

THE DIRECTION OF URBAN FORESTRY IN HONG KONG

Chiky WONG

In the series 1 article we have briefly reviewed the fundamentals of Urban Forestry. We will elaborate the concept through understanding the situation in Hong Kong this time. It is important to acknowledge and evaluate our diverse urban forest asset as the foundation for developing a strategic plan.

Notwithstanding being a small city, there are quite diverse and relatively sufficient areas of urban forest to sustain the living quality of more than 7.3M population. Our country parks alone cover more than 40% of total land area of the territory. Our current urban forest asset was mostly established since the 1950s through massive plantation, planned greenery programmes, or unintentional neglect in some areas. Together with parks, gardens and other green open space, the per capita urban forest area, in a broad sense, is 105 sq. m (Annon, 2011) a figure quite high amongst cities in Southeast Asia (Table 1). However, the figure would drop to about 2.5 sq. m (comparable to some cities in developing countries) if country parks are excluded (Jim, 1998).

Table 1 – Comparison of green open space accessible by the public (including planted areas trees) (Annon, 2011)

City	Population (person/km ²)	Urban open space per(sq. m)
UN's target (World Health Organization, 2010)	-	Min. 9.5 Ideal 50
Hong Kong	7M (6362.2)	105 (including country parks)
Bangkok	5.7M (3607.4)	3
Beijing	17.6M (1069.4)	88
Delhi	17.4M (11733.0)	19
Guangzhou	7.9M (2067.5)	166
Hanoi	6.5M (1935.1)	11
Jakarta	9.2M (13889.9)	2
Kuala Lumpur	1.7M (6811.1)	44
Manila	11.6M (18165.1)	5
Seoul	10.5M (17288.8)	23
Singapore	5M (7025.2)	66
Taipei	2.7M (9789.9)	50
Tokyo	13M (5946.9)	11

Our urban forest provides various services to the society of Hong Kong (Fig. 1). There are quite diverse components of urban forest locally (Wong, 2017) and they have some shared services to the city, such as carbon sequestration, heat island effect reduction, physical and physiological health improvement of the citizens. On the other hand, some services are quite site specific. For example, roadside tree rows for shading and screening, slope planting for erosion control, rooftop planting for reducing energy consumption, country park for conservation and water catchment.

Different types of urban forest in Hong Kong and their services to the city dwellers

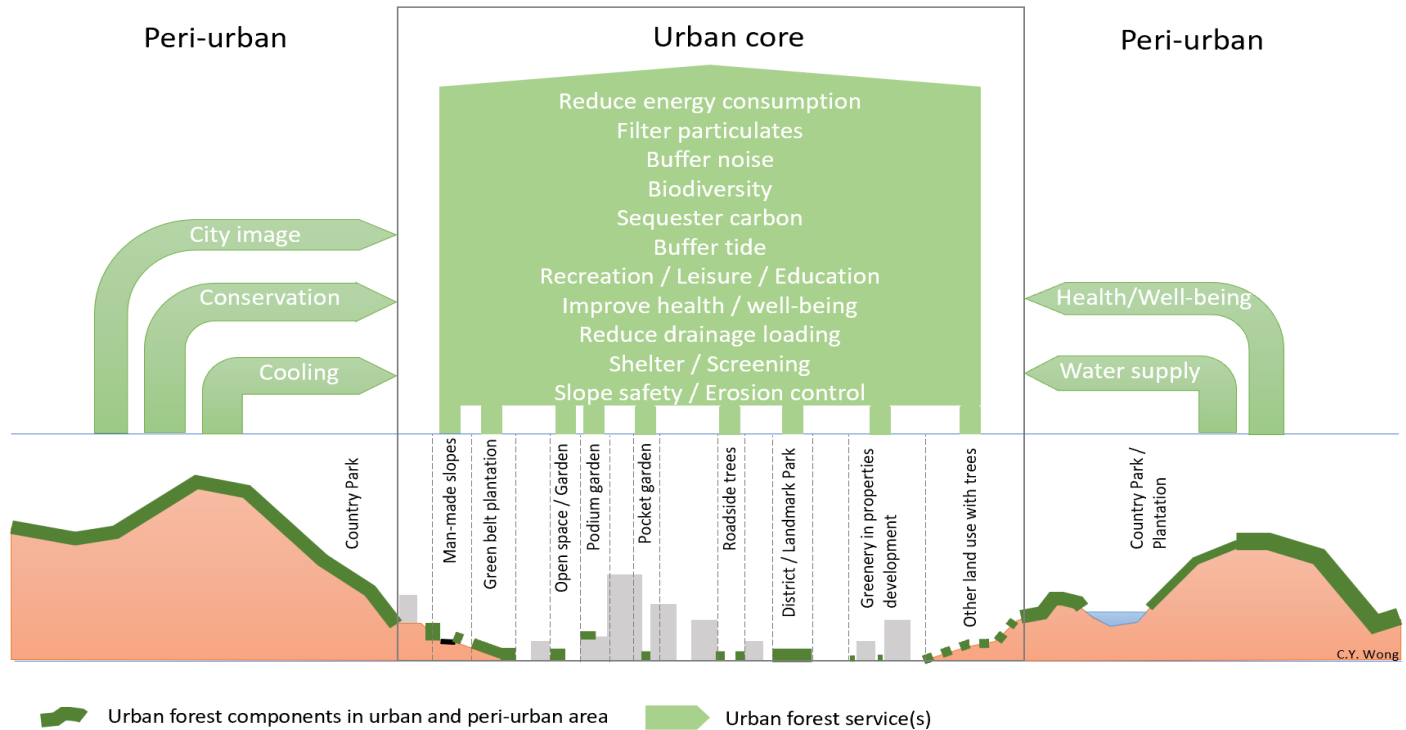


Fig. 1 – Major components of urban forest in Hong Kong and their key services

Though often taken for granted or unnoticed, such diverse functions of the urban forest are equally important to the services that other city infrastructures such as roadworks, water and power supply, drainage, hospital provide. In the past, budget and standards for designing, building and maintenance of urban forest (green infrastructure) were very low. Tree planting is usually absorbed in landscaping and mostly comprises less than 2% of the total contract sum of most development projects. As plantings were generally classified as “landscape” for amenity, aesthetic function, the real benefits of them have always been masked. With this underestimated importance of the urban forest, the performance standards and requirements for personnel responsible for the planning, design, implementation and maintenance were insufficient for the actual need. Appropriate planting space is commonly sacrificed for other utilities readily without formulating a compromise option.

The old mindset needs to be changed fundamentally so that the development of urban forestry will be on the right track. There is no shortcut, but it is achievable with collective thinking and innovative trials.

Increased expectations of the urban forest's quality and services implies the possibility of an increased budget, which may sound like a burden to municipal authorities. Currently, the majority of urban forest in Hong Kong is solely funded and managed by the government. While the public has little involvement, noise is made quite often on the quality of the government's greening and tree management work. It appears far from satisfactory to rely solely on public funding in management of green infrastructure. In fact, the community has become highly enthusiastic and involved in greening issues in recent years. This trend has created an environment for government-community collaboration in urban forestry. There are many possibilities for collaboration and below two are listed for further discussion:

1. Active participation of community on urban forestry management

It is a longstanding practice in many developed countries that the community is engaged to actively participate in the planning, design, implementation and maintenance of the urban forest. Entrusting pieces of abandoned lands to non-profit or community groups which have a strong mission in greenery is one way. Partnering of municipality and these groups in planting and maintenance works is another direction that can be explored in already-established green space.

The Plantation Enrichment Programme (PEP) at Country Parks by the Agriculture, Fisheries and Conservation Department is a frontier scheme locally in which different community groups are engaged in the planning, design and hands-on planting and maintenance work for a relatively long period of time, with funding raised from different sectors of the community. The scheme has formed a good model for reference in other urban forestry programmes.

2. Alternative funding from the community

Upgrading the standard of care of the urban forest and its function involves a lift in expenses. There are various private funding sources which have a strong mission in serving the community and improving the environment. Matching of them with the real need is necessary for a wise use of resources. For example, a popular local electronic-payment system launched a scheme for some years to fund tree planting (for each transaction) at private locations and small communities. Such kind of initiative would have been even more effective and with a greater positive impact if there had been better coordination and stronger support from the authorities which own the largest pieces of land. Nevertheless, this scheme was ground-breaking and would also become a valuable experience for future fund-raising schemes.

Being a component of the city’s infrastructure, urban forestry requires a strong team of professionals in the planning, design, implementation and maintenance. It requires the collaboration of various professions and their importance also varies depending on site nature (habitat) (Miller, et al., 2015). Fig. 2 elaborates the general concept further for the situation of Hong Kong.

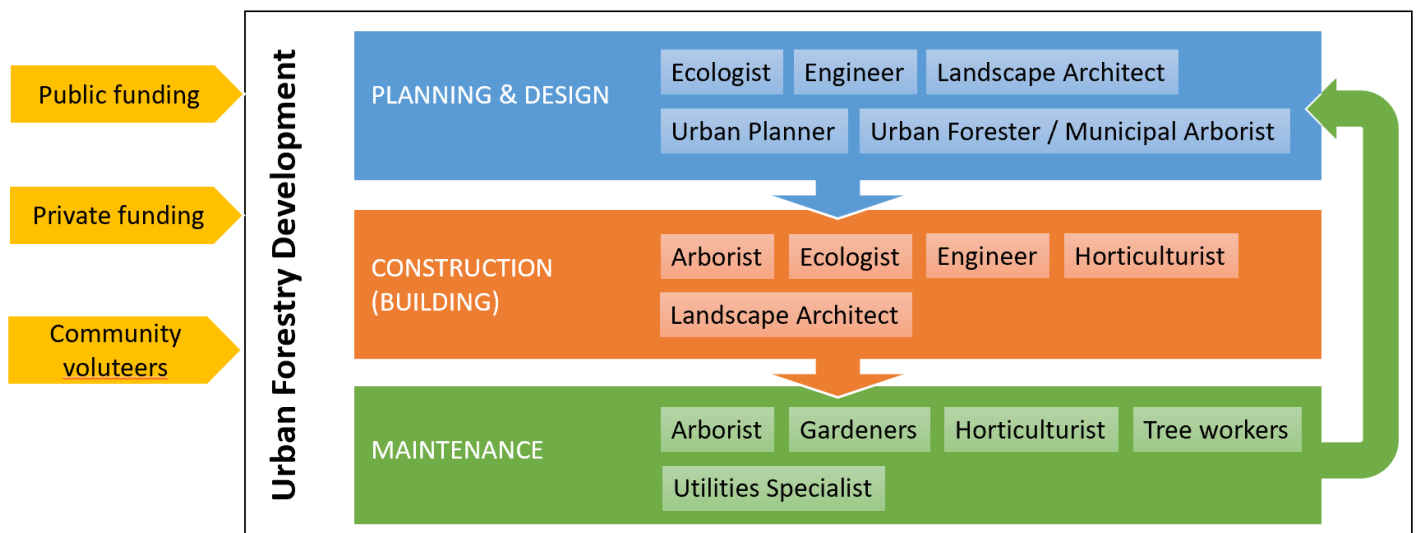


Fig. 2 – Flow chart for urban forestry development including resources and involvement of professions.

Nearly 10 professions should be involved in holistic urban forest management. For example, in the planning and design stage the goal of the urban forest is laid down in response to society needs. This involves urban planners and usually ecologists as well for benefiting the environment. While trees are the backbone of urban forest, the urban forester / municipal arborist plans for the life cycle of the forest, designs the appropriate species to deliver different functions and enhancement, and determine the required space. Landscape Architects consider the leisure and recreational needs of users and plans for the site function and spatial arrangement, and designs for other associated facilities. Engineers of different specialities contribute when there is need in coordination with other infrastructure during the development.

During the construction stage, all building / planting works delivered are supervised by various qualified specialists, arborists, ecologists and horticulturists may usually get involved in many practical works during the planting and establishment stages.

Compared with the previous two stages, the maintenance stage of the urban forest lasts much longer in time. While there are smaller plants which may be replaced after a few years, the backbone – trees can usually last for more than 80 years in the urban scenario if there is no interference or damage. However, growth of trees requires different levels of care so that their services will be maintained or preferably enhanced as they age. The damaged trees need extra attention and maintenance efforts as they tend to have more conflicts with the built environment.

As the Seoul Action Plan has predicted, awareness of the functions and benefits of urban forests and trees would increase urban forestry investment (FAO, 2017). With an increased budget, the services that the existing green space can provide to the city would be advanced too – which will benefit not only the city dwellers, but the overall global climate. The key players should acknowledge this movement and get prepared for the change.



Food and Agriculture Organization
of the United Nations

SEOUL U
서울대학교



Korea Forest Service



SEOUL ACTION PLAN

*for the development of Urban Forestry in the
Asia-Pacific Region*

1 Introduction

The dynamic and populous Asia-Pacific region is home to over four billion people; that is, almost 60% of the world's population. Half of these people live in cities (2017). Asia is also responsible for a large share of the future growth of the world's urban population, with for example India contributing with 404 million new urban dwellers in the next 20 years. The region includes 58 countries, ranging from Iran in the west to the Pacific Islands in the east, and is one of the world's most diverse in terms of economy, society, culture, environment and human settlements. The region is currently home to 17 megacities, a number that is expected to increase to 22 by 2030. However, the challenge of urban sustainability is expected to concentrate in small- and medium-sized cities, where almost 90% of the projected urban population growth is expected to occur.

Cities of the Asia-Pacific are now the predominant hubs of economic growth, wealth creation and innovation, and their economic successes and transformations have lifted millions of people out of poverty. Recognizing this, governments have explicitly linked their future urbanization to national development strategies and economic prospects. However, the current era of rapid urbanization has been marred by the limited capacity and sometimes resources to match the needs of any rising urban population. In many parts of the region, urbanization is characterized by lack of adequate infrastructure, poor housing, inadequate present and future maintenance management plans, lack of effective legislation, and weak financing mechanisms that hinder shared urban prosperity. Many cities and towns have been bypassed by the benefits of economic growth and wealth creation, leading to inequality amongst urban areas in the region.

Chiky, Cheuk Yuet Wong
Immediate Past President and
Education Committee Chairperson,
ISA Hong Kong Chapter

Reference:

- Annon. (2011). Asian Green City Index. Economist Intelligence Unit, London
- EPS iDo website: <https://www.eps.com.hk/ido/chi/>
- FAO's Urban Forestry website: <http://www.fao.org/forestry/urbanforestry/en/>
- FAO (2017). *Seoul Action Plan for the Development of Urban Forestry in Asia-Pacific Region*. Released in 2nd Asia-Pacific Urban Forestry Meeting 13-15 Sept 2017.
- JIM, C.Y. (1998). Impact of Intensive Urbanization on Trees in Hong Kong. *Environmental Conservation*. 25(2):146-159
- Kuchelmeister, G. (1998). Urban Forestry: Present Situation and Prospects in the Asia and Pacific region, FAO Asia-Pacific Forestry Sector Outlook Study. Food and Agriculture Organization of the United Nations, Forestry Policy and Planning Division, Rome
- Miller, R.W., Hauer, R.J., Werner, L.P. (2015). *Urban Forestry: Planning and Managing Urban Greenspaces*. Waveland Press, Long Grove, IL. pp.17-22
- Wong, C.Y. 2017. *Change of Forest Role and the Approach of Management in Hong Kong*. Proceeding of 2nd Asia Pacific Urban Forestry Meeting. Food and Agriculture Organization, UN
- World Health Organization (2010). Urban Planning, Environment and Health: From Evidence to Policy Action. Meeting Report, http://www.euro.who.int/__data/assets/pdf_file/0004/114448/E939_87.pdf?ua=1