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City Planning
based on Green Space Development
in Major Asian Cities

Dr. Kayoko YAMAMOTO
National University of Electro-Communications,
Tokyo, Japan

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0-1. Background and Purpose

Background

The characteristic problems in the metropolitan areas in both Japan and other Asian countries ;

1. Most large cities are extraordinarily high-density
2. In the metropolitan areas in Japan, in particular, there is an acute lack of green spaces,

→ This has given rise not only to problems in land use but also to the deterioration of the environment !!

Purpose

The purpose of this study is to review representative cases of green space development and to examine its direction in major Asian cites. For the purpose, on the basis of the results of literature research and field surveys (2002-2007) in addition to interviews (2002-2007), comparing major Asian cites, I describe the characteristics of green space distribution and outline the genealogy of city planning based on green space development.

0-2. Presentation Content

1. Case Study Cities

2. Representative Cases of the City Planning Based on Green Space Development

2-1. Green Belt Concept:

Comparison between Japan and South Korea

2-2. Garden City Construction:

Comparison between Singapore and Malaysia

2-3. Green Space Development as the National Strategy of China

3. Direction for City Planning Based on Green Space Development

4. Summary: A key point of the Presentation

1. Case Study Cities

Table 1: Outlines of case study cities

Nation	City	Population (Person)	Area(km2)	Population Density(Person/km2)
Japan	Tokyo(23 Cities)	8,641,764	621.8	13,898.0
	Nagoya	2,235,103	326.5	6,845.6
	Osaka	2,643,366	222.1	11,901.7
	Kobe	1,530,295	552.7	2,768.8
China	Beijing	14,930,000	16,808.0	888.0
	Shanghai	18,670,000	6,340.5	2,945.0
South Korea	Seoul	10,356,202	605.3	6,573.0
Singapore	Shingapore	4,353,893	698.0	6,283.0
Malaysia	Kuala Lumpur	1,800,000	243.7	7,386.1

Note) Population and area data are taken from the websites of each city.

2-1-1. Green Belt Concept in Japan

- ◆ **Japan's green space development plan can be broadly classified into three phases.**

- ◆ **The first phase (1932-1968)**

The concept of green belt was first introduced in Japan and efforts were made toward its realization.

- ◆ **The second phase (1968-1977)**

The New City Planning Law was enacted whereby the idea of Green Belt was replaced by a new concept called Urbanization Control Area.

- ◆ **The third phase (1977-present)**

The urban green space planning system was established
The Master Plan for Parks and Open Spaces was formulated
whereby greening on a small district level has become subject to planning

2-1-2. Shinjuku Sub-Center in the Greater Tokyo Metropolitan Area (December, 2006)



2-1-3. Green Belt Concept in South Korea

◆ Six categories of the city planning area

Restricted zone; Urbanization control zone;
Detailed planning zone; Multi-regional planning zone;
Development control zone (Green Belt); and
Prospective development zone

◆ The designation of Green Belt areas (1971)

A total of 166.82km² area within the Seoul Metropolitan area is designated as such.

◆ By 2020, a total of 100,000m² area will be gradually released from the Green Belt control and become an area subject to adjustments thereby paving the way for residential development.

2-1-4. A Group of High-Rise Buildings Constructed in the Suburbs of Seoul Following the Lifting of the Green Belt Control (January, 2003)



2-2-1. Characteristics of Singapore as a City State

- ◆ **The most advanced in terms of greening of urban areas** among Southeast Asian countries located in the tropical zone.
- ◆ **The Independence from Malaysia (1965)**
- ◆ **Garden City Movement under the strong initiative of the government (1967-)**

The purpose was to promote the greening of urban areas focusing on city-wide greening activities and green space development as a means to cope with the rapid urbanization and development.
- ◆ **Garden City Construction as One of the Most Successful Green Policies Undertaken in a Tropical City**

The most distinctive characteristic is that Singapore sought to enhance the attractiveness of the country as a tourist spot in addition to improving the living environment for its people amid rapid urbanization.

2-2-2. From Garden City to Environmentally Symbiotic City

- ◆ **Concept Plan as a long-term program for the entire city**
- ◆ **Green and Blue Plan for laying out a park and greenery system**

It incorporates the idea of park connector network, is aimed at building a water-and-green network with well-landscaped waterways and green open spaces over the entire land of the city state.



- ◆ **The plan is also perceived to be one of the most innovative in the world.**

It seeks to conserve the environment as a living space not only for human beings but also wild the wildlife.

2-2-3. Orchard Street in the Central Part of Singapore (May, 2002)



2-2-4. Characteristics of Kuala Lumpur in Malaysia

- ◆ **The Independence from the U.K. in 1957**
- ◆ **Urban area redevelopment including many huge projects have been promoted through the wealth of the capital which has rapidly flowed from foreign countries such as Japan on a large scale since the middle of the 1980's.**
- ◆ **Green Space Protection Plan (2006)**
It will be included in the Kuala Lumpur structure plan that determines the urban development plan until 2020.
- ◆ **Beautification Movement**
It aimed at the urban area redevelopment and the creation of a modern beautiful city space. Kuala Lumpur has become a modern city, although the traditional Kampong (Malay village) still exists inside the city.

2-2-5. Lake Garden in Kuala Lumpur and Putrajaya

◆ Lake Gardens, Hibiscus Garden, Bird Park and Butterfly Park

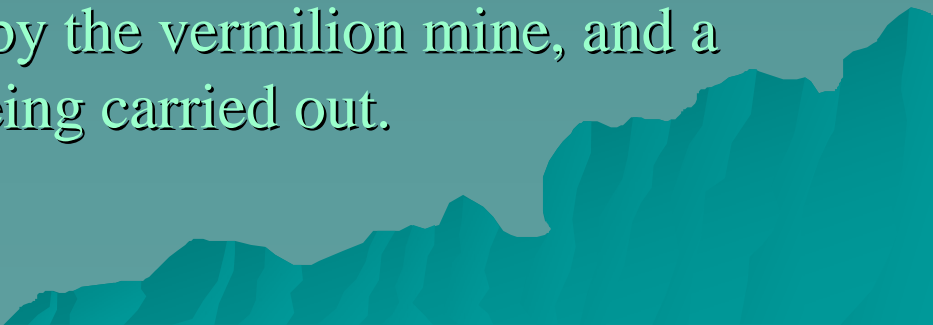
A very large-scale green space around the Lake Perdana, a man-made lake, was developed in the latter half of the 19th century in the hilly areas to the west of the center of Kuala Lumpur.

◆ Putrajaya plan (1996)

Kuala Lumpur is aiming at the construction of the new administrative city of Putrajaya by 2010.

◆ Putrajaya

It is being built as a Garden City in the man-made lake developed by infilling the wetlands the left by the vermilion mine, and a unique city planning project is being carried out.

A stylized, dark teal mountain range graphic is located in the bottom right corner of the slide, partially overlapping the text area. It consists of several jagged peaks and valleys, rendered in a solid dark teal color.

2-2-6. KLCC Park and Putrajaya (November 2007)



2-3-1. Green Space Development as the National Strategy of China

◆ “Garden Forest City” and “Hygiene City”

China places great importance on tree planting in urban areas, and is positively promoting the expansion of the area of green spaces per population and the green coverage rate.

◆ In recent years, large-scale green space development has been conducted as a national strategy for national enterprises such as the Beijing Olympic Games (2008) and the Shanghai World Exposition (2010).

◆ The 1st China Urban Forest Forum (2004)

The short-term goal is to increase the forest coverage rate to more than 30% and green space rate to more than 35% in 70% of all cities so that the public green space per population becomes more than 10m² in cities overall and more than 6 m² in the city centers.

2-3-2. Beijing and Shanghai in China

◆ **Dispersed Cluster-Type City Structure (1959) after the Beijing Master Plan (1958)**

(1) the city structure could flexibly cope with frequent changes in city planning scale; (2) the rapid expansion of continuous urbanization could be halted and green belts kept outside urban areas; and (3) environmental conservation and ecological balance could be promoted.


◆ **Shanghai as a “National Forest City”**

It aims to establish a framework for developing a green city by 2010.

Because the green space area was less than 10 hectares before the 1990's, urban redevelopment including the construction of a zoo and large-scale parks was conducted through the 9th 5-year plan (1996-2000, known as the "95").

3-1. Direction for City Planning based on Green Space Development 1

Two Major Directions in Green-Oriented Urban Planning !!

- 1. One direction has been the establishment of the concept of multi-regional development,**
 - 2. while the other has resulted in the birth of the concept of environmentally symbiotic city, which arose out of the Garden City concept.**
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3-2. Direction for City Planning based on Green Space Development 2

1. Multi-Regional Development Concept

The Green Belt concept and the Garden City concept, which emerged in Britain in the 20th century, merged with the American concept of park system established in the 19th century to develop the multi-regional urban planning in the 1920s.

2. The Birth of the Concept of Environmentally Symbiotic City which Evolved from the Garden City Concept

The emphasis has been shifted from the Garden City concept to the Green City concept based on green space development, which was then influenced by the City Beautiful Movement in the US in the 19th century. As a result, the concept of environmentally symbiotic city was born.

The term “environmentally symbiotic city” is synonym to “sustainable city” and “compact city.”

3-3. The Green Belt Concept vs the Garden City Concept

◆ Green Belts Concept

It has been mainly adopted to prevent the disorderly sprawling of the metropolitan areas.

◆ Garden City

It promotes the greening of urban areas focusing on city-wide greening activities and green space development as a means of coping with rapid urbanization and development.

◆ Green Belt Concept vs Garden City Concept

It is impossible to keep green belts in large cities and the suburbs where the urbanization pressure is tremendously strong. In such cities and the suburbs, it is essential to control land use severely and adopt garden city concept to conserve urban environment. Especially in Japanese large cities, it is necessary to promote the greening of urban areas, not only public land but also land under private ownership, by means of rooftop and wall gardening of buildings.

4. Conclusion and Future Research

- (1) The Green Belt concept was promoted in Japan in the latter half of the 1930's, South Korea in the early 1970's, and Beijing in China in the latter half of the 1950's. However, the Green Belt was converged into an urbanization control area in Japan in 1968 when the New City Planning Law was enacted, and the lifting of Green Belt control has been performed step-by-step in South Korea in recent years. In Beijing, although the maintenance of the Green Belt ran into difficulties, the detailed plan for the Green Belt was revised from the middle of the 1990's, and the Beijing municipal government has promoted it.
- (2) Singapore launched the Garden City Movement to promote green space development to cope with rapid urbanization and development after independence in the latter half of the 1960's. Beijing developed a Garden City based on the Singapore model, and Shanghai is also aiming at the development of a green city. Kuala Lumpur has developed the Lake Gardens, a man-made lake and large green spaces, and it now aims to construct a new administrative center as a Garden City in a man-made lake.
- (3) The results of previous studies and this study show that there are two major directions in such green-oriented city planning. One direction is the establishment of the concept of multi-regional development, while the other has resulted in the concept of an environmentally symbiotic city based on the Garden City concept.

Thank you very much for your attention !



Asakusa, Downtown Area



Ginza, Central Shopping Area

If you need more information about our study, please send E-mail to k-yamamoto@is.uec.ac.jp !