

Land recycling new approaches of green infrastructure; renaturing cities; remodelling etc.

www.jrc.ec.europa.eu

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*Serving society
Stimulating innovation
Supporting legislation*



Background

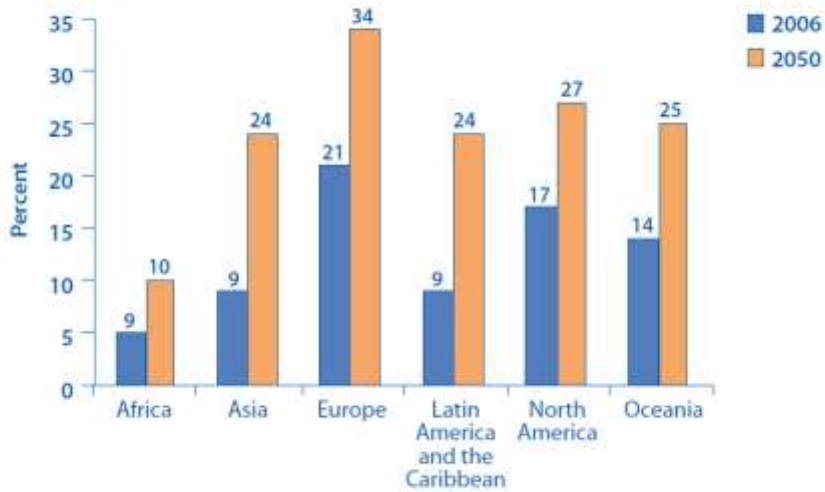
- Reuse and recycling land within urban areas is part of sustainable urban development
- Aging society → are we ready for it?
- Where innovation can take us? Is technological innovation enough or we need a social innovation?

Current 'tools'

- Green infrastructure
- WFD- Flood directive
- Natura 2k
- Active aging (age-friendly cities)

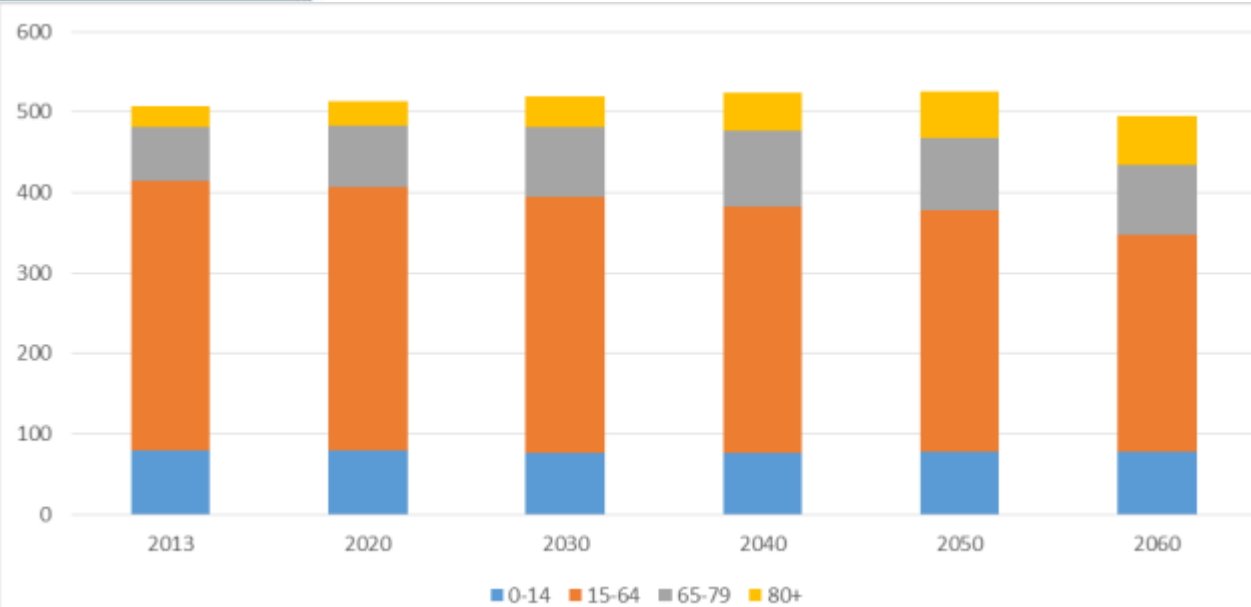


Figure 1. Percent distribution of world population 60 or over by region, 2006 and 2050



Around 80% of EU population will be leaving in cities

Source: United Nations Department of Economic and Social Affairs (1).



New cities

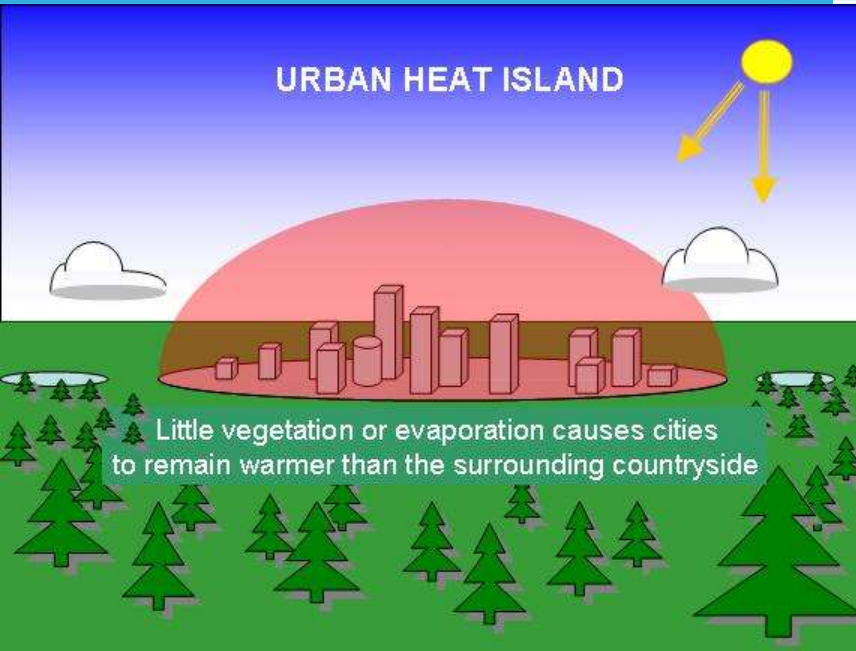
- More space for nature and new ways of living
- More green spaces: for reduction of temperature, green space for elderly, allotments
- Living closer to cities → use of bikes, public transport
- Conscious society as regards food (bio/organic, food waste)



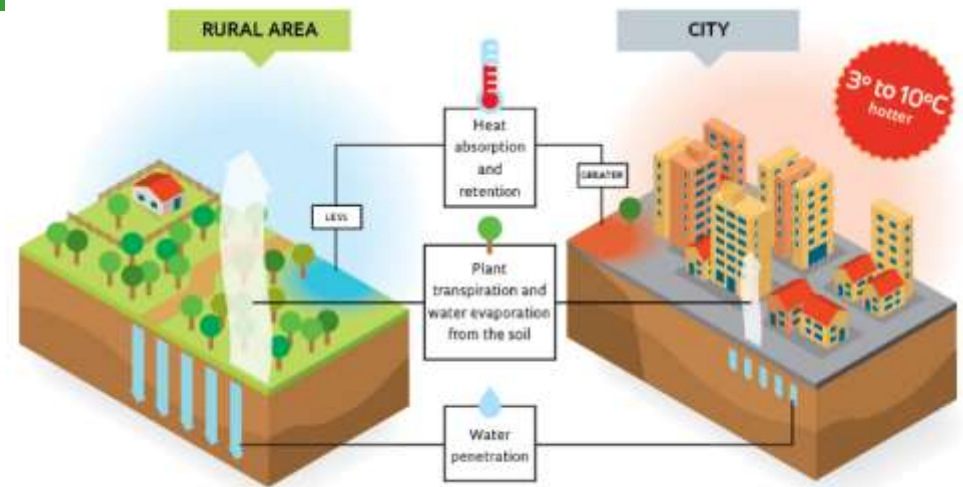
Copenhagen- bike highways



Montreal roof top farm project



Why the urban heat island effect occurs



Vertical gardens
Green space
Roof gardens



**2 km from the
center point of the
city**

**Connected green
space or
buildings?
Land efficiency
people/m²**





<http://www.grenoble-tourisme.com/en/decouvrir/lessentiel/eco-districts/>



European Examples

- Copenhagen: Amager strand; Island Brugge
- Hamburg: old port area
- Brussels: Auderghem, canal site





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Tianjin Eco-City is a 30 square kilometer development designed to showcase the hottest new green technologies and to serve as a model for future developing Chinese cities.

<http://wordlesstech.com/2011/01/26/tianjin-eco-city-for-350-000-residents/>

The city is being built just 10 minutes away from the business parks, the community's expected 350,000 residents will be able to choose different landscapes ranging from a sun-powered solarscape to a greenery-clad earthscape to enjoy.

Eco-City will make use of the latest sustainable technologies such as solar power, wind power, rainwater recycling, and wastewater treatment/desalination of sea water. In order to reduce the city's carbon emissions, residents will be encouraged to use an advanced light rail system, and China has also pledged that 90 percent of traffic within the city will be public transport. The development also features some beautiful public green spaces.



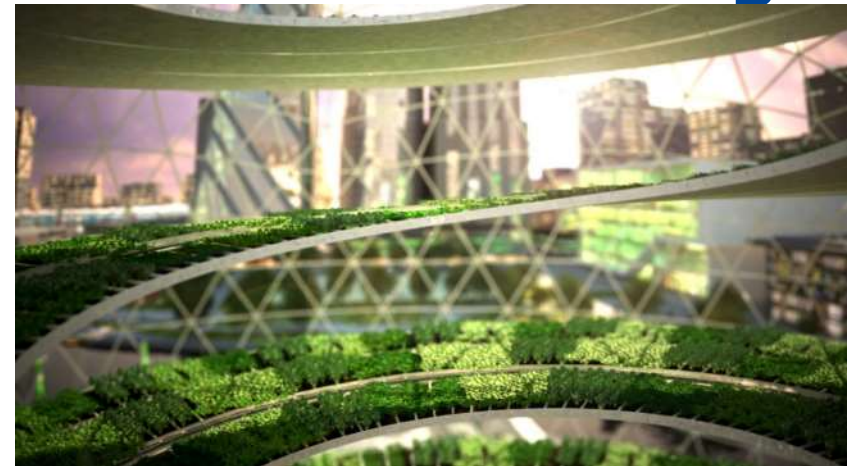
Home gardens

Depending on space: small home herbs gardens, balcony gardens, vertical gardens, use of small city gardens or specific allotments.

Use of hydroponic systems

<https://vimeo.com/78965136>

Plantagon – urban greenhouse farming



Currently being build in Linköping, Sweden



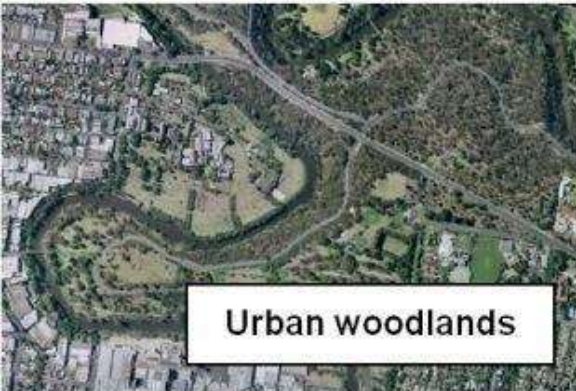
Urban green infrastructure



Urban agriculture



Green walls



Urban woodlands



Suburban street trees



City street trees



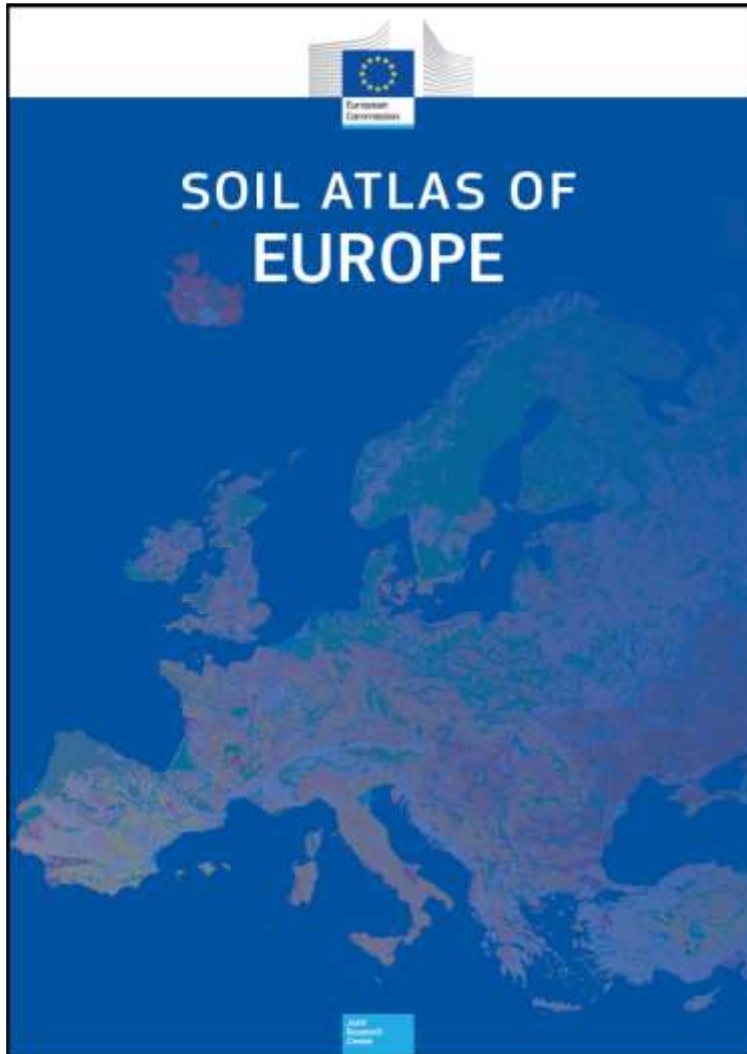
Green roofs



Sensitive urban design



Parks, gardens & golf courses



Second edition of the Soil Atlas of Europe:

- **Specific country contribution**
- **New sections**
- **Revision of the document**
- **New maps → any new contribution update of the database ? Please get in touch with us.**

Time line: work started already, to be finalized December 2015/January 2016 → Publication early 2016



<https://www.youtube.com/watch?v=aMFnmpNsaqg&t=11>

Thank you

Past FP7 projects

Timbre – Tailored Improvement of Brownfield Regeneration in Europe

The project focused on major areas previously used for military, mining, industrial or commercial purposes. There are over 20,000 large and complex contaminated sites in Europe.

Project results are:

- Web database with inventory of sites
- Expert system on the methodologies
- Development of Site Assessment and Re-use Planning Tool (SAT)
- Prioritization tool (for areas with many sites)

<http://www.timbre-project.eu/>

Past FP7 projects

HOMBRE: HOListic Management of Brownfield REgeneration

The aim of the project is to achieve a paradigm shift in sustainable brownfield land management practice by 4 objectives:

- Better understanding why, how, where and when brownfields are formed in order to avoid future brownfields.
- Better solutions for long term land use of current and potential future brownfields.
- Better operations, better implementation of state of the art technologies into practice and development of more sustainable integrated regeneration technologies for successful brownfield regeneration
- Improving the dividend from brownfield remediation for the environment, economy and society in the surrounding area by means of integrative management methodologies in cooperation with stakeholders <http://www.zerobrownfields.eu/>