



Source: FAO (2016)

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# Cities of the future:

## Urban forests – a necessary part of it (?) (!)



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Anna Steidle-Schwaiblmair

Das Management der Pflege kommunaler Grünflächen

**TUM**

Institut an der FernUniversität in Hagen

Zentrale Hochschule für innovative Dienstleistungen

zhaw Life Sciences und Facility Management

AS

FACHBIBLIOTHEK GRÜN

Alfred Niesel (Hrsg.) Grünflächen-Pflegemanagement Dynamische Pflege von Grün

KommunalHandbuch Grünflächen-Management

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The organization for open space and recreation

LA

Urban Forests and Trees

WORLD PARKS ACADEMY

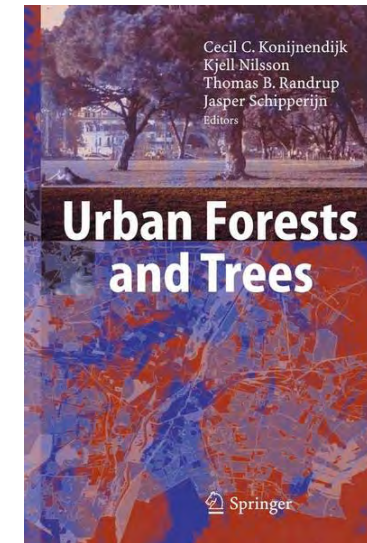
cost  
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY



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## The Concept of Urban Forest:

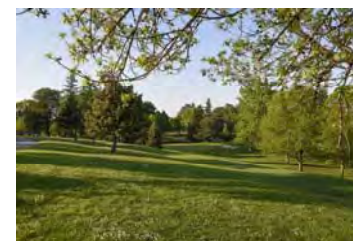


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## Definition 1:

You go by plane above an urban region.  
You could see „green“.  
That`s „Urban Forest“.



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## Definition 2:

TABLE 1.  
Main urban forest types



**Peri-urban forests and woodlands.** Forests and woodlands surrounding towns and cities that can provide goods and services such as wood, fibre, fruit, other non-wood forest products, clean water, recreation and tourism.



**City parks and urban forests (>0.5 ha).** Large urban or district parks with a variety of land cover and at least partly equipped with facilities for leisure and recreation.



**Pocket parks and gardens with trees (<0.5 ha).** Small district parks equipped with facilities for recreation/leisure, and private gardens and green spaces.



**Trees on streets or in public squares.** Linear tree populations, small groups of trees, and individual trees in squares and parking lots and on streets, etc.



**Other green spaces with trees.** For example urban agricultural plots, sports grounds, vacant lands, lawns, river banks, open fields, cemeteries and botanical gardens.

Source: FAO (2016)



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## Benefits of Urban Forest:



TABLE 2.  
Potential benefits of urban forests

Urban issue	Potential benefits of urban forests
Food security	Provide food, clean water and woodfuel
Urban poverty	Create jobs and increase income
Soil and landscape degradation	Improve soil conditions and prevent erosion
Reduced biodiversity	Preserve and increase biodiversity
Air and noise pollution	Remove air pollutants and buffer noise
Greenhouse gas emissions	Sequester carbon and mitigate climate change, improve local climate and build resilience
Extreme weather events	Mitigate local climate and build resilience
Energy shortage	Save energy through shading/cooling, and grow woodfuel
Heat island effect	Cool the built environment through shade and evapotranspiration
Limited accessible green space	Provide more accessible natural and green space
Public health	Improve the physical and mental health of residents
Flooding	Mitigate stormwater runoff and reduce flooding
Limited recreational opportunities	Provide opportunities for recreation and environmental education
Exposure	Provide shelter
Limited water resources	Enable infiltration and the reuse of wastewater
Lack of community and social cohesion	Provide distinctive places for formal and informal outdoor interaction

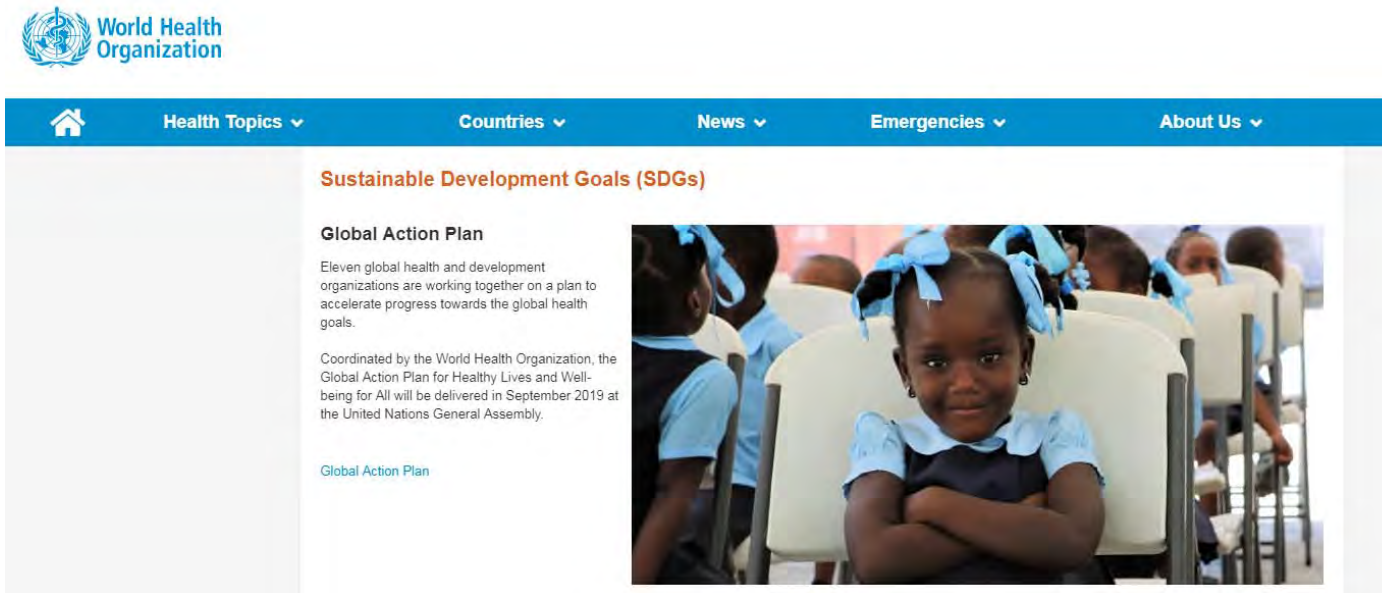




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## Contribution of Urban Forest to Sustainable Development Goals of WHO



The screenshot displays the World Health Organization (WHO) website. At the top left is the WHO logo and name. A blue navigation bar contains a home icon and menu items: Health Topics, Countries, News, Emergencies, and About Us. The main content area features the heading "Sustainable Development Goals (SDGs)" in orange. Below this is the "Global Action Plan" section, which includes a paragraph: "Eleven global health and development organizations are working together on a plan to accelerate progress towards the global health goals." A second paragraph states: "Coordinated by the World Health Organization, the Global Action Plan for Healthy Lives and Well-being for All will be delivered in September 2019 at the United Nations General Assembly." A link for "Global Action Plan" is provided. To the right of the text is a photograph of a young girl with blue bows in her hair, sitting in a white plastic chair in a classroom setting.

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TABLE 3.  
Contribution of urban forests to Sustainable Development Goals

Sustainable Development Goal	Target	The role of urban forests
 <p><b>1</b> NO POVERTY</p>	1.5	Urban forests create employment, provide a resource for entrepreneurs, reduce the cost of urban infrastructure, provide ecosystem services for all citizens, improve the living environment and increase property values, ultimately boosting local green economies
 <p><b>2</b> ZERO HUNGER</p>	2.1 2.2 2.3 2.4	Urban forests are direct sources of food (e.g. fruits, seeds, leaves, mushrooms, berries, bark extracts, saps and roots, herbs, wild meat and edible insects). Indirectly, they support healthy eating by providing affordable woodfuel, high-quality water and improved soil for sustainable agricultural production
 <p><b>3</b> GOOD HEALTH AND WELL-BEING</p>	3.4 3.9	Forests and other green spaces in and around cities provide ideal settings for many outdoor recreation and relaxation activities, thereby contributing to the prevention and treatment of non-communicable diseases and the maintenance of mental health. Urban forests filter and efficiently remove pollutants and particulates, which also helps reduce the incidence of non-communicable diseases
 <p><b>6</b> CLEAN WATER AND SANITATION</p>	6.3 6.6	Urban forests are efficient regulators of urban hydrological cycles. They filter drinking water by reducing biological and chemical pollutants, reduce the risk of floods and erosion, and reduce water losses by minimizing mesoclimatic extremes through evapotranspiration processes



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7.1

The sustainable management of urban forests can produce renewable energy for use by urban communities. This is a vital function for billions of urban and peri-urban dwellers worldwide, particularly in lower-income countries, where woodfuel is often the most affordable and sometimes only available source of energy



8.4

8.9

Investments in urban forests and other green infrastructure add significantly to green economic growth by providing an attractive environment for tourism and business, improving home values and rental rates, creating job opportunities, providing materials for housing, and generating savings in the costs associated with energy and the maintenance of human health



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Well-designed and managed urban forests make significant contributions to the environmental sustainability, economic viability and liveability of cities. They help mitigate climate change and natural disasters, reduce energy costs, poverty and malnutrition, and provide ecosystem services and public benefits



13.1

13.2

13.3

Trees and forests in and around cities contribute to climate-change mitigation directly by sequestering carbon and reducing greenhouse gas emissions and indirectly by saving energy, reducing the urban heat island effect, and mitigating flooding



15.2

15.3

15.9

Urban forests help create and enhance habitats, constitute a pool of biodiversity, significantly improve soil quality, and contribute to land restoration



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TABLE 4.  
The interacting areas of urban forest governance within the urban governance framework

	Urban forest governance	Urban and peri-urban forestry (UPF) in overall urban governance
Policy	The governing style, measures, actions and processes adopted by a community to manage existing or planned urban forests	The governing style, measures, actions and processes of urban policies with direct or indirect relationships with UPF
Norms	Laws, regulations, by-laws, codes, ordinances, decisions and other formal deliberative documents that, at various levels (local to international), regulate use, define limits, indicate conditions, state opportunities, promote actions and identify incentives for publicly and privately owned urban forests	The legal framework (local to international) addressed to components of a society not directly concerning UPF but adopting or incorporating elements of UPF and green infrastructure as important aspects for the community – such as protected-area laws; building regulations; health ordinances; and road traffic acts
Planning	Assessments and plans of urban forests and other green infrastructure at the city-region level; the planning–design–management continuum of urban forests and other green infrastructure	The role of urban forests and other green infrastructure in the context of urban planning, such as urban strategic planning; master plans; and sectoral and operative planning. Urban forests and other green infrastructure are not the targets of the plan but have a direct or indirect role



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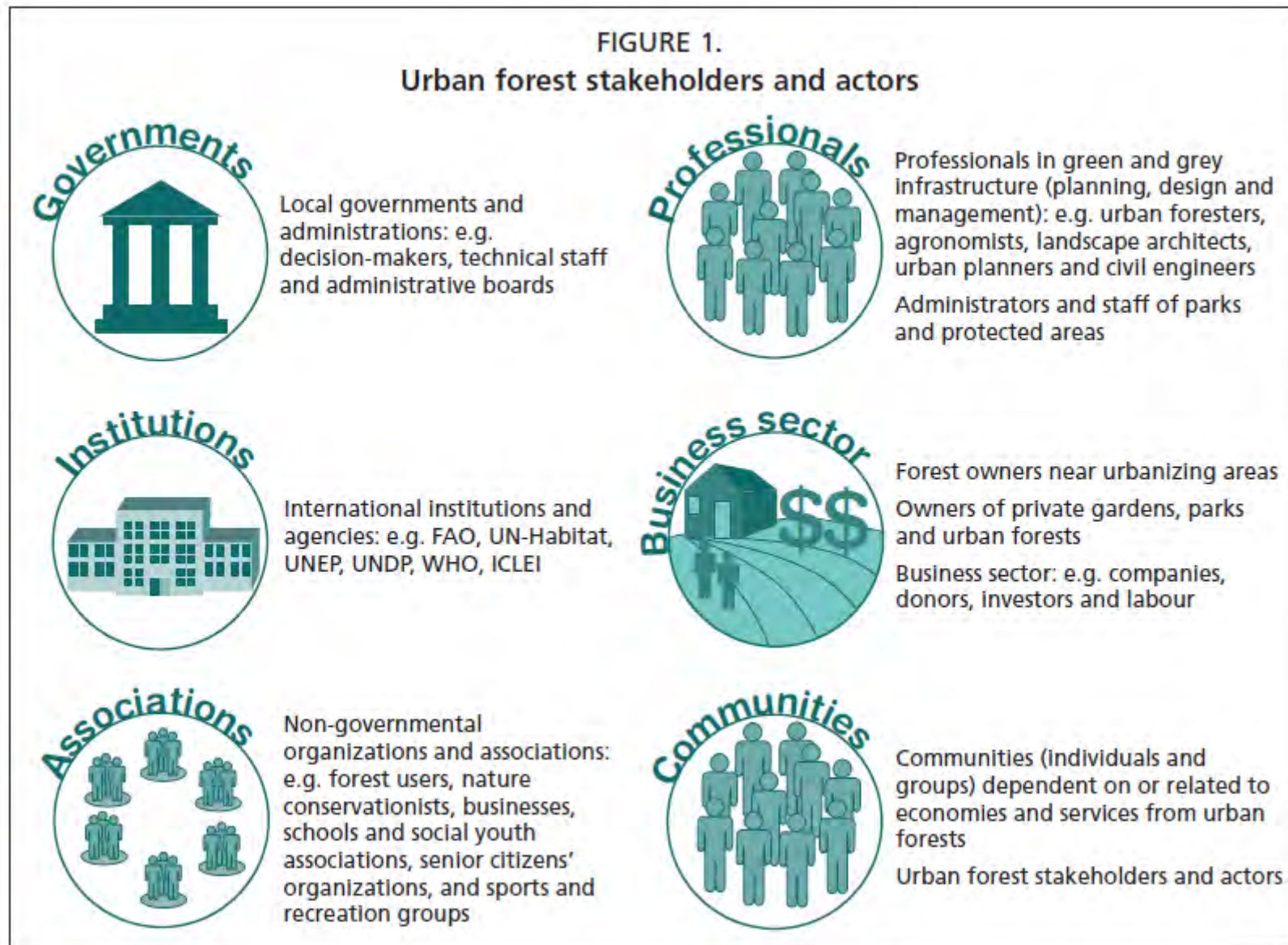


FIGURE 2.

## Urban forest governance arrangement types

### Grassroots initiatives

Relatively small-scale initiatives on public land, started and maintained autonomously by local residents

### Organization-initiated grassroots

Social enterprises or non-governmental organizations mobilizing community action, located in focus and power between co-governance and grassroots initiatives

### Co-governance

Partnerships between municipalities and citizens or grassroots organizations, with power shared among actors

### Green hubs

Experimental creative coalitions connecting networks and knowledge to develop community-based and nature-based solutions

### Public-private partnerships for green services

Maintenance or development obligations for businesses in exchange for a formalized right to use green spaces (or the values thereof) for profit

### Municipalities mobilizing social capital

Strategic planning instruments to invite grassroots organizations and individuals to participate in place-making and place-keeping, where trees are a key issue

Self-governance

Collaborative governance

Governmental regulation



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**Next week:**

**28.11.2018 – 01.12.2018**



## Cities of the future: Urban forests - a necessary part of it (?) (!)

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**NOV**  
**28**

### UERA at WFUF: "Urban Conflict and Convergence"

Öffentlich - Gastgeber: Urban Landscape Management

✓ Zusagen ▾ Teilen ▾ ...

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🕒 Mittwoch, 28. November 2018 von 11:30 bis 17:30  
Nächste Woche - 1-9°C Teilweise bewölkt

📍 Mantova Architettura  
Piazza Carlo D'Arco, 3, 46100 Mantua Karte anzeigen





## Questions do discuss in the Workshop:

- 1) Housing versus biodiversity
- 2) Ecosystem services versus resource deployment
- 3) Inclusion versus inequality
- 4) Regulation versus laissez-faire

## In the Context:

**Natural and agricultural lands becoming megacities**  
**Brownfields becoming eco-neighbourhoods and parks**



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**Save the date:**

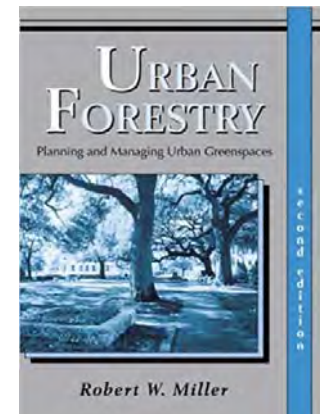
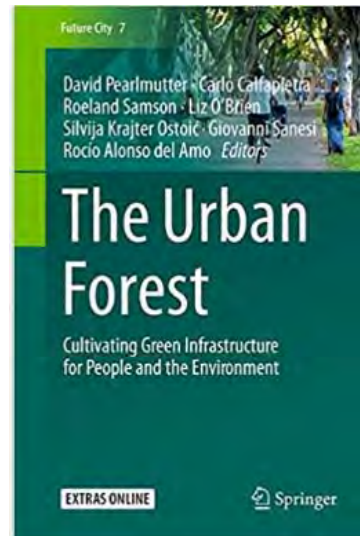
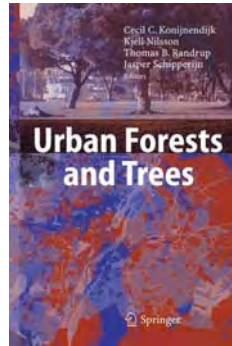
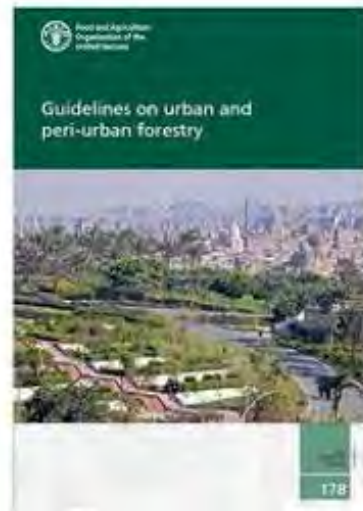


**with an International Student Workshop**



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## More Information:



## Cities of the future: Urban forests - a necessary part of it !

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**Cities of the future need Urban Forest!!!**

**Cities of the future need YOU !!!!**

