



Sustainable Housing and Urban Development

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Colombo – Sri Lanka

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Definitions -Sustainability

- **Common** - “To sustain is to support without collapse and the sustainability problem is taken to be: how to address problems of inequality and poverty in ways that do not affect the environment so as to reduce humanity’s future prospects” (1995).
- **Elkington** - “It’s the principle of ensuring that our actions today do not limit the range of economic, social, and environmental options open to future generations” (1998).
- **Meadows** - “Sustainable development is a social construct, referring to the long-term evolution of a hugely complex system —” (1998).
- **Berke and Conroy** - “A dynamic process in which communities anticipate and accommodate the needs of current and future generations in ways that reproduce and balance local social, economic, and ecological systems, and link local actions to global concerns” (2000)

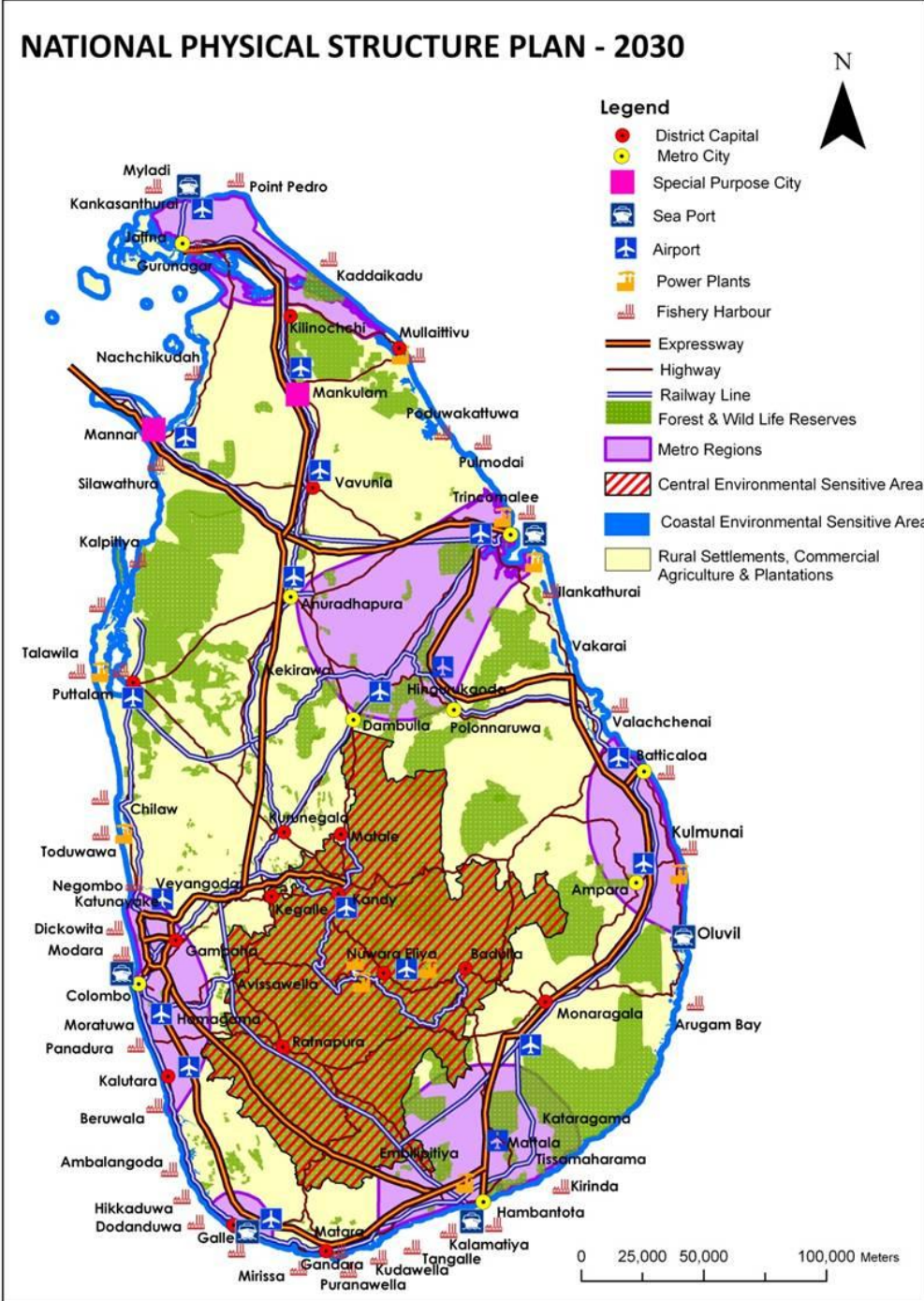
More than 100 definitions of Sustainable Development

Most Commonly Used Definition

‘Meeting the needs of the present without compromising the ability of future generations to meet their own needs’

Bruntland Report, 1987

National Physical Policy & Plan - 2030



The National Physical Planning Policy & Plan -2030

The National Physical Planning Policy and Plan was developed in 2007 to **promote and regulate integrated planning of economic, social, physical and environmental aspects** of land and territorial waters in Sri Lanka.

- This plan is identified **five metro regions**, Colombo, North-Central, Southern, Eastern and Northern Regions as well as the development of **nine metro cities** – Anuradhapura, Ampara, Batticaloa, Colombo, Dambulla, Hambantota, Jaffna, Polonnaruwa and Trincomalee. These are to be competitive, well-linked and be environmentally sustainable
- This policy and plan clearly articulates the intention to **ensure development that is mindful of environmental factors**.
- It identifies **both the hill country and the entire coast as environmentally sensitive and under stress due to excessive human activity**.
- The policy **promotes maintaining an equilibrium between the environment and human settlements** in regions exposed to natural hazards, while encouraging voluntary migration through economic stimuli to planned settlements in planned metro-regions and cities targeted for future growth and state investment.

Housing Policies in Sri Lanka

National Housing Policy – 2014

Goal:

“To ensure the right to live in an adequate, stable, qualitative, affordable, sustainable, environment friendly and secure house with services for creating a high living standard on the timely needs of the people”

Promote the concepts of

- Participatory and partnership in housing.
- Decentralization and integrated development.
- Good governance.
- Sustainable housing development
- Disaster resilience.
- Appropriate technology and green building.

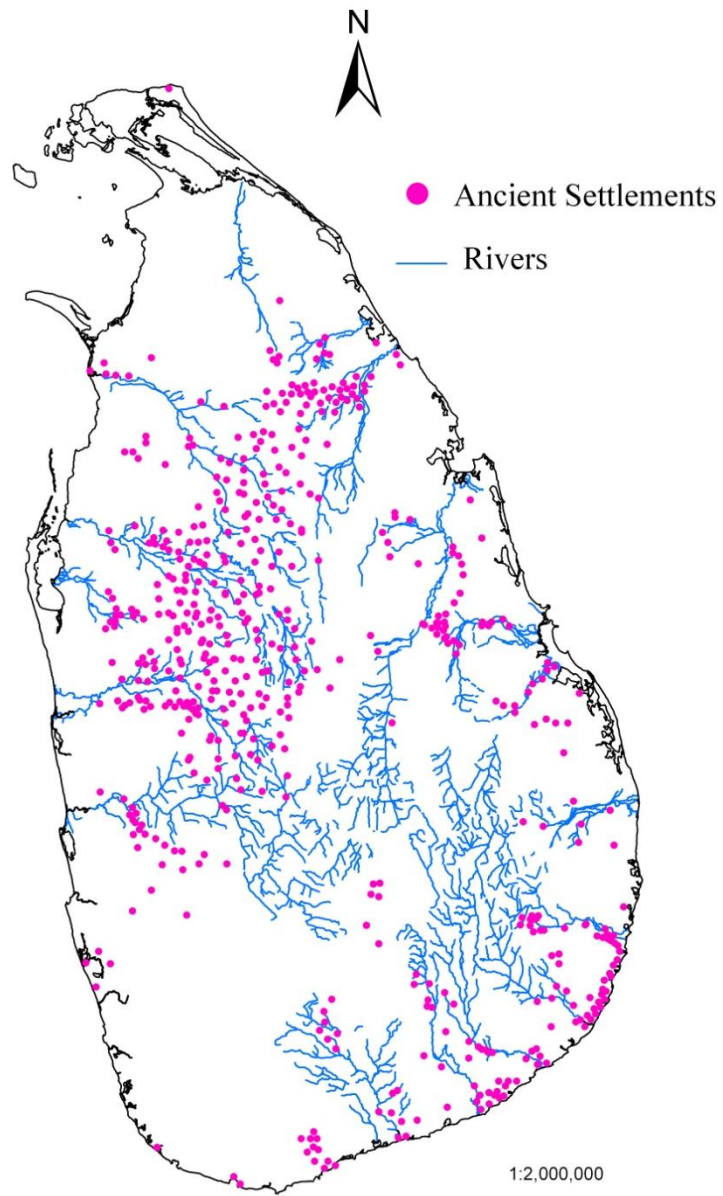
Urban Management Policies in Sri Lanka

The main policies and plans related to the urban management, setting up of human settlements and sustainable housing expansion in Sri Lanka as follows.

National Physical Planning Policy and Plan – (2030)

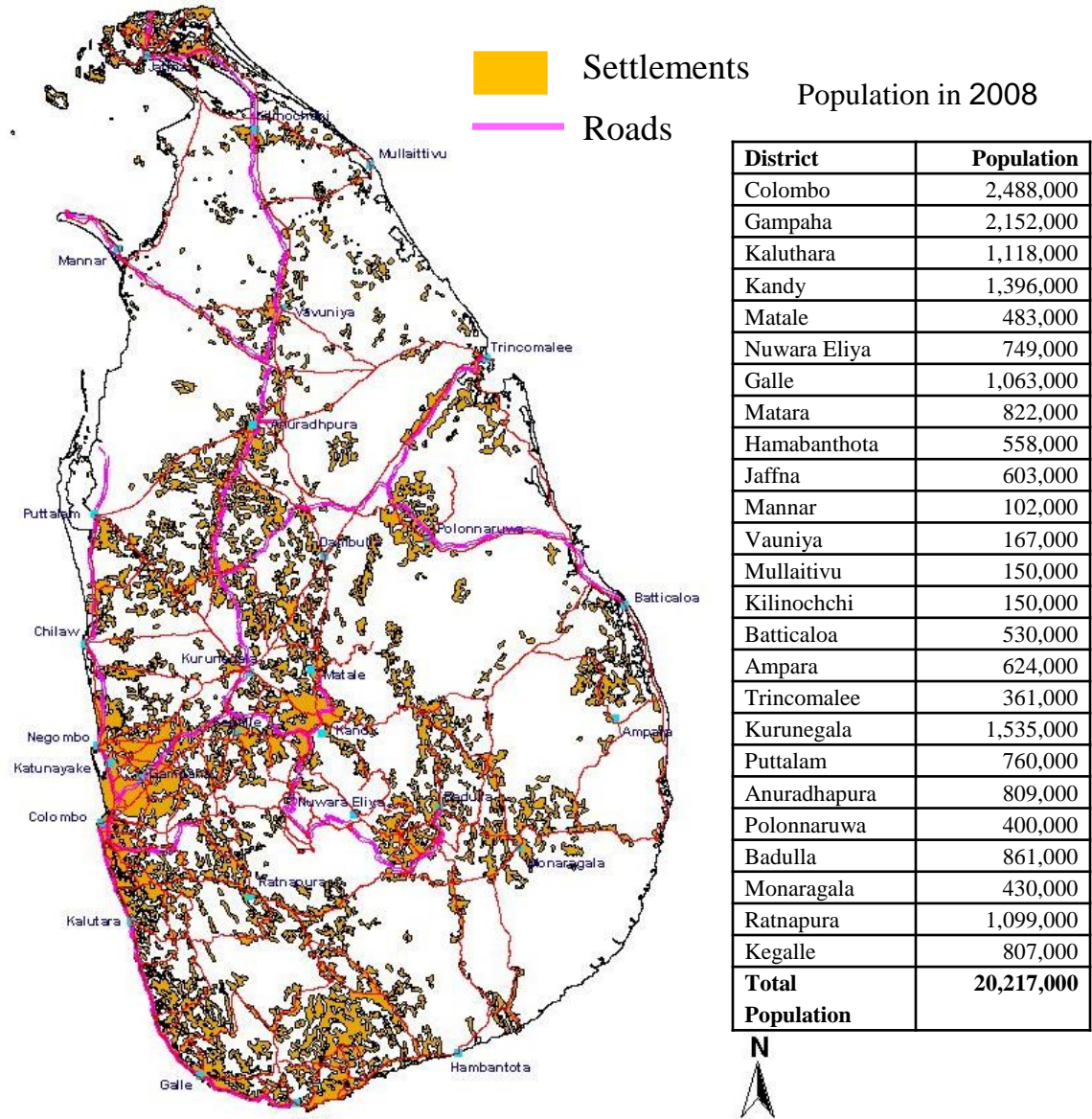
- National Policy on Air Quality Management of 2002
- The National Energy Policy of 1997
- National Transport Policy of 1991
- National Environment Policy of 2003
- Land Use Policy of 2009
- Local Government Policy

Ancient Settlement Pattern in Sri Lanka



Source: 50 years of Town & Country Planning in Sri Lanka, NPPD

Existing Population Distribution Pattern in Sri Lanka



Source: Urban Development Authority

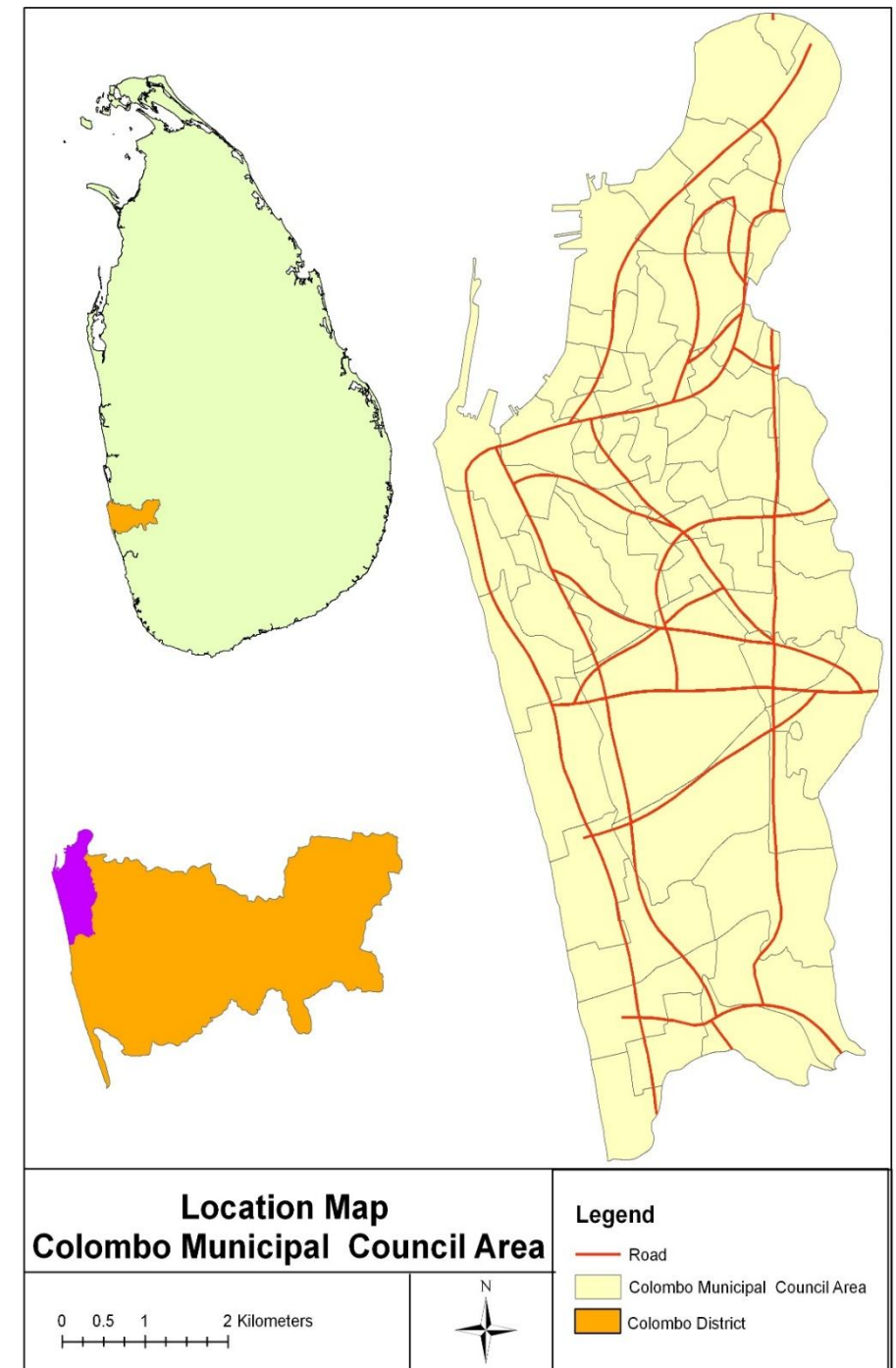
Location of Colombo City

Sri Lanka

- **Location** - South Asia (Island of the Indian Ocean)
North Latitude between 5° & 10°
East Latitude between 79° & 81°
- **Capital City** - Colombo
- **Administrative City** - Sri Jayawardenapura Kotte
- **Land Extent** - 65, 610 sq.km.
- **Population** - 20, 277, 597 (20 million)
- **GDP** - \$84.023billion
- **Per capita** - \$3927
- **Currency** - Sri Lankan Rupee (LKR)

Colombo Municipal Council Area

- **Land Extent** - 3733 Hectares
- **Population** - 665, 000 Persons



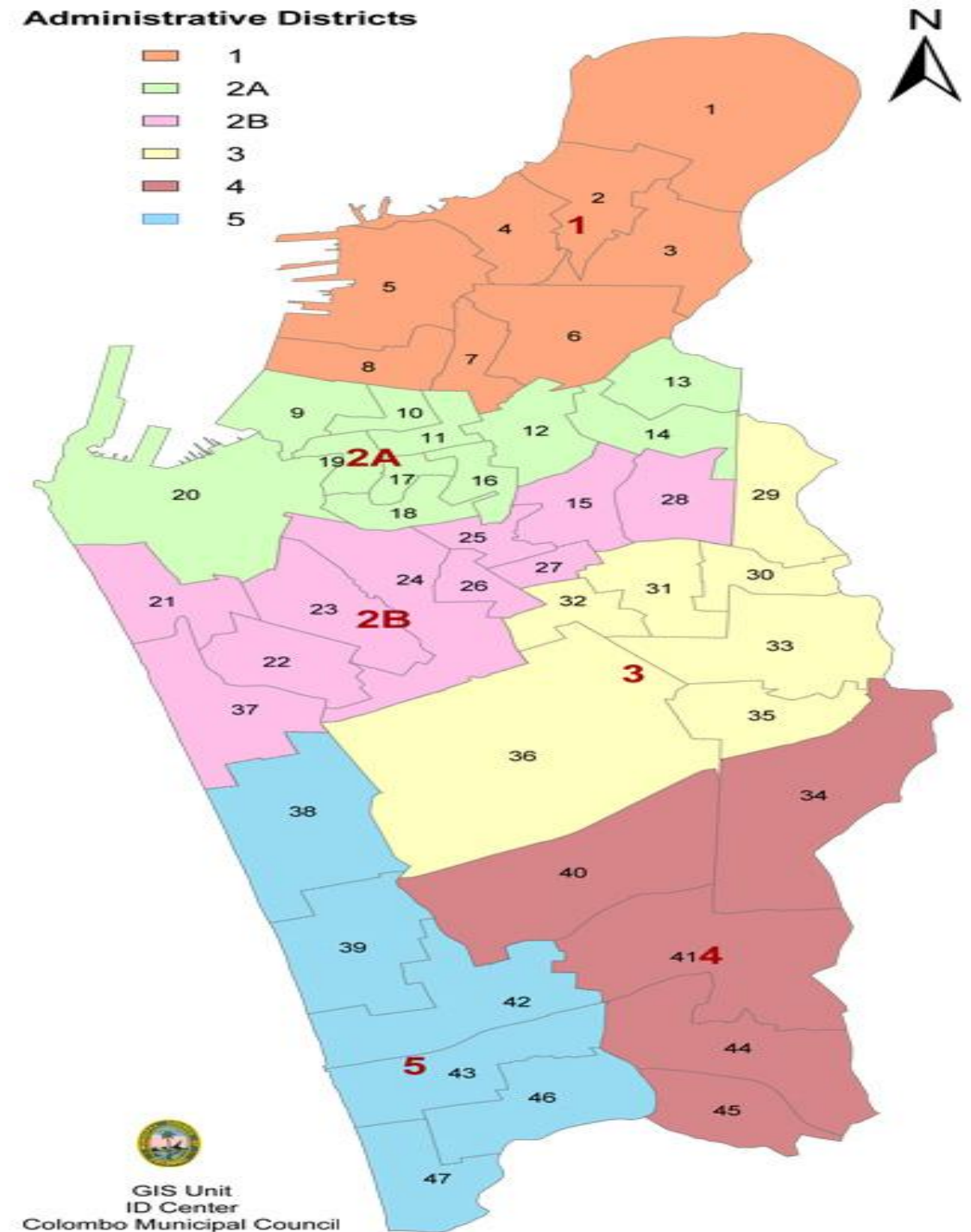
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Background of city of Colombo

- The city of Colombo located on the Western coast of Sri Lanka has been the Sri Lanka's capital city created under the British Rulers.
- Sri Lanka has gained independence from the British rulers in 1948 and the status of capital remained until 1978 where the Government of Srilanka declared the adjoining Municipal Council area of kotte being the capital of Sri Lanka.
- However the city of Colombo remains as main finance and commercial capital of SriLanka due to historical development strength and the location advantages being nodal point of rail ,road transportation and the maritime connectivity to the world through the port of Colombo

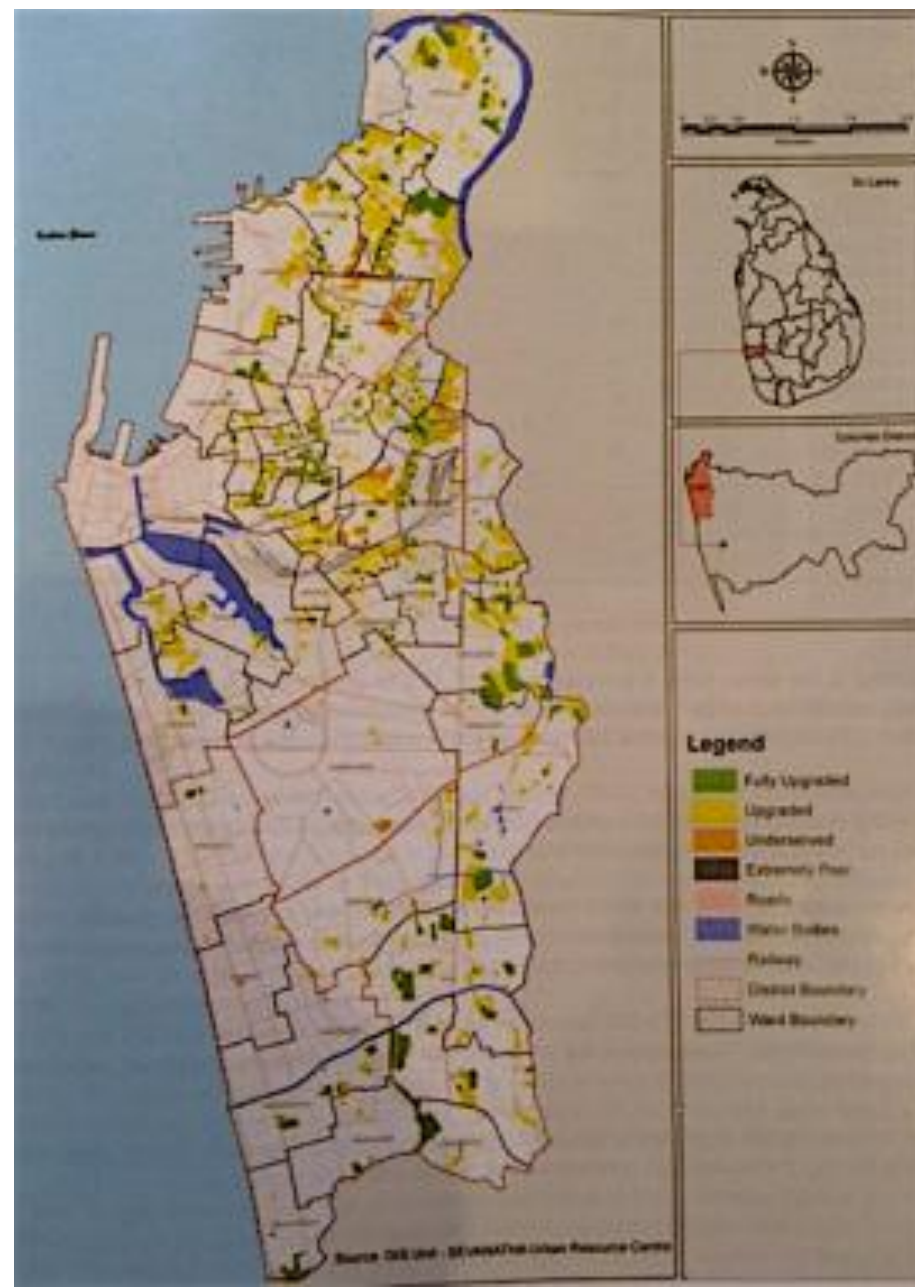
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- The city of Colombo is administrated by Colombo Municipal Council which is regarded as the city area spread over 3733 Hectares and consist of 47 Municipal wards. The Colombo city population for the year 2015 was 665,000 persons.
- most of the valuable lands in Colombo city area are occupied by the scotters
- Most recently the Ministry of Megapolis and Urban Development Authority has undertaken housing resettlement programme for providing most modern accommodation to low income families in proposed high-rise housing schemes in the city.

Present Situation of the City of Colombo

Distribution of the Settlements

- When you look at the settlements on map 2 below you can see that they are scattered throughout the city;
- There is a clustering of settlements in the north of the city District 1, 2a and towards the Eastern boundary Districts 3 and 4
- Districts 1 and 2a hold 72 of the population and 74% of the Under Serve Settlements there is a secondary cluster towards the South East District 4
- The western central area is relatively free of USS District 2b and District 5



Issues in Urban Low Income Housing Sector (6)

- Most urban under-served settlers, have suffered **severe deterioration due to the poor maintenance and management of the building structures and their infrastructure.**
- The lack or almost **inexistence community intervention on housing management** is the result of poor awareness, lack of willingness, incorrect attitudes and bad habits of the communities. Their social status and education level might be an obstacle to undertake management tasks that involved certain skills and capacities.
- The poor regulatory level for management of the buildings and the infrastructure, there are several critical areas to be addressed,
- Solid waste management;
- Drinking Water Supply System (Water lines, Pumps, Sumps, Storage tanks, etc)
- Common areas (corridors, stairways, common lighting systems, gardens and green areas, children play areas, community centre, parking areas etc.)
- Sewerage & other waste water systems;
- Surface runoffs and storm water drains;





Sustainable Housing Projects in Colombo City



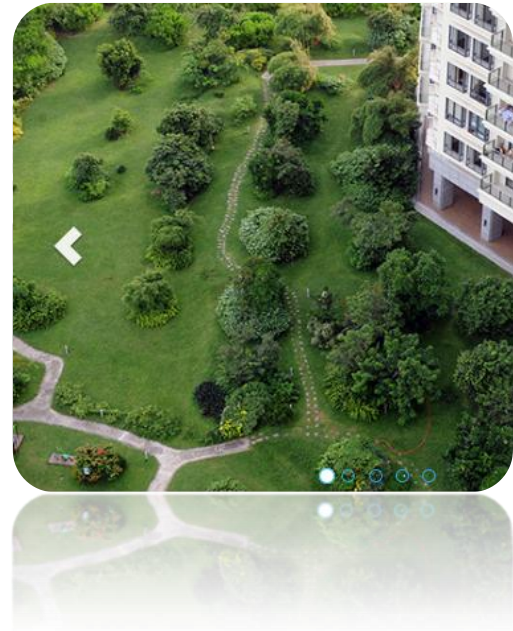
The Altair Residencies

- The Altair building is located in the heart of Colombo, adjacent to Beira Lake.
- This is a residential development, 68 stories and 240m, the building will be one of the tallest building in Colombo spread within 14 ha.
- Altair consists of 400 luxury apartments ranging from 1,500 sq.ft. to 4,000 sq.ft.
- The development also have a Sky Garden on the 63rd floor with a pool, lounge and party arena.
- This allows maximum airflow and light which contributes to energy savings in heating and cooling and also provides access to the balcony for an awesome view.
- Residents of the building will enjoy 270 degree unobstructed views of Beira Lake and the Indian Ocean.



Havelock City Park Tower

- Havelock Towers are the best residential apartment in the heart of Colombo height of 115 meters high and 22 stories
- This artfully landscaped 7-acre building has largest rooftop garden and the garden with Sri Lankan foliage, bamboo pools, thriving flora and colourful birdlife.
- This condominium is designed with offering panoramic views of the City and the Indian Ocean. Havelock City will offer a recreational facilities, a shopping mall with office space.



Clear point Residencies

Clear point Residencies is the tallest residential vertical garden consist of 171 apartments & 46 floors.

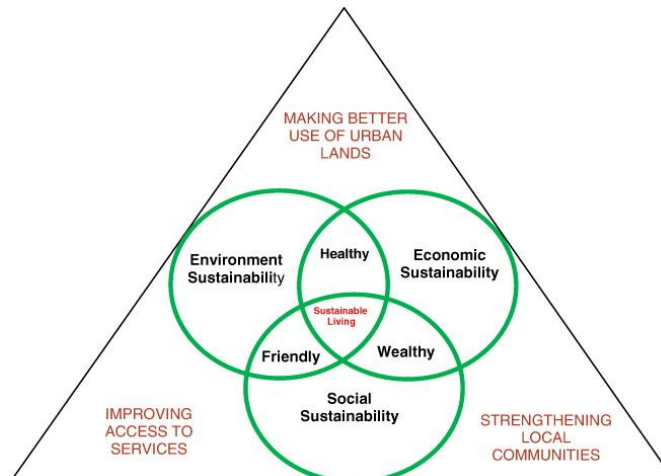
The building is comprised several sustainability features

- **Self-sustaining watering system** - reduce energy and water consumption
- **The Planted terraces offer the building a unique charter.**
- Plants have a natural tendency to **absorb sound**, both internally and externally.
- **Plants provide shade, cool terraces and buffer radiant heat.**
- Oxygen Produced during the daytime **provides cleaner air, while leaves act as a natural filter for dust**
- **Sound proofing system**, blocking out the sounds of the hustle and the bustle of the city around it.
- **Reduce its carbon footprint reduce maintenance costs** across the creative architectural design and cutting-edge technology.
- Green cover provides a **natural cooling system** for the entire building,
- Fresher and more relaxing atmosphere, but **less energy spent on air conditioning.**
- **Less heat**, windows not being exposed to direct sunlight, reduce the size of air conditioners
- **Solar panels generate electricity** for common areas.
- **Rainwater Harvesting System** is used for plant irrigation.
- **An automated drip irrigation system** will save water used for irrigation, recycled from the grey water output of the residence, used in the sanitation systems of apartments, thus reducing water usage by 45%.
- **Grey Water Recycling System**
- **Solid Waste Disposal**



Sahaspura Housing Project

- “Sahaspura” is the first high-rise low-income housing project in Sri Lanka, 2001, Consisting of 671 housing units over 14 floors
- This project was one outcome of an entire city development under the Sustainable Township Development Programme (STP). The mission was to help Sri Lanka meet the shelter requirements of the urban poor by creating socially acceptable, economically viable and environmentally friendly housing and urban and spatial developments to ensure sustainable living in Colombo.
- Social recognition is the most important factor for social sustainability.
- environmental sustainability, this project has addressed both micro-level on-site sustainability and sustainability within the macro-level city environment. On a macro-level, this project provides sustainable housing for poor people who lived in environmentally sensitive areas like retention areas, marshy lands, low-lying lands, public parks and public open spaces.
- Evaluation criteria for making a sustainable living environment in Sahaspura



Challenges of Urban Management

- **Absence of communication and collaboration** among different government institutions.
- **lack of integrated policy** and institutional framework **for urban management**.
- **Inadequacy of guidelines on settlement planning**.
- **Shortage of suitable land for residential purposes** in urban areas.
- **Rapid escalation of land values** in major cities and suburbs.
- **Proper waste disposal methods are not available**.
- **Traffic Congestion**
- **Political constraints of policy reforms**.
- **Urban areas are becoming more vulnerable to natural disasters**, due to the loss of flood retention areas, filling of wetlands, poor storm water drainage system.
- **Encroachment of environmental sensitive areas** within urban areas
- **Urban sprawl**- difficult to plan and manage, regulatory failures and enforcement of land use controls.

Solutions

- Moving towards **strategic and integrated urban management** system.
- Ensuing **sustainable financing** of regional and **urban infrastructure**.
- Promoting **efficient and sustainable land and housing development** for city livability.
- **Initiate policy and institutional changes**
- **Encouraging the use of public transport** and alternative transport modes
- **Disaster mitigation and adaptation** strategies need to be mainstreamed
- **Repositioning urban local authorities** as service provider and equipping them with adequate powers and facilities for performance-based city management and finance.
- Promoting the use of **proper solid disposal methods**.

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Thank You