MANAGING AN URBAN FOREST OF OPINIONS –
NEW GOVERNANCE (MODELS)
FOR GREEN INFRASTRUCTURE

CECIL KONIJNENDIJK, PROFESSOR OF URBAN FORESTRY

- Changing urban forest governance
- Components of 'good governance'
- Analysing two cases: Melbourne and Vancouver
- Making things even more complicated...

http://1.bp.blogspot.com/-0DF4EfNtFy4/UlfRF3nqAiI/AAAAAAAAA58/S4qhEsyjHsw/s1600/cartoon1.jpg

DEFINING 'GOVERNANCE'

- Efforts to direct human action towards **common goals**, and more formally as the **setting, application and enforcement of generally agreed to rules**

- Role of non-public actors as becoming more influential over policy

- *Governance by / with / without government*

- Governance *with* government: boundaries between and within public and private sectors have become blurred

Who decides, who is involved – and who benefits (or looses)?

How is decision-making done?
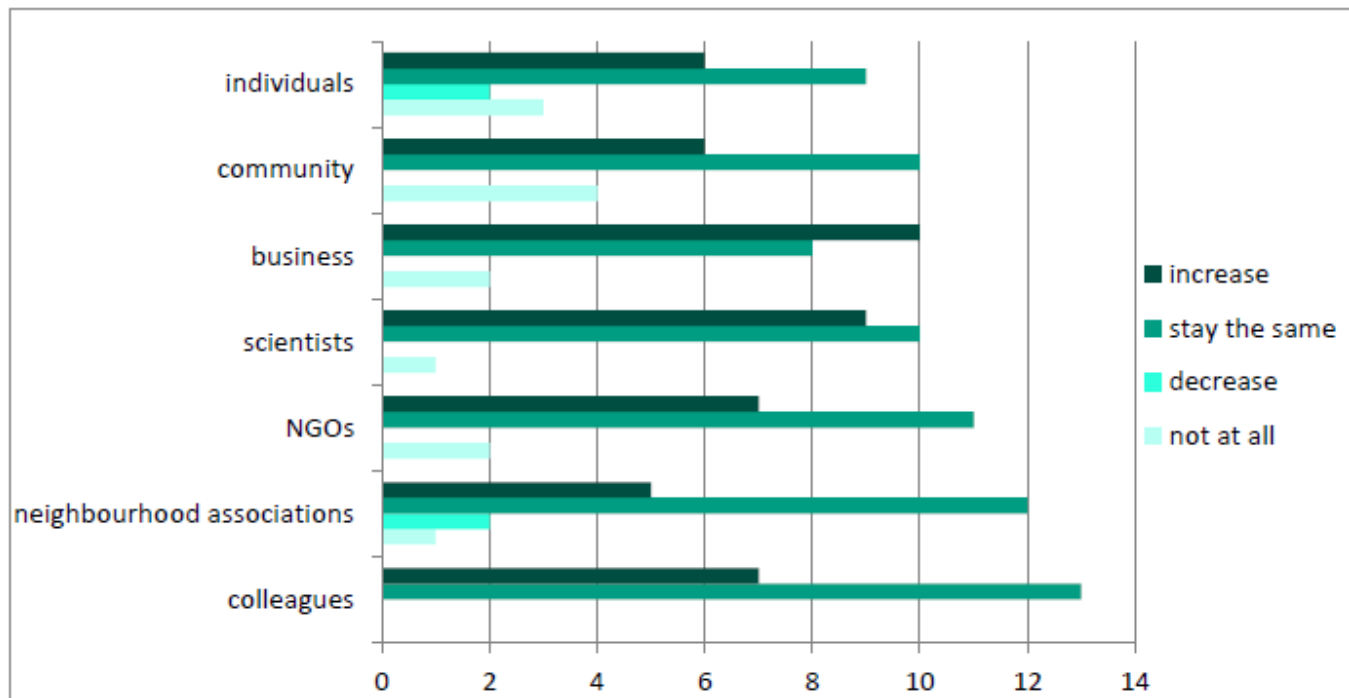
Slide courtesy of Bas Arts
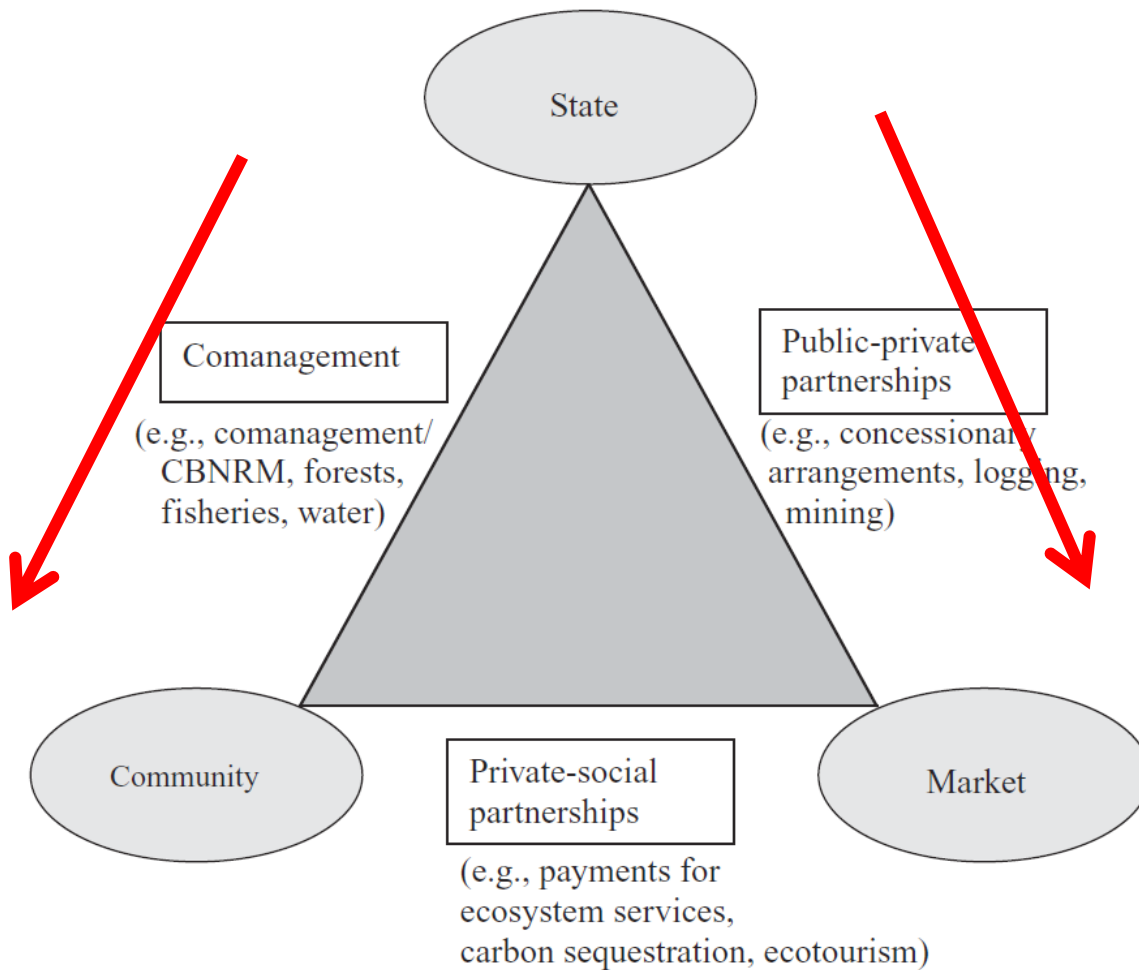
Figure 6.2 Views by city officials (N=20) on future involvement of stakeholders as gauged by of the following question in the questionnaire 'Who should be involved to what intensity in the future?'

Buizer et al. (2015)
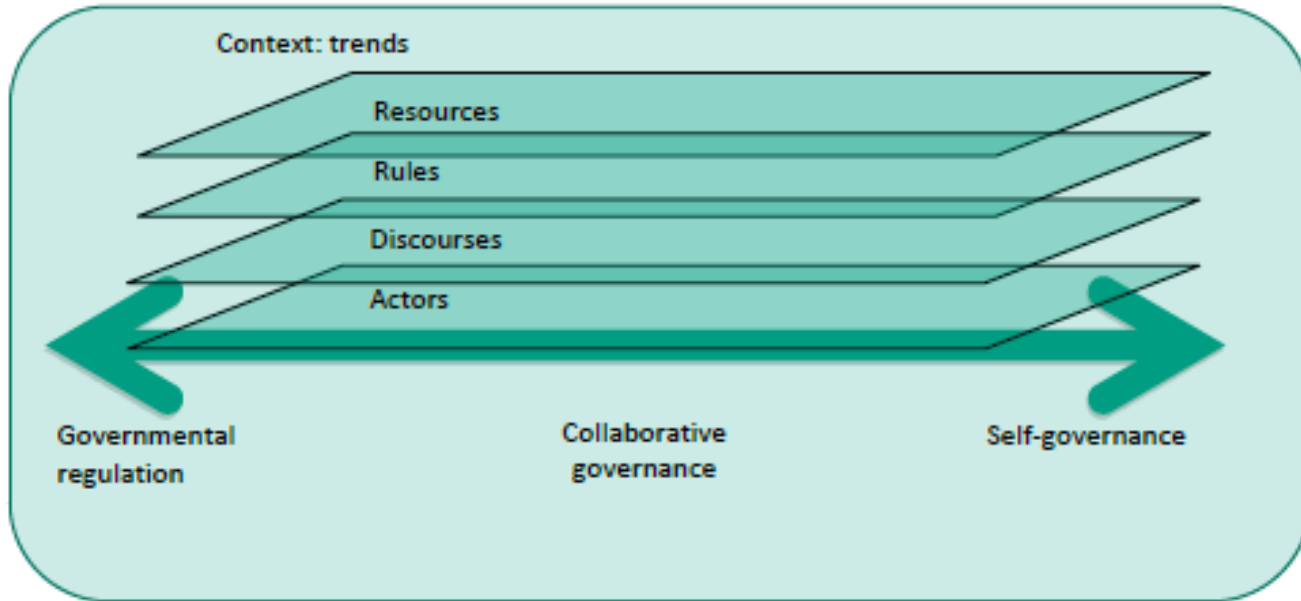
" ENGINEERS LIKE TO SOLVE PROBLEMS.

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

SCOTT ADAMS

IEEE COMMUNICATIONS SOCIETY

Buizer et al. (2015)

COMPONENTS OF 'GOOD GOVERNANCE' IN URBAN FORESTRY

Discourses:

- Recognition of multiple storylines, agreement on important ones

Actors:

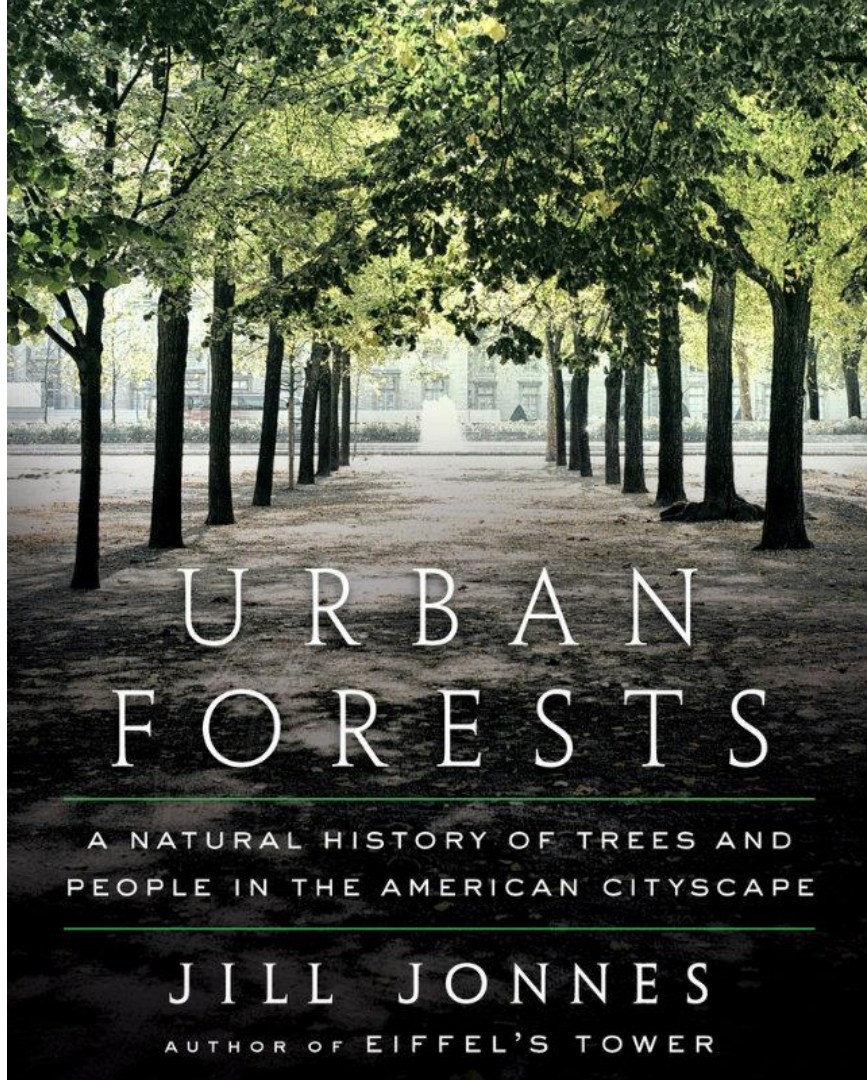- Inclusiveness, alliances, the role of 'champions'

Rules of the game:

- Clear and generally agreed to; innovation

Resources:

- Funding, knowledge (including local, traditional), power

URBAN FORESTS
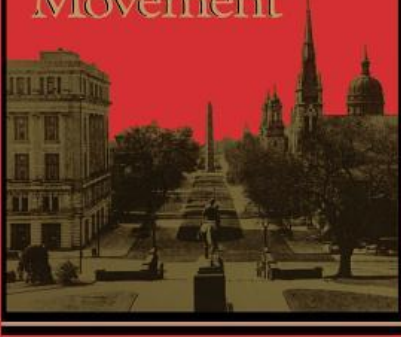
A NATURAL HISTORY OF TREES AND
PEOPLE IN THE AMERICAN CITYSCAPE

JILL JONNES

AUTHOR OF EIFFEL'S TOWER

The City Beautiful Movement

William H. Wilson

City of La Mirada

Spring Beautification

A CITY BEAUTIFUL DREAM THE 1912 VISION FOR COLORADO SPRINGS
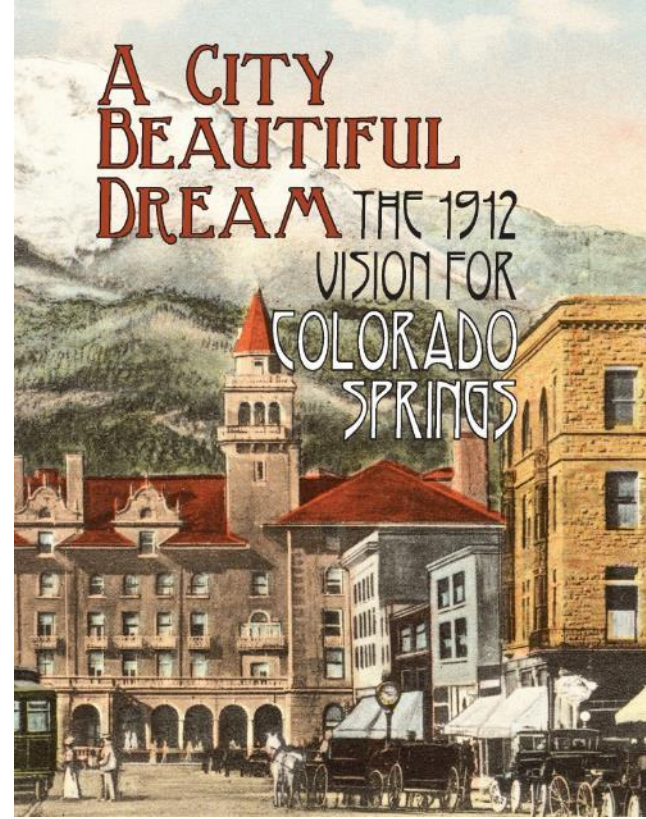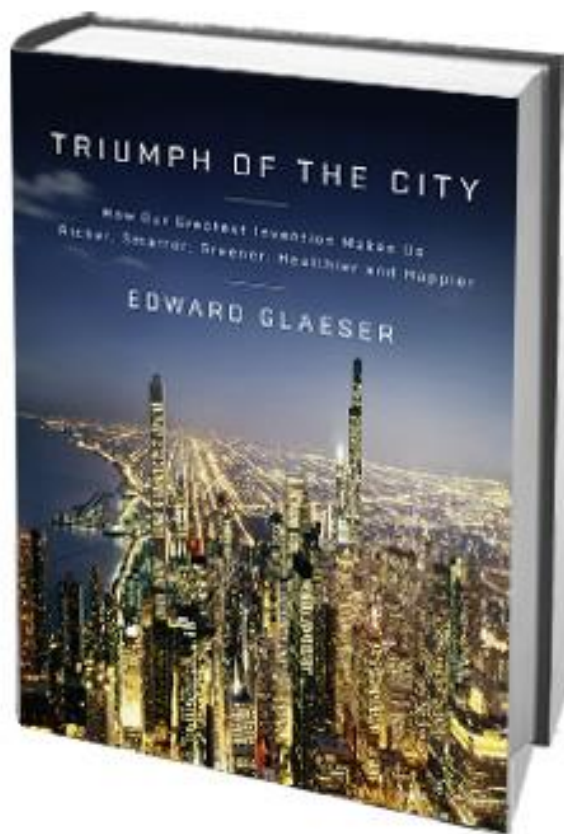
TRIUMPH OF THE CITY

How Our Greatest Invention Makes Us
Richer, Smarter, Greener, Healthier and Happier

EDWARD GLAESER

Cheongyecheon stream restoration, Seoul

FIGHTING THE INVASION
THE ROOT OF THE COUNTRY'S TREE PEST PROBLEM

AMERICAN FORESTS
140 YEARS *of Protecting and Restoring Forests*

James Notman, Boston; engraving of image later published in *Century Magazine* ([source](#)) - The World's Work, 1903: http://archive.org/stream/worldswork06gard#page/3938/mode/2up
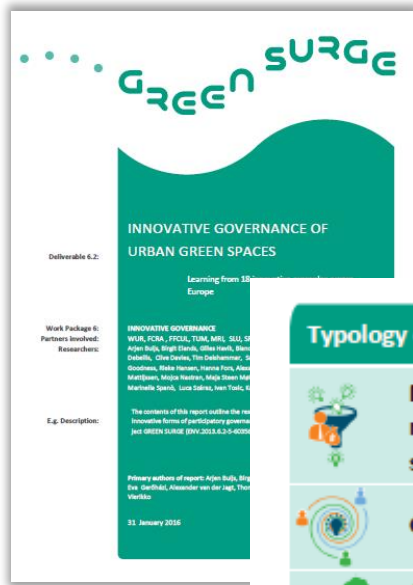
Typology of governance arrangements

	Municipalities mobilising social capital	Strategic planning instruments to invite grassroots and individual citizens to participate in place making or place-keeping
	Green hubs	Experimental, creative coalitions connecting various networks and knowledges to develop community based solutions.
	Grassroots initiatives	Relatively small scale initiatives located on public land, started and maintained quite autonomously by local residents.
	Co-governance	Partnerships between municipality and citizens or grassroots with power being between across actors.
	Organization initiated grassroots	Social enterprises or NGO's mobilising community action, in focus and power located between co-governance and grassroots initiatives.
	Green barters	Maintenance or development obligation for businesses in exchange for a formalised right to use the values of space for business profits.

Buijs et al. (2016) – GREEN SURGE

Table 15.1 Ideal-typical governance arrangements according to Arnouts et al. (2012).

	Hierarchical	*Closed co-governance*	*Open co-governance*	*Self governance*
Actors	Mainly governmental actors	Select mixed group of actors	Large mixed group of actors	Mainly non-governmental actors
Power	With government	Pooled	Diffused	With non-government
Rules	Governmental coercion	Restricted cooperation	Flexible collaboration	Non-governmental forerunning

From: Sheppard et al. (2017) Urban forest governance and community engagement. Chapter 15, Routledge Handbook of Urban Forestry
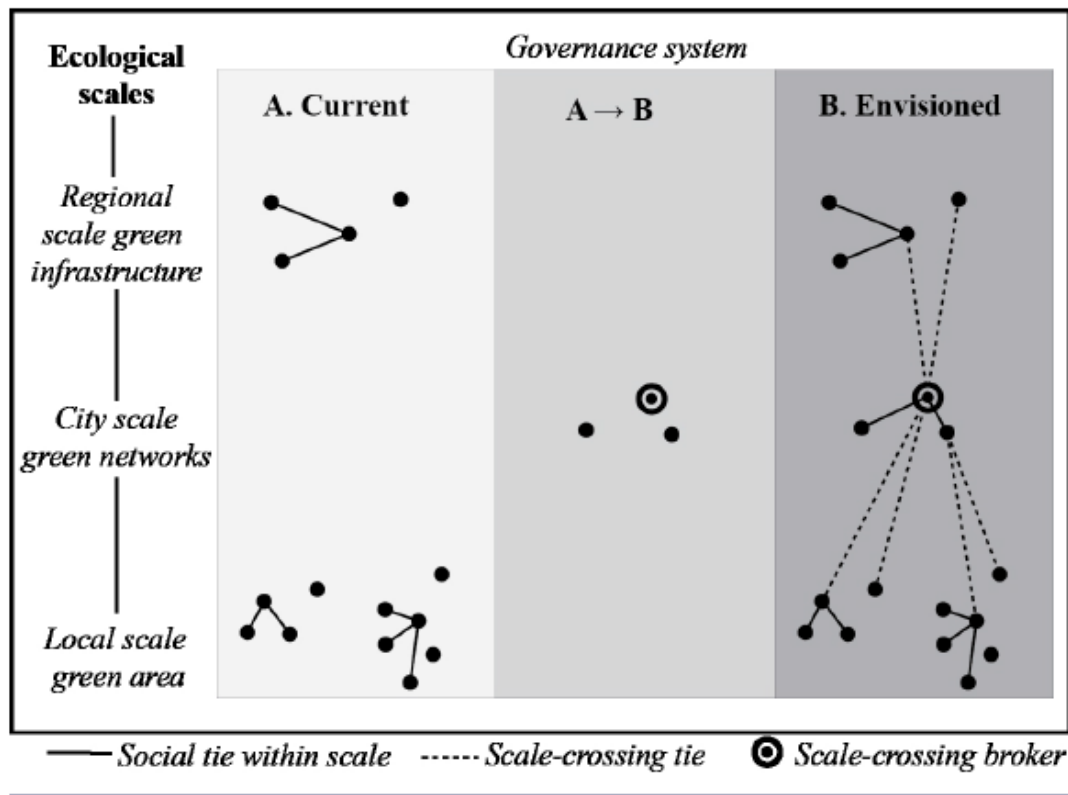
Scale-Crossing Brokers and Network Governance of Urban Ecosystem Services: The Case of Stockholm

Henrik Ernstson [1,2], *Stephan Barthel* [2,3], *Erik Andersson* [1,4], and *Sara T. Borgström* [1]

VALUING LONDON'S URBAN FOREST

Results of the London i-Tree Eco Project

Summary

The London i-Tree Project involved hundreds of volunteers conducting the largest city tree survey of its kind in the world in 2014. Using the information collected, the quantity and value of some of the benefits that London's trees and woodland provide were calculated, referred to as ecosystem services.

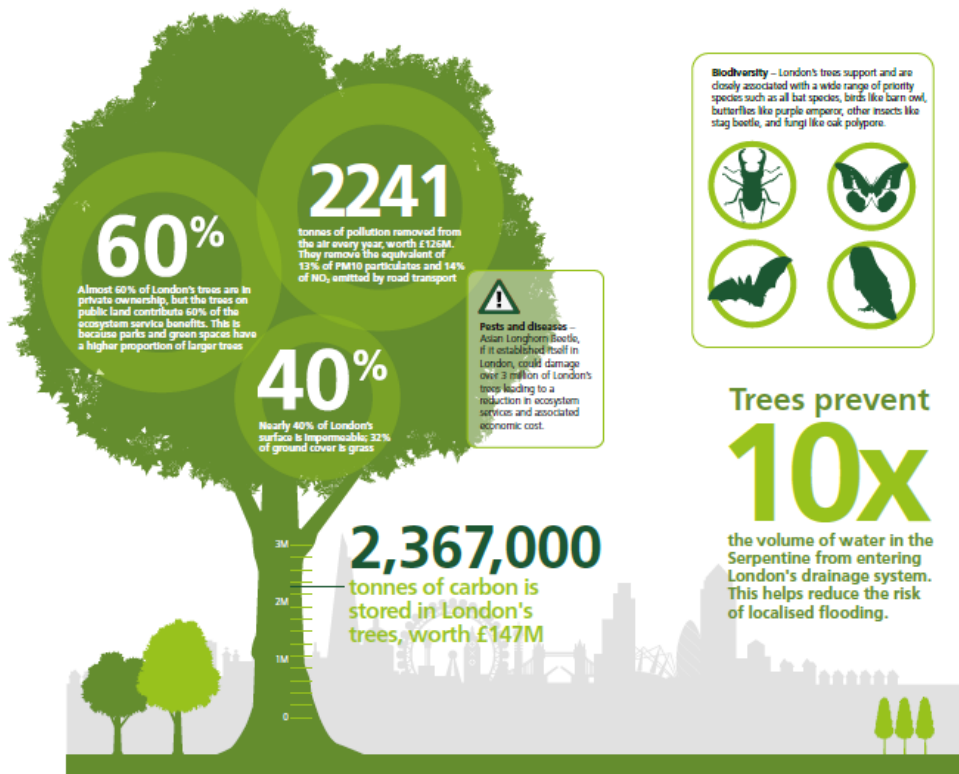The benefits measured include air pollution removal, reduction of storm water run-off and carbon sequestration.
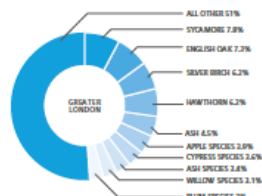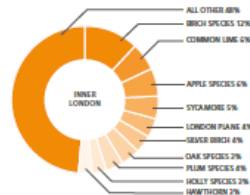
This leaflet provides just some of the headline information and key messages. For further information – including a breakdown of the trees and associated benefits for both inner and outer London - download the full report "Valuing London's Urban Forest" from www.urbantreecover.org/location/london

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London's trees provide at least £133M of benefits every year in terms of air pollution removal, carbon sequestration and reducing the amount of water going into drains.

2241 tonnes of pollution removed from the air every year, worth £126M. They remove the equivalent of 13% of PM10 particulates and 14% of NO₂ emitted by road transport

60% Almost 60% of London's trees are in private ownership, but the trees on public land contribute 60% of the ecosystem service benefits. This is because parks and green spaces have a higher proportion of larger trees

40% Nearly 40% of London's surface is impermeable: 32% of ground cover is grass

⚠ **Pests and diseases** – Asian Longhorn Beetle, if it established itself in London, could damage over 3 million of London's trees leading to a reduction in ecosystem services and associated economic cost.

2,367,000 tonnes of carbon is stored in London's trees, worth £147M

Biodiversity – London's trees support and are closely associated with a wide range of priority species such as all bat species, birds like barn owl, butterflies like purple emperor, other insects like stag beetle, and fungi like oak polypore.

Trees prevent 10x the volume of water in the Serpentine from entering London's drainage system. This helps reduce the risk of localised flooding.

There are 8.4M trees in London

INNER LONDON
- ALL OTHER 48%
- BIRCH SPECIES 12%
- COMMON LIME 6%
- APPLE SPECIES 6%
- SYCAMORE 5%
- LONDON PLANE 4%
- SILVER BIRCH 4%
- OAK SPECIES 3%
- PLUM SPECIES 3%
- HOLLY SPECIES 3%
- HAWTHORN 3%

OUTER LONDON
- ALL OTHER 62%
- SYCAMORE 8%
- ENGLISH OAK 9%
- HAWTHORN 7%
- SILVER BIRCH 7%
- ASH 5%
- CYPRESS SPECIES 4%
- WILLOW SPECIES 4%
- WILD CHERRY 3%
- OTHER ASH SPECIES 4%
- APPLE SPECIES 4%

GREATER LONDON
- ALL OTHER 51%
- SYCAMORE 7.8%
- ENGLISH OAK 7.3%
- SILVER BIRCH 6.2%
- HAWTHORN 6.2%
- ASH 4.5%
- APPLE SPECIES 3.6%
- CYPRESS SPECIES 3.6%
- ASH SPECIES 3.4%
- WILLOW SPECIES 3.1%
- PLUM SPECIES 3%

http://blog.ted.com/forest-for-the-trees-suzanne-simard-at-tedsummit/

http://3.bp.blogspot.com/-
B74p9_A6MOg/T6SAgwPDTBI/AAAAAAAABSo/jRo_ZQbkCUI/s640/musqueam+
protest+2.jpg

http://www.mediacoop.ca/sites/mediacoop.ca/files2/mc/musquem2.jpg

the city before the city

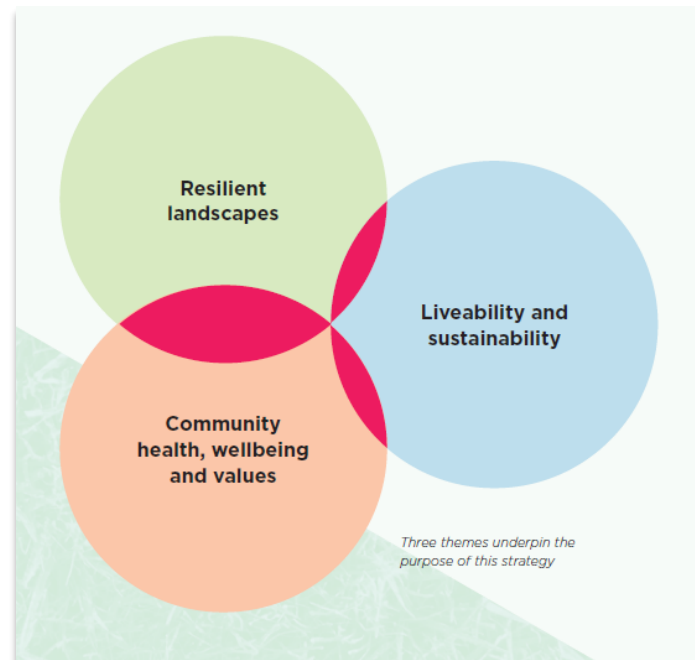# Urban Forest Strategy for Melbourne, Australia

VISION

The City of Melbourne's urban forest will be resilient, healthy and diverse and will contribute to the health and wellbeing of our community and to the creation of a liveable city.

Key challenges

The City of Melbourne is currently facing three significant challenges: **climate change, population growth and urban heating**. These will place significant 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 liveability of Melbourne.

Resilient landscapes

Liveability and sustainability

Community health, wellbeing and values

Three themes underpin the purpose of this strategy

MELBOURNE'S URBAN FOREST

60,000
COUNCIL TREES

$650m
AMENITY VALUE

22%
CANOPY COVER

LOW DIVERSITY
Just three species – plane, elm and red river gum make up more than 35% of Melbourne's trees

+

AGEING
Some of our grandest trees are nearing the end of their lives

=

HIGH VULNERABILITY

Fitzroy Gardens now

CITY OF MELBOURNE EXPECTS TO LOSE

- **27%** of trees in 10 years
- **44%** of trees in 20 years

If no action is taken

CHALLENGES

Pests & Disease
Myrtle rust could affect almost 45% of Melbourne's trees

Climate change
Victoria's temperatures are predicted to increase into the future

Victoria has recorded five of its ten hottest years since 1999**

**Ranked according to average daily temperature

1	2007
2	1988
3	1914
4	1961
5	1981
6	2000
7	2005
8	1999
9	2001
10	1990

Increasing Population & Density

THE FUTURE

OUR VISION
The City of Melbourne's urban forest will be resilient, healthy and diverse and will contribute to the health and wellbeing of our community and to the creation of a liveable city.

URBAN FOREST STRATEGY TARGETS
1. Increase canopy cover – 40 per cent by 2040.
2. Increase diversity – no more than 5% of one tree species, 10% one genus, 20% one family.
3. Improve vegetation health – 90 per cent of tree population healthy by 2040.
4. Improve soil moisture.
5. Improve biodiversity.
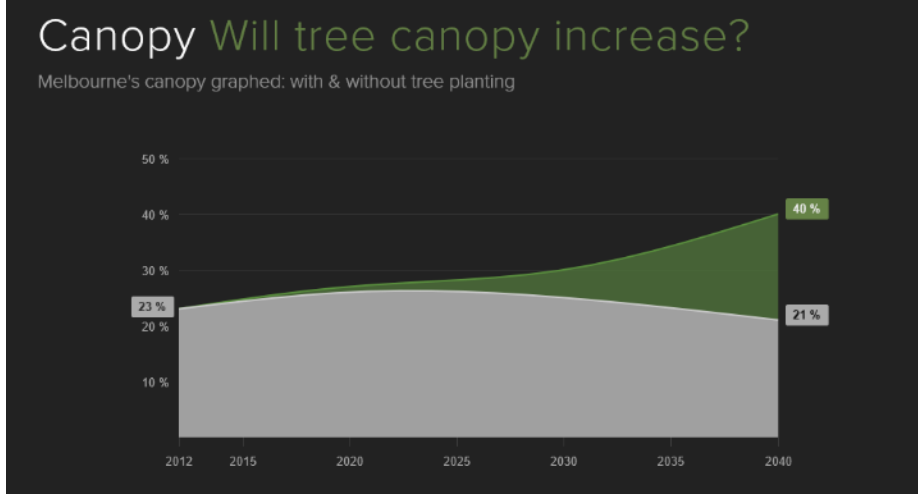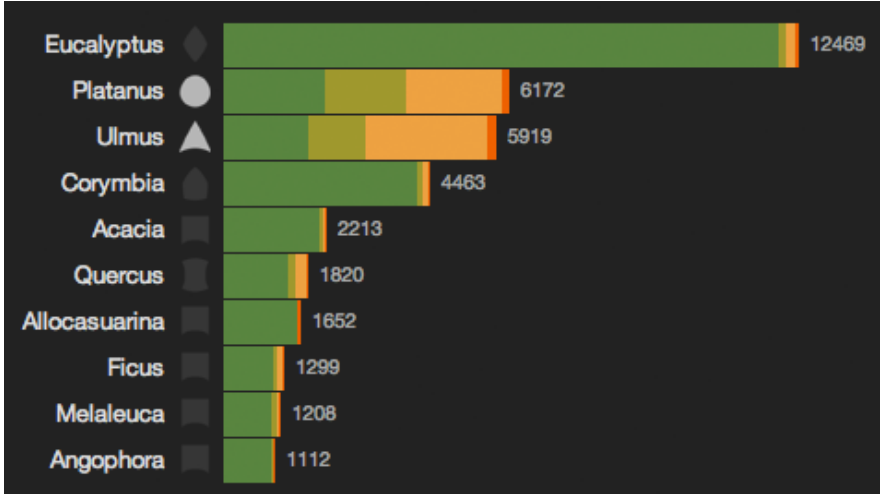6. Inform and consult with the community.

HAVE YOUR SAY: melbourne.vic.gov.au/urbanforest

CITY OF MELBOURNE

URBAN FOREST STRATEGY
MAKING A GREAT CITY GREENER
2012–2032

CITY OF MELBOURNE

MELBOURNE CONVERSATIONS
Getting Melbourne talking

Canopy **Will tree canopy increase?**

Melbourne's canopy graphed: with & without tree planting

http://melbourneurbanforestvisual.com.au/#mapexplore

ANALYSING THE MELBOURNE CASE

- Strong and supporting discourses: resiliency, quality of life, health
- Champions at different levels
- Strong urban forestry team with clear mandate
- Community engagement
- Use and communication of knowledge

City of Vancouver

Urban Forest Strategy

APRIL 15, 2014

make up what is known as Vancouver's "urban forest"

We now know canopy cover by neighbourhood.

West End 18.6%
Downtown 8.3%
Strathcona 5.9%
Grandview Woodland 13.6%
Hastings Sunrise 11.3%

West Point Grey 28.9%
Kitsilano 19.8%
Fairview 14.3%
Mount Pleasant 13.1%

Arbutus Ridge 17%
South Cambie 14.1%
Riley Park 14.3%
Kensington Cedar Cottage 12.1%
Renfrew Collingwood 9.7%

Dunbar Southlands 28.1%
Shaughnessy 27.1%

Kerrisdale 24.6%
Oakridge 15%
Sunset 8.6%
Victoria Fraserview 9.8%
Killarney 23.9%

Marpole 11.4%

However, our canopy cover has been declining over the past two decades. Why is this of concern?
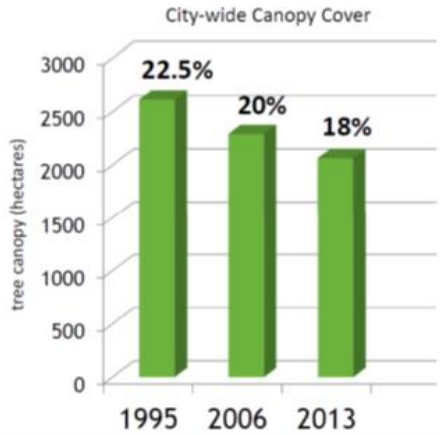
City-wide Canopy Cover

Over the last two decades **23,490** healthy, mature trees were removed on private property (including residential, institutional, commercial and industrial land).

News / Vancouver

Vancouver ranks highest in tree canopy coverage among world's major cities

But densification could threaten the city's urban forest, says one urban forestry expert

f **Tweet**   G+1 3   reddit this!

METRO FILE

A view of Vancouver's Stanley Park.

By: **Wanyee Li** Metro Published on Wed Jan 04 2017

A new analysis of trees in major cities around the world puts Vancouver at the top of list for the largest green canopy.

Researchers at Massachusetts Institute of Technology used Google Street View to calculate tree canopy from a human point of view, as opposed to the more common way, from a bird's-eye view.

According to the interactive platform, called Treepedia, Vancouver scored 26 per cent – far ahead of Geneva's 21 per cent and neighbouring Seattle's 20 per cent.

views

sun

development

litter & allergies

infrastructure conflicts

pests

thestar.com

News · GTA

North York resident wins right to move city-owned tree based on religious belief

Vastu, an ancient Indian system of architecture involving home design, holds that trees shouldn't be planted directly in front of a home's main entrance.

North York resident Sanjeev Joshi says the 17.5-centimetre diameter maple tree in front of his house violates the principles of vastu. (SAMMY HUDES/TORONTO STAR / SAMMY HUDES/TORONTO STAR)

CURRENT SECTION 4.5: property owners are able to remove one tree per year regardless of tree health, size or species.

PROPOSED AMENDMENT: trees can be removed only if they meet the criteria in Section 4.4 of the existing By-law:
- Hazardous
- Dead, diseased or dying
- Within a building envelope
- Close to or interfering with drainage systems, sewer systems or utility wires
- Causing damage to property including roofs and sidewalks.

HELP ME!

Save me from Gregor's axe
He is cutting me down
Join the Rally June 26th 11am Kits Beach
@ foot of Yew & Cornwall

kitsresidents.com

Green Vancouver | Your Government | About Vancouver | Parks, Recreation, and Culture | Home, Property, and Development | People and Programs | Streets and Transportation | Doing Business

Your Government

- ▷ Vancouver City Council
- ▷ Vancouver Board of Parks and Recreation
- ◢ Citizen involvement
  - Follow us on social media
  - ◢ Public consultation
    - How we do community engagement
  - Speak at a City Council meeting
  - Speak at a Park Board meeting
  - ▷ Agencies, boards, and committees
  - Neighbourhood planning
  - Major urban planning projects
  - Find out what's going on in your neighbourhood
- ▷ Get government information
- ▷ City operations
- ▷ Municipal operations
- ▷ Jobs and careers
- ▷ Municipal elections

Public consultation - Share your views

The City of Vancouver and the Vancouver Park Board want to hear from you. We use a variety of ways to listen to what you have to say about what is most important to you. Browse this page to find ways to get involved today.

Participate in online discussions on Talk Vancouver

As part of our Engaged City initiative, we invite you to be a part of Talk Vancouver, our online space for civic participation.

Help us build a better Vancouver by becoming a member of the City's online community of trusted, local advisors.

We will keep you connected to the latest City initiatives and invite you to participate in studies and discussions to hear your views and ideas.

Join Talk Vancouver today

Get notified about our consultation activities

Email: *

Name:

* Indicates required fields

Subscribe

View privacy policy

Comment online

Budget feedback

Your feedback helps inform our strategic goals and is designed to help direct spending towards the services that you want and need.

Share your views in person

Rezoning application open house - 1640-1650 Alberni Street
Mon, Nov 21, 5:00pm–8:00pm

10th Avenue Corridor open house

ANALYSING THE VANCOUVER CASE

- Competing discourses: greening and canopy expansion versus development
- Champions under debate
- Unclear institutional set-up, with e.g., multiple municipal actors
- Rules of the game and legislation
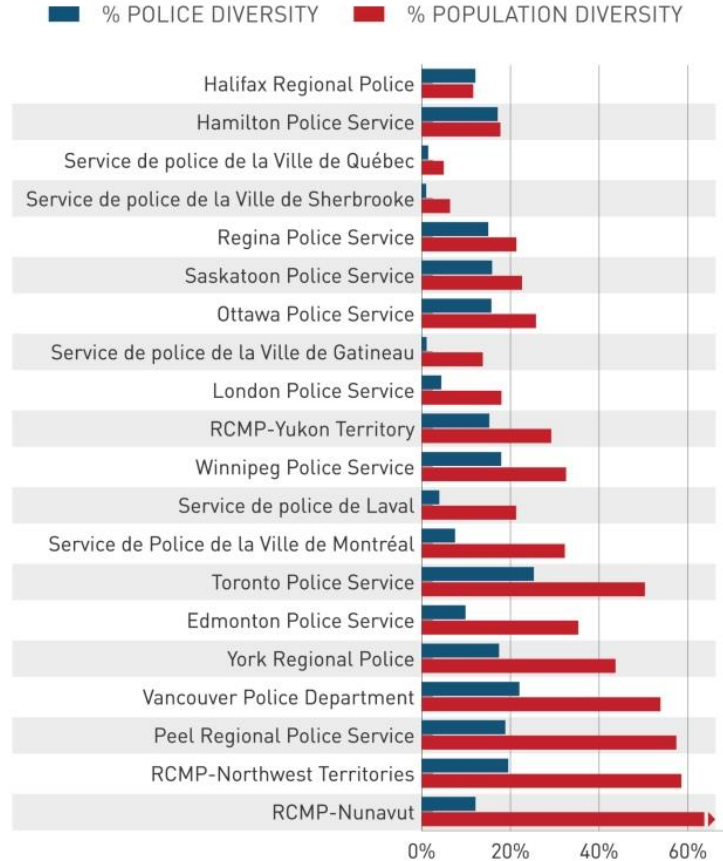- Lack of information: the privately-owned urban forest

PostMagazine
APRIL 10, 2016

Dazzling
artist Tobias
Rehberger
P18

A new
approach to
landmine
clearance
P22

Uprooted
In pictures: China's sweeping urbanisation

AP Photo/ Kerstin Joensson

How well police forces reflect their communities

■ % POLICE DIVERSITY ■ % POPULATION DIVERSITY

Halifax Regional Police	
Hamilton Police Service	
Service de police de la Ville de Québec	
Service de police de la Ville de Sherbrooke	
Regina Police Service	
Saskatoon Police Service	
Ottawa Police Service	
Service de police de la Ville de Gatineau	
London Police Service	
RCMP-Yukon Territory	
Winnipeg Police Service	
Service de police de Laval	
Service de Police de la Ville de Montréal	
Toronto Police Service	
Edmonton Police Service	
York Regional Police	
Vancouver Police Department	
Peel Regional Police Service	
RCMP-Northwest Territories	
RCMP-Nunavut	

0%   20%   40%   60%

http://i.cbc.ca/1.3678145.1468448246!/fileImage/httpImage/image.jpg_gen/derivatives/original_620/police-diversity-canada-chart.jpg

Regional Municipality of Wood Buffalo / Wikimedia Commons
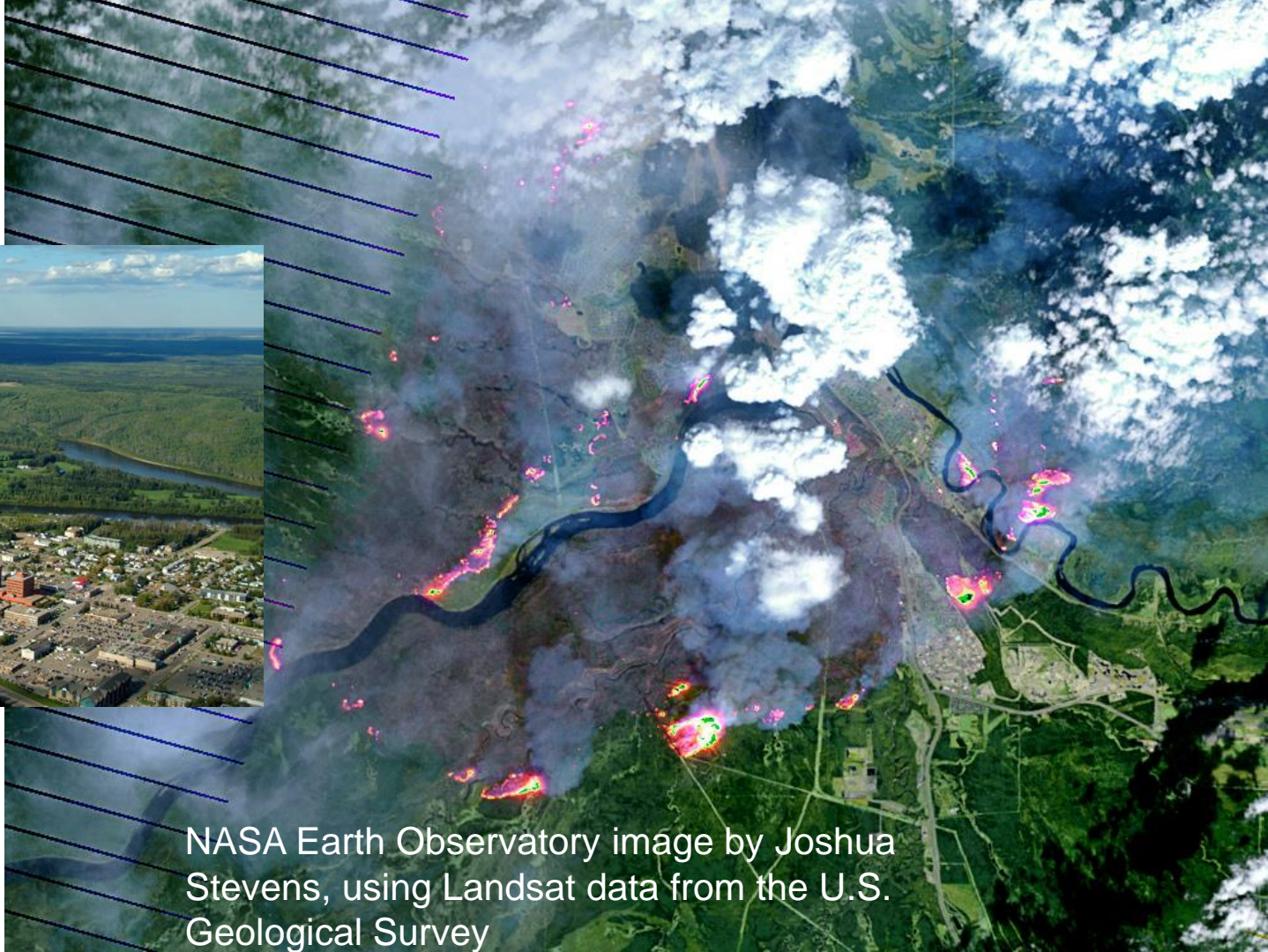
NASA Earth Observatory image by Joshua Stevens, using Landsat data from the U.S. Geological Survey

globalnews.ca/news/3222261/massive-1-3m-tree-planting-effort-in-fort-mcmurray-to-start-this-spring

FORT MCMURRAY WILDFIRE

Home   Info for evacuees   Live Updates   Timeline

ENVIRONMENT   February 2, 2017 7:22 am   Updated: February 2, 2017 7:24 am

Massive $1.3M tree-planting effort in Fort McMurray to start this spring

By Julia Wong
Digital Broadcast Journalist Global News

💬 Comments 1   f Facebook 2k   🐦 Twitter   ✉ Email   🖨 Print   ...