

Successful Urban Forestry in Volatile Times

Think Trees, Think Big

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Discussed So Far...

- These are volatile times – and urban forestry and arboriculture are affected by continuous change and uncertainty
- Case 1: dealing with pests and diseases
- Case 2: governance and calamities



Next: what can urban foresters (and associated professionals) do to be successful in volatile times?

By Unknown. Stitch and restoration by
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[https://commons.wikimedia.org/w/index.
php?curid=33748204](https://commons.wikimedia.org/w/index.php?curid=33748204)





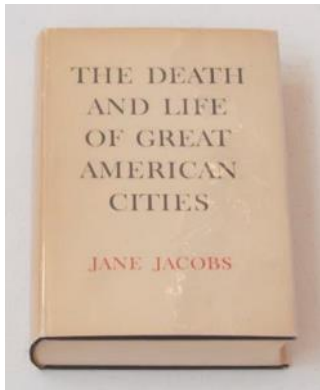
Jan de Meyere -

<http://www.stockholmskallan.se/index.php?sokning=2&action=visaPost&foto=true&upphov=Jan+de+Meyere&start=290&mediald=18132&post=294>, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=10265838>

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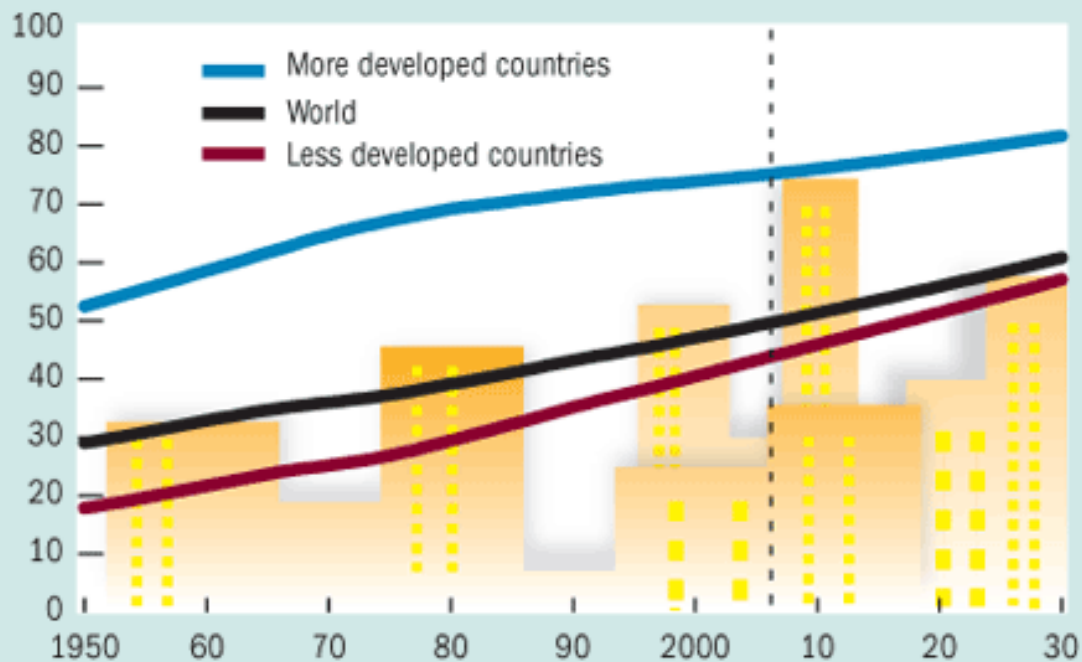


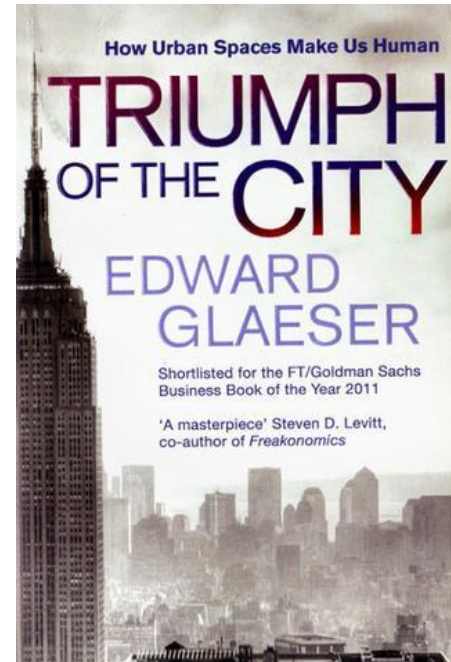
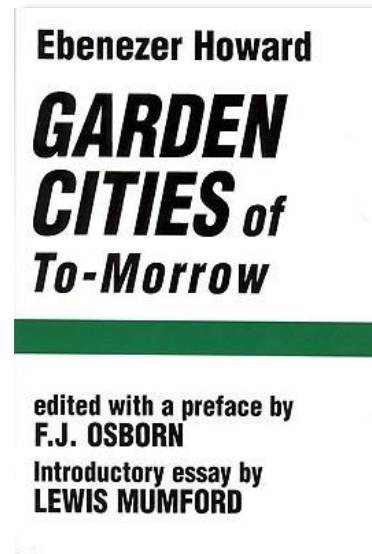
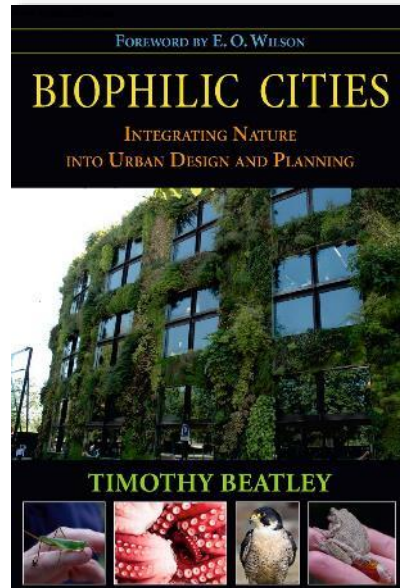
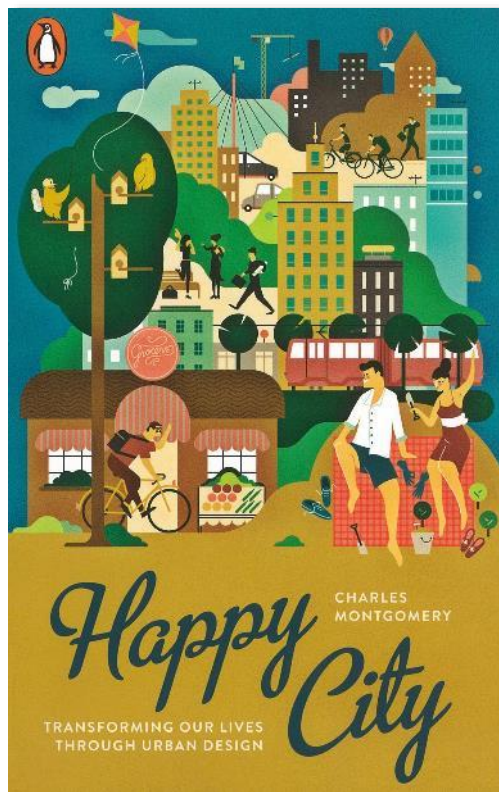
Cities are an immense laboratory of trial and error, failure and success, in city building and city design –
Jane Jacobs (1961)

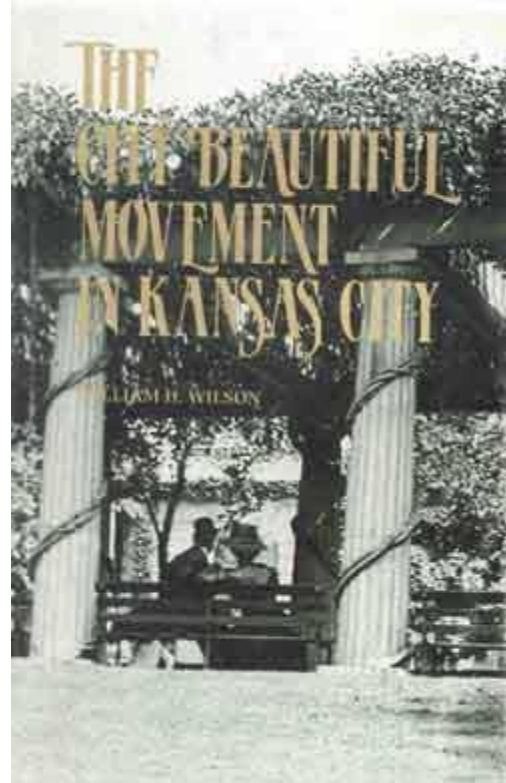
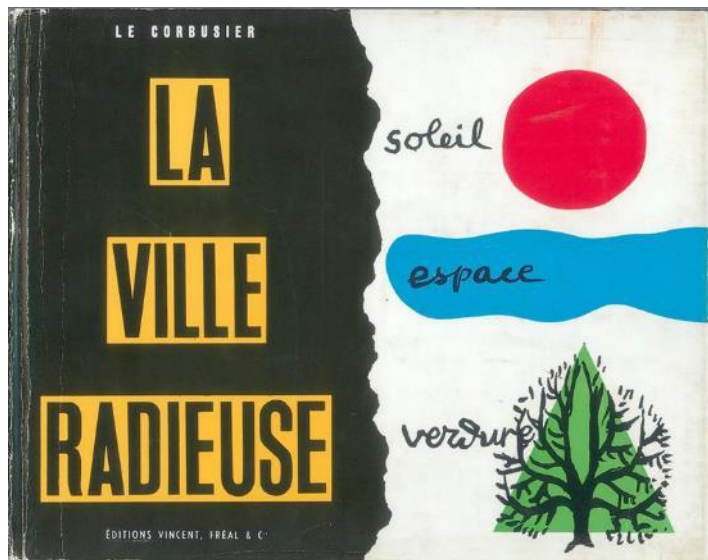


The move from rural to urban areas will continue . . .

(percent of population living in urban areas)







THE ERA OF FOREST CITIES



China is building a smog-eating 'forest city' filled with tree-covered skyscrapers



Leanna Garfield



Jun. 27, 2017, 2:36 PM

91,988



FACEBOOK



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TWITTER



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PRINT

The smog levels in the southern Chinese city of Liuzhou are not yet dire, but if the city fails to deal with its pollution, it will only get worse over time.

Italian design firm
[Stefano Boeri Architetti](#)
believes that building a













AGPT Trail Pole NE



AGPT Trail Pole West



A GATHERING
PLACE FOR
TULSA



<http://agatheringplacefortulsa.com/>





*An initiative of the
European Commission*



*An initiative of the
European Commission*



Donate to the Red Cross emergency fund to help victims and families affected by the Grenfell Tower fire

DONATE

No thanks

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Mayor plans to make London into the world's first National Park City

11 August 2017

The Mayor of London, Sadiq Khan today launched plans to help make the capital the world's first



1500 reasons to move to an electric vehicle

03 August 2017

A major step towards zero carbon transport as 1500 new electric vehicle charging points to be installed across London.



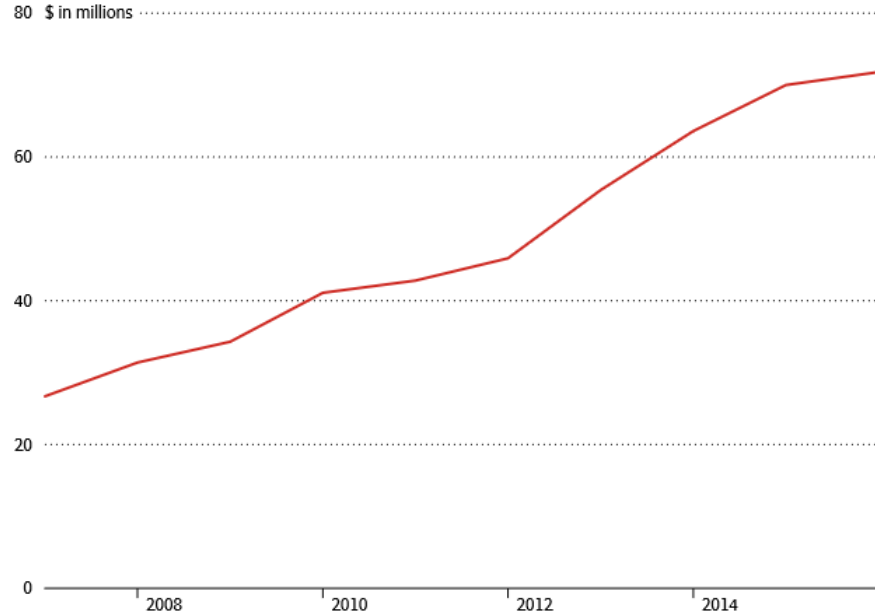
By CPG1100 - Own work, CC BY-SA 4.0,
<https://commons.wikimedia.org/w/index.php?curid=57702057>



The City in the Forest

Over the past decade, the city has diverted more resources to urban forestry, with the department's gross operating budget increasing to \$71.8-million this year from \$26.7-million in 2007, with about two-thirds of the current funding going to maintenance. But millions more are needed to bring the city's tree maintenance in line with its objectives.

Gross operating budget for City of Toronto's Urban Forestry department



HOW TO THINK BIG



Resilience

The capacity to recover
quickly from difficulties;
toughness

Key concepts / themes for 'thinking big'
and being successful in volatile times?

Success Factors – 8 C's



- Connection
- Collaboration
- Community
- Communication
- Competence
- Creativity
- Courage
- Champions



Hurray for GI!

- Bridging between social and ecological systems
- Raising the (political and planning) status of green space and tree issues
- Speaking the “right language”
- Economic and service / value focus
- Linking between town and country

But how about the drawbacks?

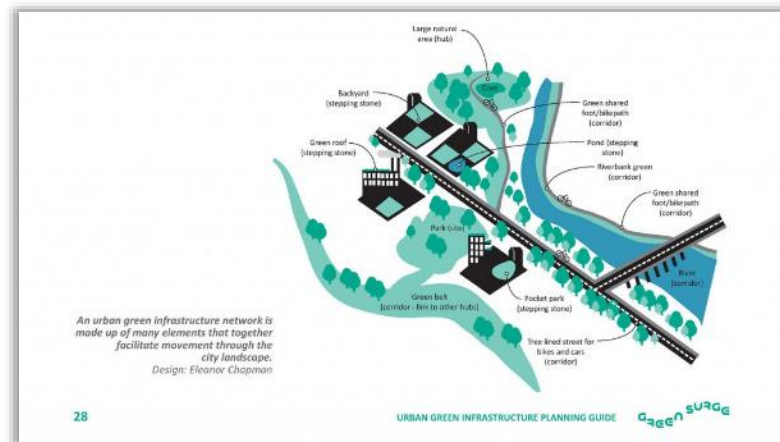
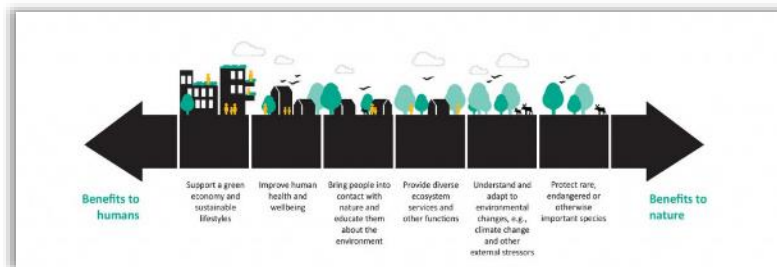




...is based on four core principles

- 1) Green-grey integration – combining green and grey infrastructure**
UGI planning seeks the integration and coordination of urban green spaces with other infrastructure, such as transport systems and utilities.
- 2) Connectivity – creating green space networks**
UGI planning for connectivity involves creating and restoring connections to support and protect processes, functions and benefits that individual green spaces cannot provide alone.
- 3) Multifunctionality – delivering and enhancing multiple functions and services**
UGI planning aims at combining different functions to enhance the capacity of urban green space to deliver multiple benefits – creating synergies, while reducing conflicts and trade-offs.
- 4) Social inclusion – collaborative and participatory planning**
UGI planning aims for collaborative, socially inclusive processes. This means that planning processes are open to all and incorporate the knowledge and needs of diverse parties.

All four principles are explored in Part B.



“
**ENGINEERS
LIKE TO SOLVE
PROBLEMS.**

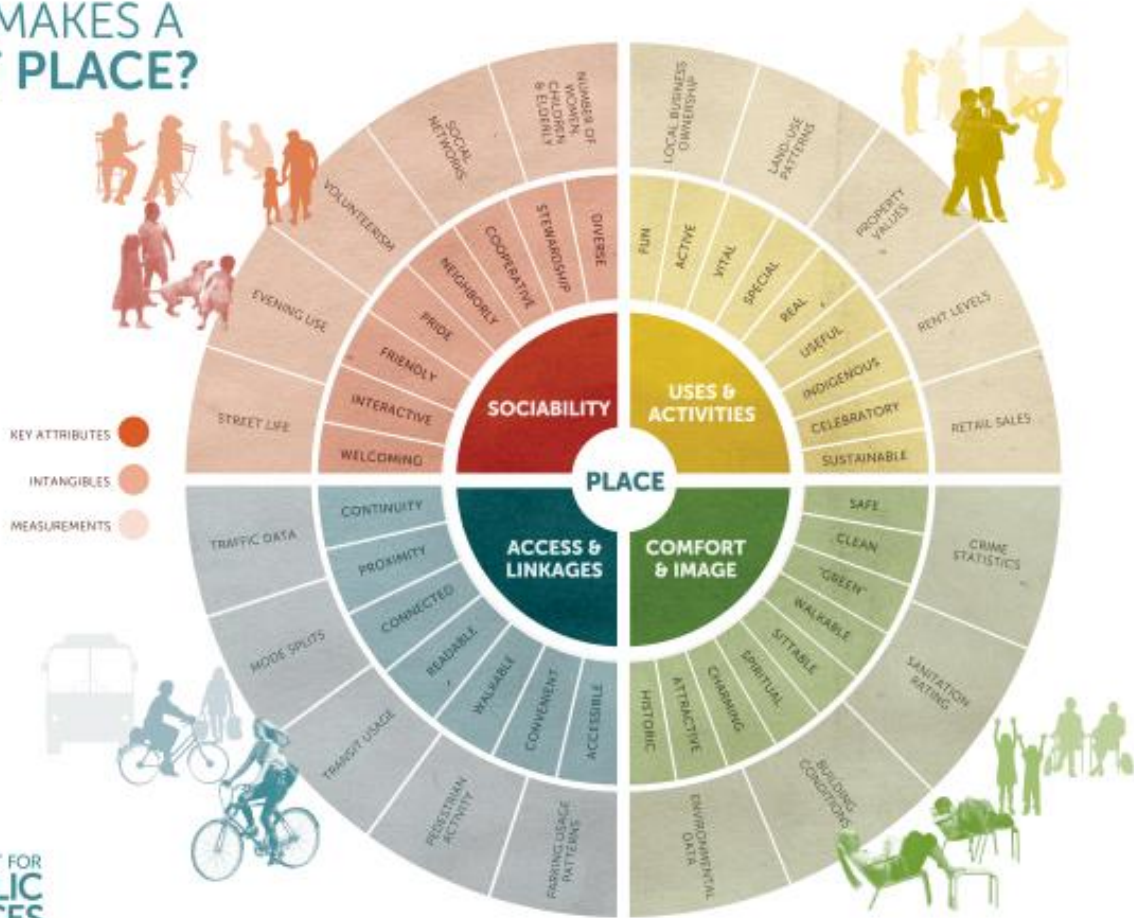


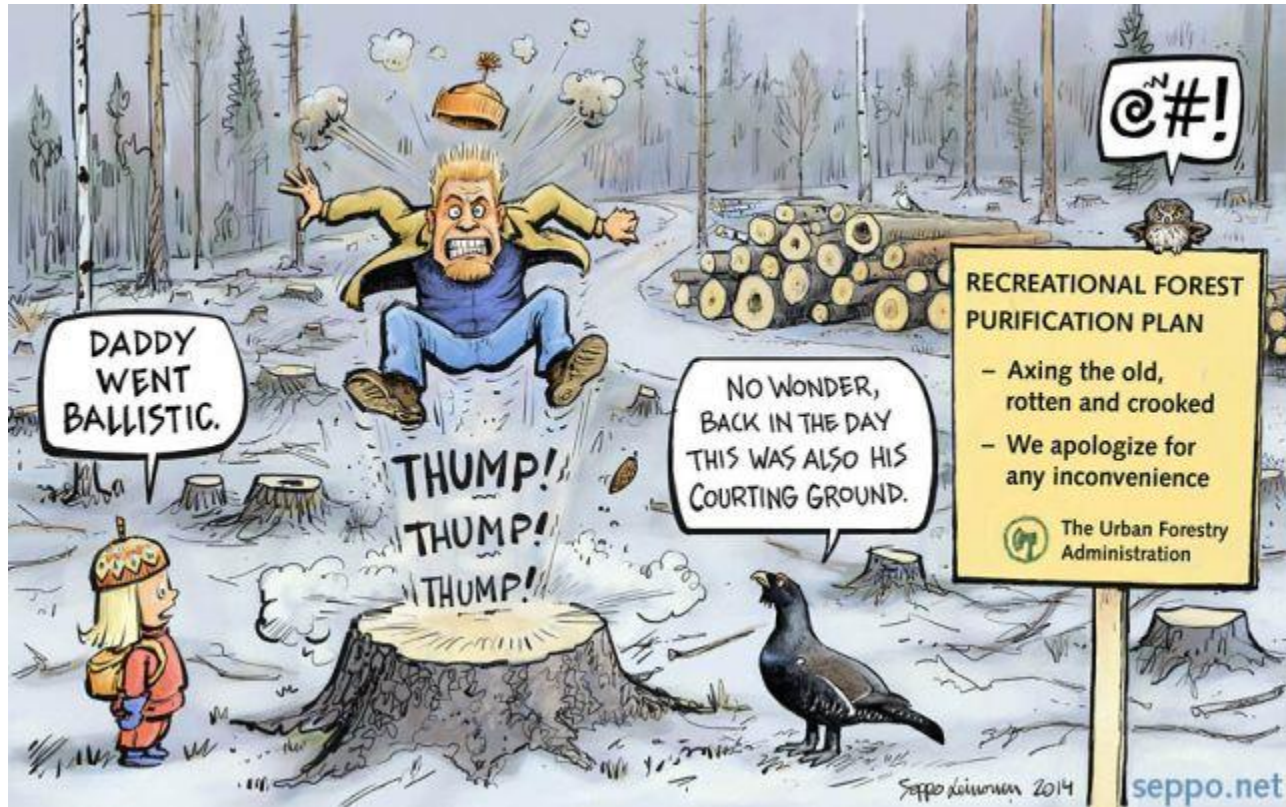
IF THERE ARE NO PROBLEMS HANDILY AVAILABLE,
██████ THEY WILL **CREATE**
THEIR OWN PROBLEMS.

SCOTT ADAMS

”

WHAT MAKES A GREAT PLACE?





SPONSORSHIP OF MUNICIPAL FORESTRY Programs & Events

by Owen Croy, Manager of Parks and Mary Rukavina, Special Events Manager,
City of Surrey, British Columbia • Photos by R. Chapman



Source: City Trees magazine, City of Surrey / Owen Croy



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Urban forest

Melbourne's tree population is vast – we have 70,000 council-owned trees, worth around \$650 million. Trees are a defining part of Melbourne and our parks, gardens, green spaces and tree-lined streets contribute enormously to the livability of the city.

But the trees are now under threat. More than a decade of drought, severe water restrictions and periods of extreme heat, combined with an ageing tree stock, have put our trees under immense stress and many are now in a state of accelerated decline. As a result, we expect to lose 27 per cent of our current tree population in the next decade and 44 per cent in the next 20 years.

Combined with this loss, Melbourne's urban forest is facing two significant future challenges: climate change and urban growth.

The City of Melbourne's Urban Forest Strategy seeks to manage this change and protect against future vulnerability by providing a robust strategic framework for the evolution and longevity of Melbourne's urban forest.

[Urban Forest Strategy](#)

The City of Melbourne is facing the significant challenges of climate change, population growth and urban heating, placing pressure on the built fabric, services and people of the city. A healthy urban forest will play a critical role in maintaining the health and livability of Melbourne.

Related plans and publications

- Renewable Energy Procurement
- Community garden policy
- We Need to Talk About Food

Related news

- Australian first – Melbourne powers ahead with wind farm
- Elizabeth Street to get pop-up park over summer
- Citizen scientists needed to study birds in tree hollows

[Report an issue](#)

- I want to:
 - Become a Citizen Forester
 - Report a tree in need of maintenance
 - Nominate a tree for the Exceptional Tree Register
 - Construct a green roof or wall
 - Find a park
 - See the Macleay and Acland Street park plan
 - View all services
- Recently visited



**CATHY OKE
FOR MELBOURNE.**

**KEEP MELBOURNE
LIVEABLE & AFFORDABLE.**



**THE
GREENS.**







Urban Forestry & Urban Greening

Volume 46, December 2019, 126442



Original article

Women in urban forestry and arboriculture: Experiences, barriers and strategies for leadership

Adrina C. Bardekjian ^a, Lorien Nesbitt ^a , Cecil C. Konijnendijk ^a, Barend T. Lötter ^b

 [Show more](#)

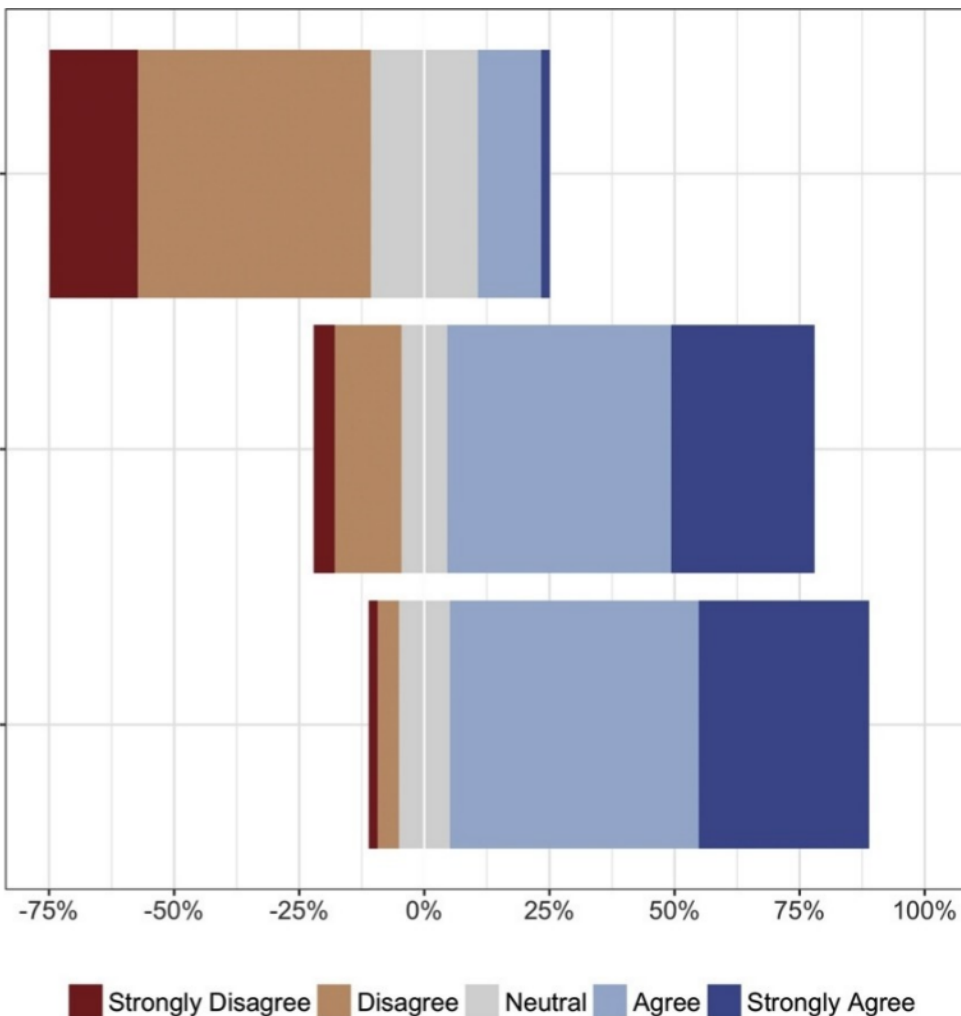
<https://doi.org/10.1016/j.ufug.2019.126442>

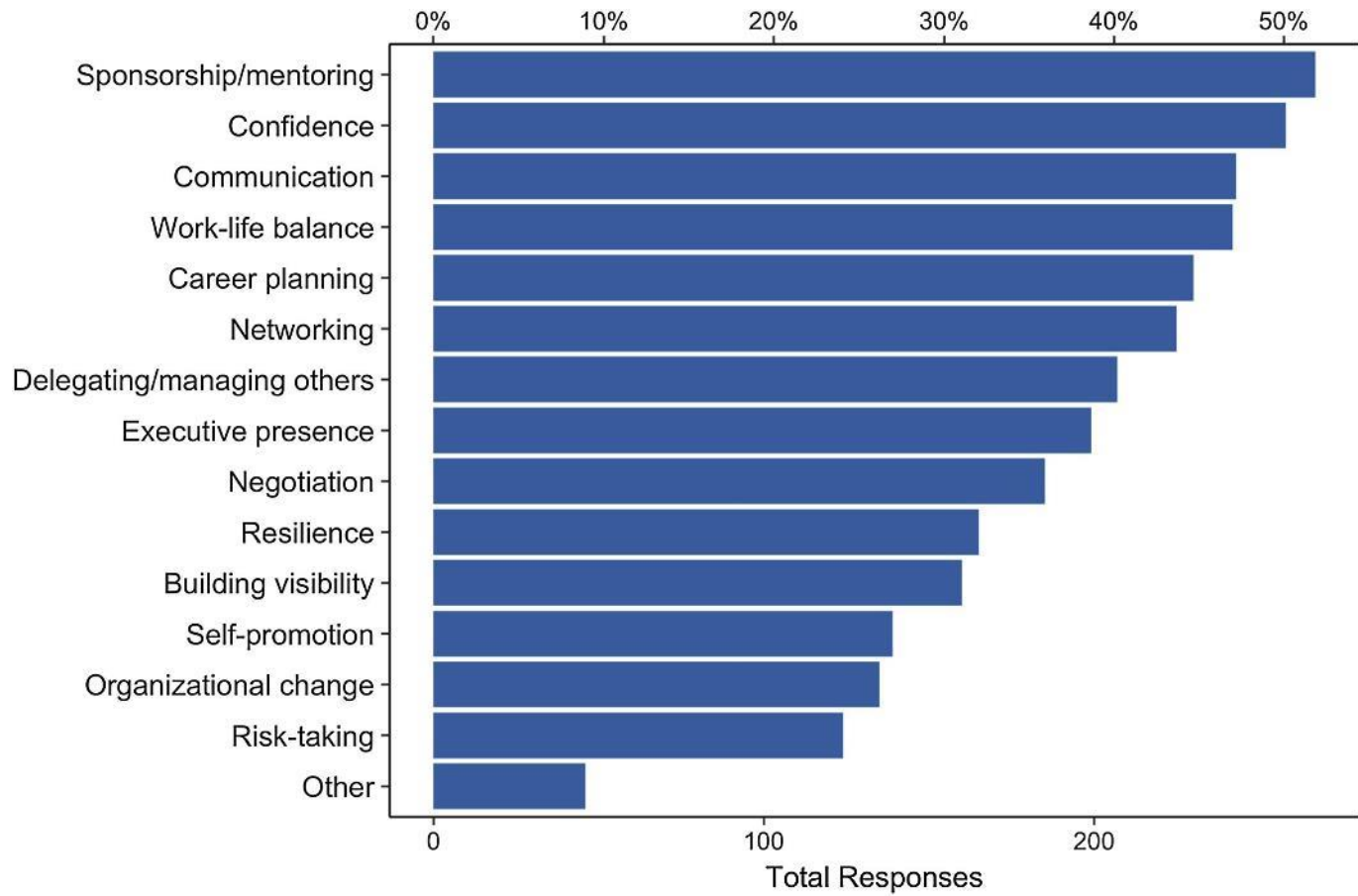
[Get rights and content](#)

Women and men are treated equally in my industry (n=506)

I have experienced or witnessed sexist behaviour or sexual harassment in my industry (n=503)

Women in our industry face a set of challenges and barriers different from men (n=512)





“Never stop educating yourself. Your work and your looks and behaviour will be under close scrutiny. Know that and develop confidence in your work interactions. Strive for high quality work--the women who follow you depend on so much on what you do. Whether that is fair, or not. Find a mentor. Network. Network with women.” (#P509)



Cheongyecheon stream restoration, Seoul





https://en.wikipedia.org/wiki/Lee_Myung-bak



<https://commons.wikimedia.org/wiki/File:Korea-Seoul-Cheonggyecheon-2008-01.jpg>





Urban forestry champions





<http://www.smh.com.au/good-weekend/green-power-nycs-parks-commissioner-on-why-parks-are-essential-20160823-gqytqf.html>;

Photo: Nathaniel Welch

A Few More C's?

- Clearheadedness
- Continuity – keep your focus on the longer-term vision
- Coaching
- Celebratetion
- Cash
- ...

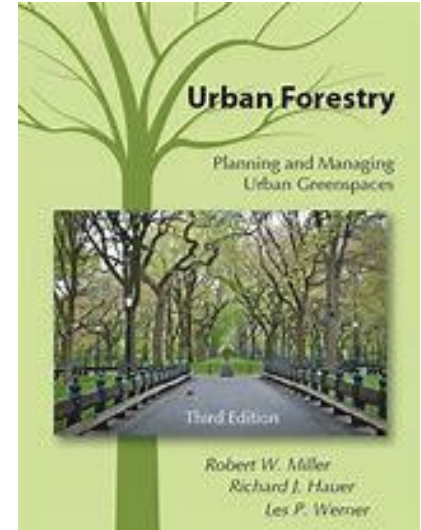
But be weary of...:

- Cynicism
- Cylinders



4 Key Questions in Strategic Urban Forestry

1. What do we have?
2. What do we want?
3. How do we get what we want?
4. How do we know that we have arrived?





i-Tree Tools for Assessing and Managing Community Forests

Get the Tools

Google Custom Search

Username Password Login Register

Home About Applications Utilities Resources Support News

i-Tree Canopy

Percent Cover (±SE)

	34.3	8.36	44.8	7.40	0.00	4.46
	±5.80	±3.66	±6.06	±3.34	±0.00	±2.58

Cover Class	Latitude	Longitude
61 Tree	38.902153937112	-76.965047426253
62 Water	38.923799096149	-77.110429223729
63 Tree	38.961324676131	-77.03963893727
64 Impervious	38.866540734234	-76.965399589474
65 Tree	38.8882062512128	-76.951066339850
66 Grass	38.891553823381	-77.04267817671
67 Bare Ground	38.907230806429	-77.049487697045

Save Your Data

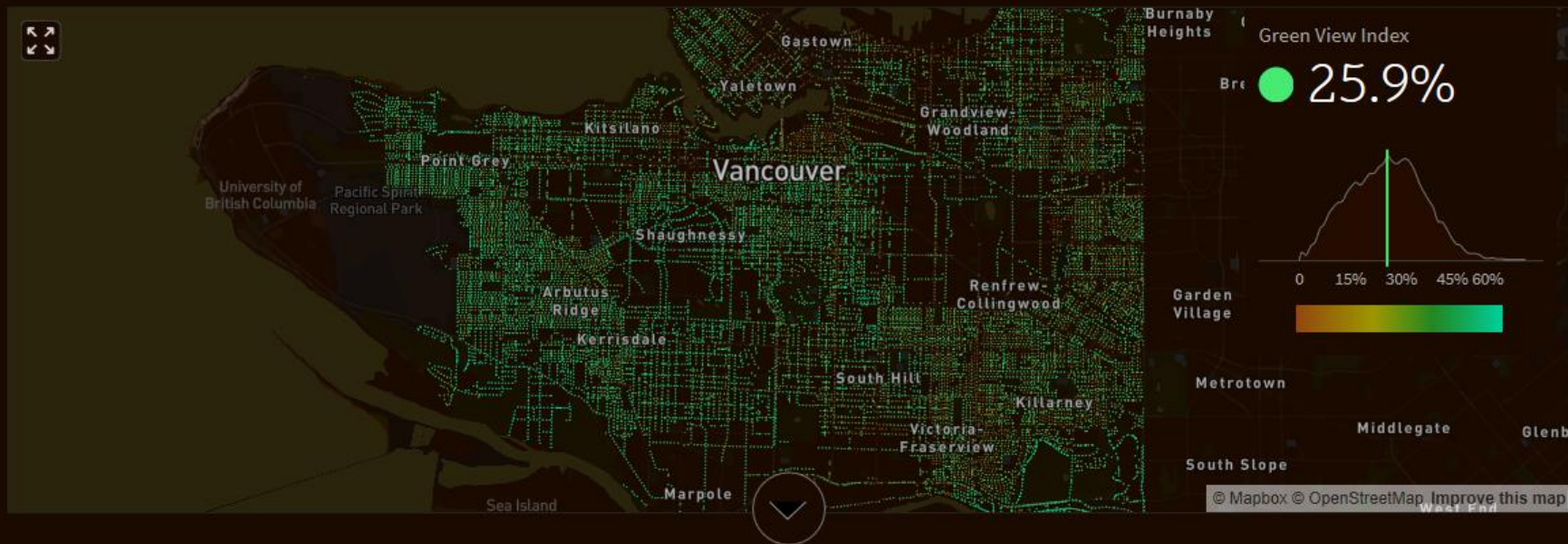
Remember, the more points you survey, the lower your Standard Error, and the more precise your sampling will be. More points surveyed provide for a better estimation of Land Cover across your study area.

Save Data Save Early Save Often Don't lose your project data!



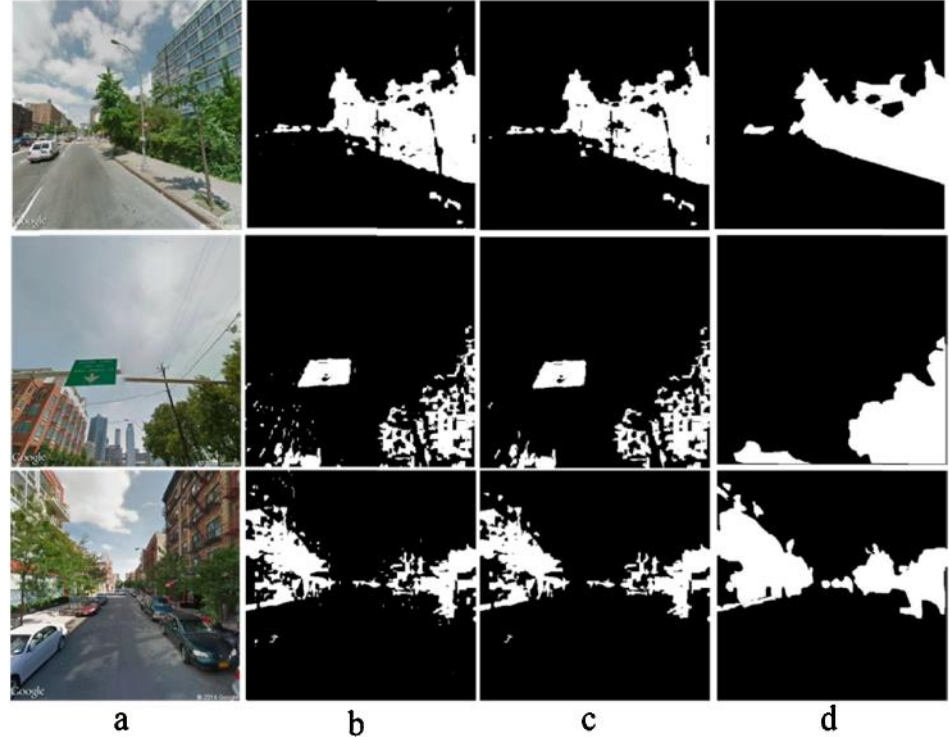
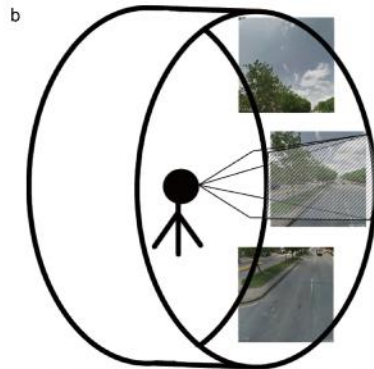
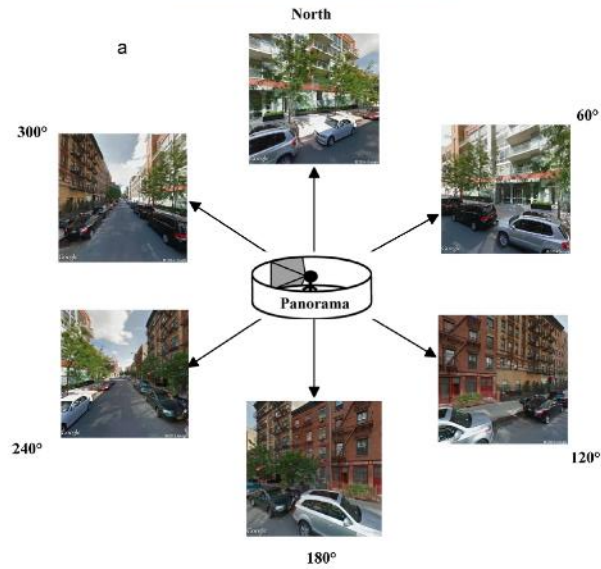
Exploring the Green Canopy in cities around the world

Vancouver



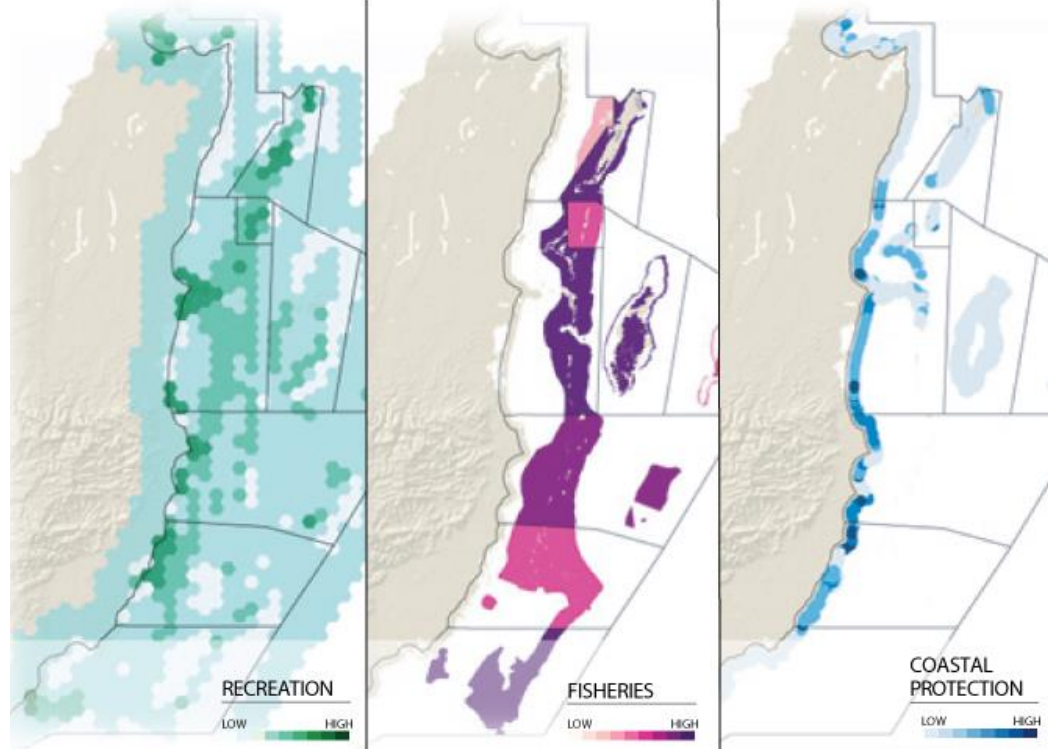
Google Street View (GSV) → Green View Index (GVI)

Treepedia Lab, MIT



InVEST

integrated valuation of
ecosystem services
and tradeoffs



Our flagship tool with models for mapping and valuing ecosystem services provided by land- and seascapes.

MAPPING EXPERIENCES AND SOCIOTOPES

Experience values

Rich in species

Prospect

Wild

Cultural-historic

Refuge

Serene

Festive

Space

Nature

Rich in species

Serene



Space

Refuge

Prospect

Based on Randrup et al. (2008)

Introducing a method for mapping recreational experience

Andrej Christian Lindholst PhD

Postdoctoral Research Fellow, Forest and Landscape, University of Copenhagen, Copenhagen, Denmark

Nicola Dempsey PhD

Lecturer, Department of Landscape, University of Sheffield, Sheffield, UK

Mel Burton MA, CMLI

Research Fellow, Department of Landscape, University of Sheffield, Sheffield, UK

- exploring public open space and its multiple use values in urban and landscape planning practice

Nordic Journal of Architectural Research
Volume 19, No 4, 2006, 13 pages

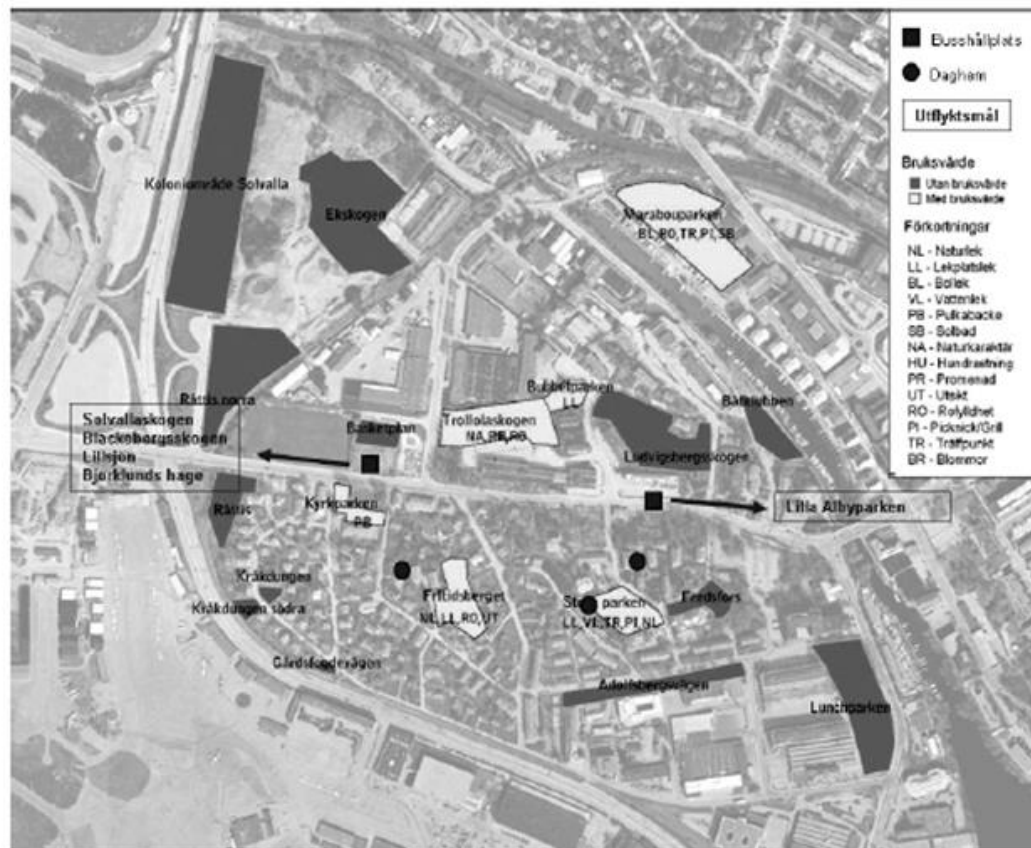


Fig 4. Favourite open spaces for children ages 2-6 in Mariehäll (Stadsbyggnadskontoret 2006).

Visions and Missions

Vision Statement outlines what a company **wants to be / aspires to be** in the **future**.



Vision Statement is a **source of inspiration and motivation**.

Mission Statement concentrates **on the present**; it defines the customer(s), critical processes and it informs you about the **desired level of performance**.

Vision statements - examples

To make people happy



A just world without poverty



To create a better everyday life for the many people



Bring inspiration and innovation to every athlete* in the world



To give people the power to share and make the world more open and connected





**GREENEST
CITY 2020**

Vancouver's Urban Forest Strategy:

Protect, Plan and Manage

<http://vancouver.ca/files/cov/Urban-Forest-Strategy-Draft.pdf>

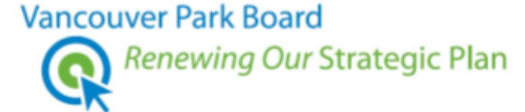
What We Do (Mission)



Our Mission

***“Provide, plan and manage
benefit all***

What We Want to Become (Vision)



Our Vision...

***“To be leaders in parks and recreation by connecting people to
green space, active living and community.”***



AMERICAN FORESTS
- SINCE 1875 -



DONATE

ABOUT US

OUR WORK

GET INVOLVED

BLOG



The reason for that is simple: research no longer supports a universal 40 percent tree canopy recommendation, and neither does American Forests.

By Ian Leahy, *American Forests*, Director of Urban Forest Programs

One of the most frequent questions I receive, as American Forests' Director of Urban Forest Programs, comes from individuals developing tree canopy goals for their jurisdiction or region. They have come across numerous references to American Forests' recommended 40 percent tree canopy goal but cannot find a source citation to include in planning documents.

The reason for that is simple: research no longer supports a universal 40 percent tree canopy recommendation, and neither does American Forests.



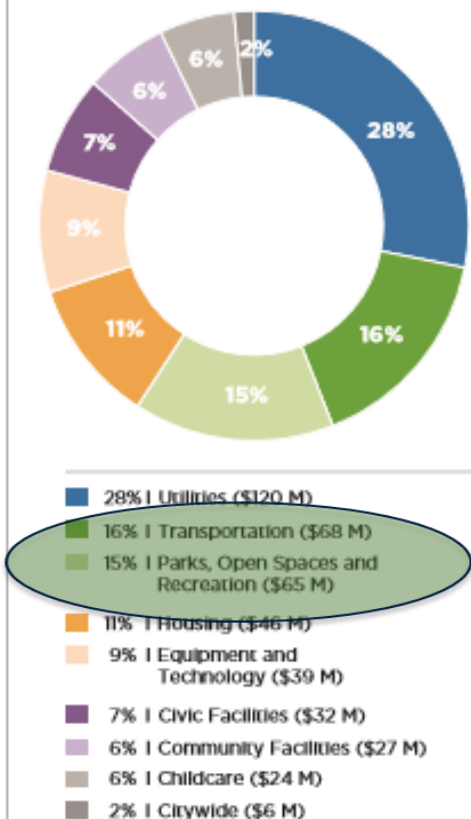
Strengths of Using Canopy Targets

- Simple and powerful narrative / discourse – attractive to e.g. politicians
- Easy to communicate and understand
- Provides common narrative and sense of direction in complex governance situation
- Measurable indicator of success
- Assemble public support and generate action and involvement (e.g. also from business)
- Highlighting the urgency of loss
- Linked to several key ecosystem services – see the iTree approach
- Allows for benchmarking

Pitfalls when Using Canopy Targets

- Cities and local conditions are very different
- Mostly suitable for some ecosystem services (see e.g. i-Tree)
- Public – private; access
- Quite two-dimensional – how about the ‘on the ground’ experience?
- Quantity over quality – resilience, diversity, functionality
- It’s not only about trees
- Issue of uneven distribution of canopy
- Methodology

2018 Capital Budget
Expenditures \$426.4 Million



**\$64.7 MILLION IN PARKS,
OPEN SPACES AND RECREATION**

- New park in Downtown South at Smithe & Richards Streets **\$5.5 million**
- Stanley Park waterfront and seawall upgrade **\$3.4 million**
- Golf course improvements **\$3.5 million**
- Riley Park Pavillion and Farmers Market **\$0.5 million**
- Planning and design for a new outdoor pool **\$0.8 million**
- Planning for renewal of Marpole-Oakridge Community Centre (Total project budget \$2.0 million) **\$0.6 million**
- Renovations and upgrades of 5 park washroom facilities **\$2.4 million**



Adaptive management (...) is a structured, iterative process of robust decision making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring.

Key Ingredients of Adaptive Management

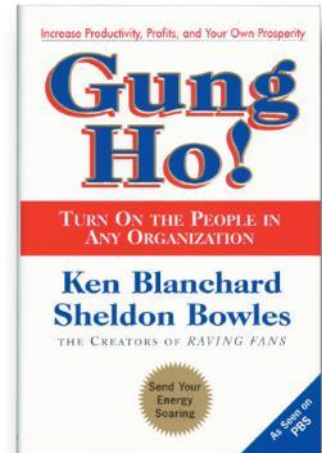
- Purposefulness and leadership
- Dealing with *risk* and *uncertainty*
- Learning (different ways, organisational)
- Increasing knowledge
- Enhancing information flow
- Institutional structures and processes
- Adaptation and flexibility

Photo by Victor Monsour of Monsour's Photography
- <http://www.fhwa.dot.gov/byways/photos/53219>



People First

- **Worthwhile work**
 - Knowing we make the world a better place
 - Working towards a shared goal
 - Values guide all plans, decisions and actions
- **In control of achieving the goal**
 - A playing field with clearly marked territory
 - Thoughts, feelings, needs and dreams are respected
 - Able but challenged
- **Cheering each other on**
 - Congratulations must be true
 - Cheers the progress
 - Importance of enthusiasm



Guiding Principles for Monitoring

Urban Tree Monitoring Protocols:

- Keep it simple
- Make it flexible and easily applied by a diversity of users
- Seek input from practitioners
- Answer key research questions
- Promote management objectives



Perspective

- Thriving (and not just surviving) in volatile times is possible for urban forestry
- Capitalise on opportunities – and even challenges or threats
- Think like a forester
- Bold visions have to be delivered on the ground – tree by tree
- Celebrate successes – and make sure people learn about them

