Partnership for Sustainable Urbanization of Cochin," Center for Public Policy Research, India.

<sup>39</sup> Xu, B. (2014), "Governance in India: Infrastructure," Council on Foreign Relations, US.

## 7.5 Sri Lanka's Urbanization Efforts: The Attempts and Lessons

Just like Malaysia, Sri Lanka is also investing in urban housing development. These housing efforts are targeted at vulnerable groups, middle income as well as high income groups of the metro cities. Housing for vulnerable groups is a joint effort by the UDA and the NHDA. People who live in slums and shanties are to be provided with 70,000 housing units. This is under way, and is expected to be completed in the next six years.

Housing requirements of all other income groups are being managed by the NHDA. Adequate and sustainable houses for one million families are to be provided through the 'Jana Sevana National Million Houses and Human Settlement Development Programme' and the 'Nagamu Purawara' housing development programme. This programme, while among many other areas, will also look into the housing needs of the poor and lower middle income groups in urban areas. The programme is geared in such a way that banks and other financial institutions are linked to provide financial assistance for poor and lower middle income groups to start building their homes, while making continuous government assistance available. Additionally, these housing efforts are focused on applying low cost and green technologies, which suit the environment and energy demands of the country.

Housing for upper middle income groups are mainly supported by their own savings, but here again, the NHDA is geared to provide necessary assistance for them to secure financial assistance from banks. Housing demand for a portion of the upper middle income and the high income groups are mostly met by private housing contractors. There are many housing development projects and condominiums

in the urban areas of Sri Lanka, with many more planned and under construction. Sri Lanka has thus been successful to an extent so far in addressing urban housing needs. However, there is much to be done in the coming years. Despite the efforts by many government institutions to expedite housing for the urban poor and vulnerable, there are some concerns. Where the re-located housing involves a transition from 'horizontal housing' to 'vertical arrangements', there will be considerable adjustments to be made, both in terms of livelihoods, community living, etc. For many urban poor, livelihoods are very closely linked to the place they live. Furthermore, unless the aim is to provide adequate housing for all urban poor and vulnerable, the selection of beneficiaries is also going to be a tedious task with concerns over equity and transparency.<sup>40</sup>

Both Japan and South Korea were successful in managing urbanization with the investments they made on infrastructure development, especially the railways and road systems. Sri Lanka's situation is somewhat similar. As mentioned earlier, Sri Lanka is focusing on the development of five metro regions and nine metro cities. All these regions and cities are being connected through a well-developed road network and a railway system. The Ministry of Transport launched its flagship project recently - Urban Transport System Development Project for Colombo Metropolitan Region and Suburbs - that aims to meet the road and railway development needs in urban areas. Both the road and railway systems are focused on 'transit-oriented development' to minimize congestions and reduce the commuter time.

Under the National Road Master Plan for 2007-2017 released in 2007 by the Road Development Authority (RDA), highways are being built at a rapid pace, connecting all the metro regions of the country.<sup>41</sup> Therefore, just like Japan and South

<sup>40</sup> Rabenhorst, C. S. (2011), "Gender and Property Rights: A Critical Issue in Urban Economic Development", International Housing Coalition, US.

<sup>41</sup> RDA (2007), "National Road Master Plan 2007-2017"; Road Development Authority, Ministry of Highways and Road Development, Colombo.

Korea, Sri Lanka has identified the urban area and cities to be built to achieve its urban vision, and is rapidly investing in and constructing the necessary road and railway networks.

Disaster preparedness and management is also a major component of urban development efforts. Managing heavy rains and floods and solid waste generation to avert socio-economic impacts of disasters is important. Under the UDAs 'Metro Colombo Urban Development Project', five key Municipal Council areas of the CMR are being developed as urban centres. Just as in India, PPPs are one of the main frameworks that the government of Sri Lanka is pursuing. Many of these partnerships are focused on building urban infrastructures such as buildings, houses and transportation systems. There are several PPP initiatives in the areas of water supply and sanitation facility developments that have proven to be successful. However, more effort is needed to build joint investment initiatives.<sup>42</sup>

China used industrialization to promote urbanization and economic growth. Sri Lanka's urban population is still at a low level, but increasing. In order to have a successful and sustainable urbanization process, industrialization in urban as well as rural areas is necessary to allow the movement of labour from lower productivity areas to higher productivity areas. Growing employment opportunities are not the only reason to boost industrial urbanization. Apart from financial income, transport facilities, close proximity from dwelling to working place, modern living styles, education services, housing and other facilities on offer to the new rural migrants are some of the other pull factors for industrial urbanization.

However, rising environment pollution, land degradation, increasing land and housing prices

in urban areas, increasing slums in urban cities, etc., pose many challenges to the urbanization process. In order to overcome these challenges and have a successful urbanization process in Sri Lanka, some policy measures are proposed below.

### *Strengthen municipal authorities*

Due to the centralized nature of municipal authorities, there are issues of inadequate funds, incentives and human resources.<sup>43</sup> Thus, issues of urbanization may not be completely dealt with, as roles and responsibilities overlap creating a degree of confusion. There is also lack of coordination between different authorities. Issues of finance and resource allocation also arise due to the mismanagement of roles and responsibilities. Human resources are another problem area as there may not enough technical knowledge and staff to provide the required services. The CMR produces the highest amount of solid waste per day at more than 100 Mt. However, neither the Colombo Municipal Council nor the Western Province solid waste management authorities have the necessary financial, human and technical capacity to handle this waste generation. As a result, solid waste management in the main urban city of Sri Lanka is a major problem. This situation is not limited to Colombo, and can be seen in all other satellite municipalities in Sri Lanka. If Sri Lanka were to achieve a successful urbanization, these municipalities have to be strengthened financially, technically and in terms of human resources.

### *Address economic and environmental costs*

Sri Lanka must also adequately address increasing economic and environmental costs of urban development. There are problems associated with the low density sprawl and ribbon development that include economic inefficiency and environmental unsustainability. Urbanization demands

<sup>42</sup> Rajapakse, G. (2013), "Develop Clean Green People Friendly Cities," *Sunday Observer*, <http://www.Sundayobserver.lk/2012/10/07/fea01.asp>, visited online 4th May 2014.

<sup>43</sup> World Bank and UNHABITAT (2012), "Turning on Sri Lanka's Urban Vision into Policy and Action", World Bank, Colombo.

transportation services.<sup>44</sup> Inadequate provision of such services and environmental unsustainability can place bottlenecks on urban infrastructure services. Poor land use is making urban areas more prone to natural disasters. Such exposure makes planning for urbanization more difficult, and at the same time erodes the competitiveness of cities. The origins of natural disasters such as landslides and heavy floods are most of the time associated with land usages. Inefficient and unauthorized housing and settlement projects can create more devastating results with natural disasters. Therefore, Sri Lanka needs to carefully consider the status of land usages, housing conditions and possible exposures to natural disasters such as floods and landslides in making urban development plans. The CMR was significantly affected by heavy rains in the recent past. Subsequent efforts saw many water canals being cleaned and reconstructed so that heavy rains can take water to the sea without creating floods. Many shanty houses in Colombo were removed and people were given safe housing. However, there is more to be done to ensure environment sustainability and better provision of services.

#### *Develop railway systems and roads*

Sri Lanka has a largely connected road network, but the railways are not as well developed. Many people commute to Colombo for employment, with vehicles entering the city on the rise. In order to address the resultant road congestion, a highway network for vehicles to bypass Colombo city when moving to other areas is under construction. Roads within the Colombo city as well as access roads are being widened. These efforts will reduce commuter time, while saving time and money. In an ideal situation, like in most of the countries that have successfully addressed urbanization, transportation systems play a major role with public transportation being the most frequently used medium of travel. In Sri Lanka, the use of private transportation is still high, mainly owing to poor public transportation

services. The use of private vehicles is also a major source of environmental pollution. Hence, a strong public transportation system is needed to address these problems.

#### *Green cities*

Ensuring a greener environment is essential for urban development in several ways. This will help to minimize environmental degradation, limit adverse impacts of natural disasters and climate change, and will improve the aesthetic value of urban areas. Like in South Korea, it is important to establish green areas in Colombo and other metropolitan regions of Sri Lanka. The government has taken many steps to improve the greenery of the Colombo city through the 'Colombo City Beautification Project'. Similar efforts are to be expended on another 20 urban areas in Sri Lanka. The Ministry of Environment and Natural Resources is also planning to have more trees in all metropolitan areas in Sri Lanka as a means of improving the greenery, as well as reducing levels of air pollution. With GHG emissions on the increase, with metropolitan regions being the main sources, establishing steps to mitigate the future impacts are quite important for Sri Lanka. Since Sri Lanka is an island, establishing green areas around the coastal belt is also important so that the impacts of natural disasters can be mitigated in the future. In spite of efforts made to establish green belts after the 2004 Asian Tsunami, houses are once again being built close to the coastal line. Hence more investments and attention has to be given to ensure urban centres close to the coastal line have a proper green belt as a protection.

#### *Provide safe and affordable housing, safe drinking water and sanitation*

The percentage of Sri Lanka's population with safe housing, access to safe sanitation facilities and access to safe drinking water are above 90 per cent.<sup>45</sup> However, housing prices are much higher

<sup>44</sup> *Ibid.*

<sup>45</sup> CBSL (2013), "Economic and Social Statistics of Sri Lanka," Central Bank of Sri Lanka, Colombo.

in urban areas, limiting the ability of low income households to secure housing, sanitation and water facilities. The government, as well as many NGO/INGOs, is working to provide housing facilities for low income groups in urban areas. But, there needs to be better coordination between these groups. Sri Lanka has launched a 'Sustainable Housing Programme' to provide safe houses, water and sanitation for low income groups in urban areas, especially in Colombo, but more investments and coverage is needed. Banks are reluctant to provide loans for low income groups for housing facilities and request collateral and clear land titles which most low income households in urban areas are unable to provide.<sup>46</sup>

### *Encourage PPPs*

Sri Lanka is already making large investments in improving urban infrastructure in the CMR as well as other urban areas. Urban infrastructure is expensive, making it difficult for the government alone to meet the demand. Hence, PPPs are useful. Sri Lanka is already engaged in PPP activities in providing housing, water and sanitation; managing solid waste; and building roads and other transportation systems.<sup>47</sup> However, there should be proper management and coordination among the state and private entities in order to make these efforts a success. Corruption and inefficient management can be two major things that can bring down PPP efforts. Therefore, while expanding the use of PPP, it is also important that a proper regulatory body is in place so that neither the private

entity nor the public entity mismanages the PPP efforts in Sri Lanka.

### *Ensure an integrated and forward looking planning process*

As India's experience shows, the lack of an integrated and forward looking urban planning process hampers a successful urbanization process. China also invested in too many urban cities with too little people. By contrast, Japan, South Korea and Malaysia did plan for the future, identifying the importance of transportation systems, housing, and especially the development of key urban areas and supporting satellite urban areas. Hence, learning from these experiences suggest that Sri Lanka must develop a comprehensive urban development plan that looks into all aspects of socio-economics of urban dwellers, environment, financing, and physical resources. For example, most often, urban development activities call for an Environment Impact Assessment (EIA). However, most developed countries now have moved on to Strategic Environment Assessments (SEAs) which integrates urban development efforts linking all the elements of socio-economic, environment, finance and physical resource issues.<sup>48</sup> These integrated planning tools will allow Sri Lanka to identify and carry-out its urban area development, considering future population increases, traffic congestions, demand for wider roads and railway systems, air pollution and land degradations and impacts of climate change in a more effective, efficient and sustainable manner.

<sup>46</sup> Kelegama, S., (2013), "Sri Lanka's Vision of Urban Development", *Financial Times*, <http://www.ft.lk/2013/05/17/sri-lankas-vision-of-urban-development/>, visited online 2nd May 2014.

<sup>47</sup> UNHABITAT (2014), "Sustainable Cities Programme in Sri Lanka: Sustainable Colombo Core Area Project", [http://www.fukuoka.unhabitat.org/programmes/scp/sri\\_lanka/detail01\\_en.html](http://www.fukuoka.unhabitat.org/programmes/scp/sri_lanka/detail01_en.html), visited online 2nd May 2014.

<sup>48</sup> Rodrigo, P.C. J. and L.H.P. Gunaratne (2008), "Strategic Environment Assessment as a Subsumable Tool for Urban Solid Waste Management Problem", *Proceeding of the International Conference on Business Management*, Vol. 5