

# LAND AND SOILS - CHALLENGES FOR OUR EUROPEAN TERRITORIES

Didier Vancutsem (Secretary General of the International Society of City and Regional Planners)



Health

Societal Demands

Cities

Jobs

Land and Soils – Challenges for Our European Territories

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Soil

Ecosystem Services

Spatial Planning

Farming

Natural Capital

Resources

Land-Use

Water

World Soil Day

European Commission





# **LAND AND SOIL – challenges for our European territories**

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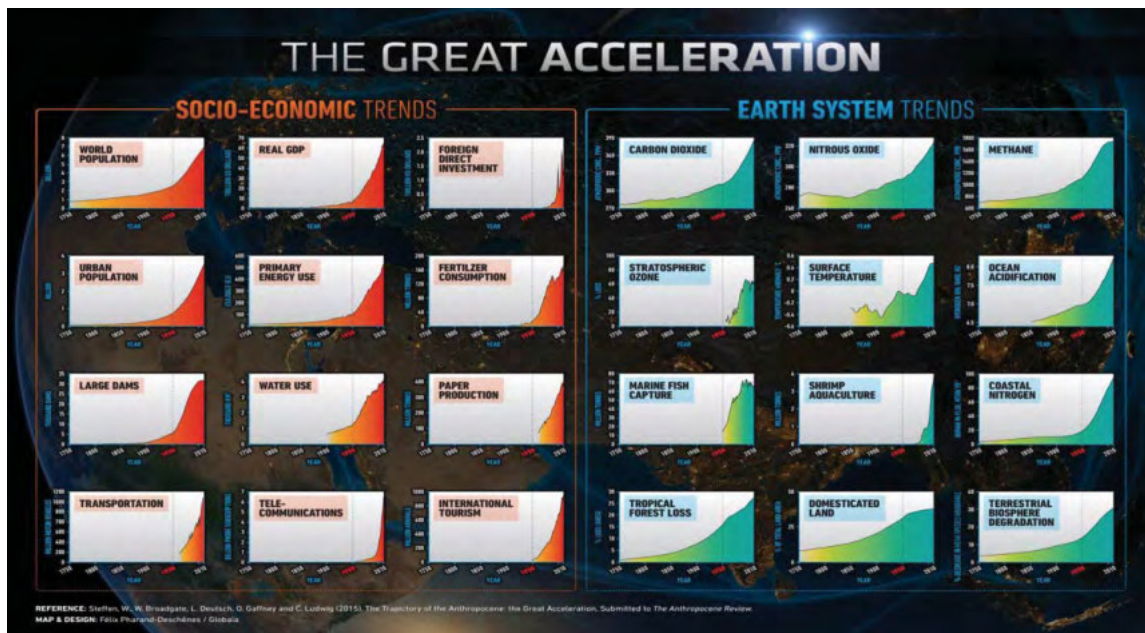


## **Contents**

- Global Context
- Conflicts and challenges: the International Framework
- 3 biggest Challenges
- The future of cities – how?
- Research topics



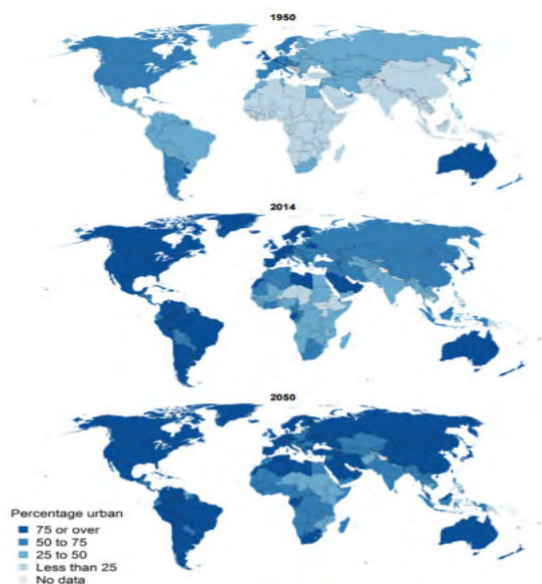
# Humanity's challenges



Source: [www.anthropocene.info](http://www.anthropocene.info)

# Humanity's challenges

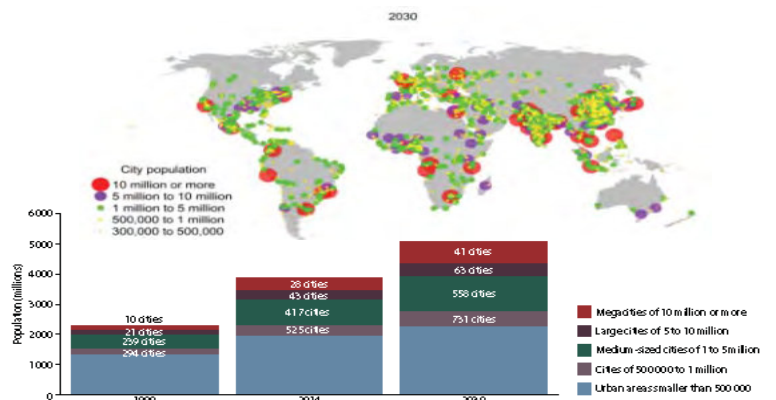
1950: 30% - 2050: 66% urban population



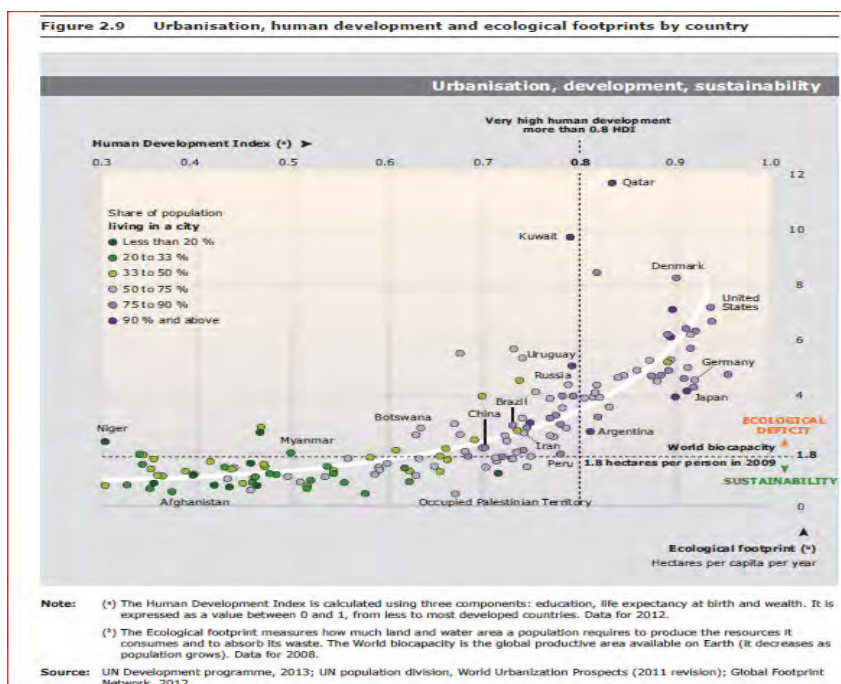
Source: UNDESA 2014 - <http://esa.un.org/>

## Population

- projected to increase to 9.7 billion people in 2050
- 90% increase in Asia and Africa
- most urbanized region North America (82%)
  - Latin America (80%)
  - Europe (73%)
  - Asia (48%)
  - Africa at 40%



# Humanity's challenges



# Humanity's challenges

**Table S.1 Indicator scoreboard by 7th EAP thematic priority objectives**

Indicator	EU indicator past trend (*)	Outlook for meeting the selected objective by 2020
<b>Priority objective 1: 'To protect, conserve and enhance the Union's natural capital'</b>		
(I) Exposure of terrestrial ecosystems to eutrophication due to air pollution (*)	▲	●
Gross nutrient balance in agricultural land: nitrogen	▲	●
(I) Land take (*)	▲	●
(I) Forest: growing stock, increment and fellings	▲	●
Status of marine fish stocks	▲	●
Abundance and distribution of selected species (common birds (*) and grassland butterflies)	▲	●
(I) Species of European interest	▲	●
(I) Habitats of European interest	▲	●
(I) Status of surface waters	N.A.	●
<b>Priority objective 2: 'To turn the Union into a resource-efficient, green, and competitive low-carbon economy'</b>		
Resource productivity	▲	●
Waste generation in Europe (excluding major mineral wastes) — absolute and per capita	▲	●
Recycling of municipal waste (*)	▲	●
Use of freshwater resources	▲	●
Total greenhouse gas emission trends and projections	▲	●
Share of renewable energy in gross final energy consumption	▲	●
Progress on energy efficiency in Europe	▲	●
Energy consumption by households	▲	●
Greenhouse gas emissions from transport	▲	●
Animal product consumption (animal protein)	▲	●
Share of environmental and labour taxes in total tax revenues	▲	●
Employment and value added in the environmental goods and services sector	▲	●
Environmental protection expenditure in Europe	▲	●
<b>Priority objective 3: 'To safeguard the Union's citizens from environment-related pressures and risks to health and well-being'</b>		

Source: EEA Environmental Indicator Report 2017

**How can we deal with these conflicts and challenges in the future?**

**What are our engagements towards more sustainable and integrated soil and land use for the next generations?**

## **SDG's**





# New Urban Agenda



## Our shared vision

11. We share a vision of cities for all, referring to the equal use and enjoyment of cities and human settlements, seeking to promote inclusivity and ensure that all inhabitants, of present and future generations, without discrimination of any kind, are able to inhabit and produce just, safe, healthy, accessible, affordable, resilient and sustainable cities and human settlements to foster prosperity and quality of life for all. We note the efforts of some national and local governments to enshrine this vision, referred to as "right to the city", in their legislation, political declarations and charters.

12. We aim to achieve cities and human settlements where all persons are able to enjoy equal rights and opportunities, as well as their fundamental freedoms, guided by the purposes and principles of the Charter of the United Nations, including full respect for international law. In this regard, the New Urban Agenda is grounded in the Universal Declaration of Human Rights<sup>11</sup>, international human rights treaties, the Millennium Declaration<sup>12</sup> and the 2005 World Summit Outcome<sup>13</sup>. It is informed by other instruments such as the Declaration on the Right to Development<sup>14</sup>.

13. We envisage cities and human settlements that:

(a) Fulfill their social function, including the social and ecological function of land, with a view to progressively achieving the full realization of the right to adequate housing as a component of the right to an adequate standard of living, without discrimination, universal access to safe and affordable drinking water and sanitation, as well as equal access for all to public goods and quality services in areas such as food security and nutrition, health, education, infrastructure, mobility and transportation, energy, air quality and livelihoods;

(b) Are participatory, promote civic engagement, engender a sense of belonging and ownership among all their inhabitants, prioritize safe, inclusive, accessible, green and quality public spaces that are friendly for families, enhance social and intergenerational interactions, cultural expressions and political participation, as appropriate, and foster social cohesion, inclusion and safety in peaceful and pluralistic societies, where the needs of all inhabitants are met, recognizing the specific needs of those in vulnerable situations;

(c) Achieve gender equality and empower all women and girls by ensuring women's full and effective participation and equal rights in all fields and in leadership at all levels of decision-making, by ensuring decent work and equal pay for equal work, or work of equal value, for all women and by preventing and eliminating all forms of discrimination, violence and harassment against women and girls in private and public spaces;

<sup>11</sup> Resolution 217 A (III).

<sup>12</sup> Resolution 55/2.

<sup>13</sup> Resolution 60/1.

<sup>14</sup> Resolution 41/128, annex.

# New Urban Agenda

96. We will encourage the implementation of sustainable urban and territorial planning, including city-region and metropolitan plans, to encourage synergies and interactions among urban areas of all sizes and their peri-urban and rural surroundings, including those that are cross-border, and we will support the development of sustainable regional infrastructure projects that stimulate sustainable economic productivity, promoting equitable growth of regions across the urban-rural continuum. In this regard, we will promote urban-rural partnerships and inter-municipal cooperation mechanisms based on functional territories and urban areas as effective instruments for performing municipal and metropolitan administrative tasks, delivering public services and promoting both local and regional development.

97. We will promote planned urban extensions and infill, prioritizing renewal, regeneration and retrofitting of urban areas, as appropriate, including the upgrading of slums and informal settlements, providing high-quality buildings and public spaces, promoting integrated and participatory approaches involving all relevant stakeholders and inhabitants and avoiding spatial and socioeconomic segregation and gentrification, while preserving cultural heritage and preventing and containing urban sprawl.

98. We will promote integrated urban and territorial planning, including planned urban extensions based on the principles of equitable, efficient and sustainable use of land and natural resources, compactness, polycentrism, appropriate density and connectivity, and multiple use of space, as well as mixed social and economic uses in built-up areas, in order to prevent urban sprawl, reduce mobility challenges and needs and service delivery costs per capita and harness density and economies of scale and agglomeration, as appropriate.

99. We will support the implementation of urban planning strategies, as appropriate, that facilitate a social mix through the provision of affordable housing options with access to quality basic services and public spaces for all, enhancing safety and security and favouring social and intergenerational interaction and the appreciation of diversity. We will take steps to include appropriate training and support for service delivery professionals and communities in areas affected by urban violence.

# New Urban Agenda

## Reflections on the New Urban Agenda

- Centrality of housing, planning, land, public space, local governance, formality and informality, safety and security, gender mainstreaming
- Participation and consultation finds a place but no clear commitments towards institutionalization of multi-stakeholder partnerships
- 70+ references to planning (full section), 35 references to local governments, 10 references to private sector

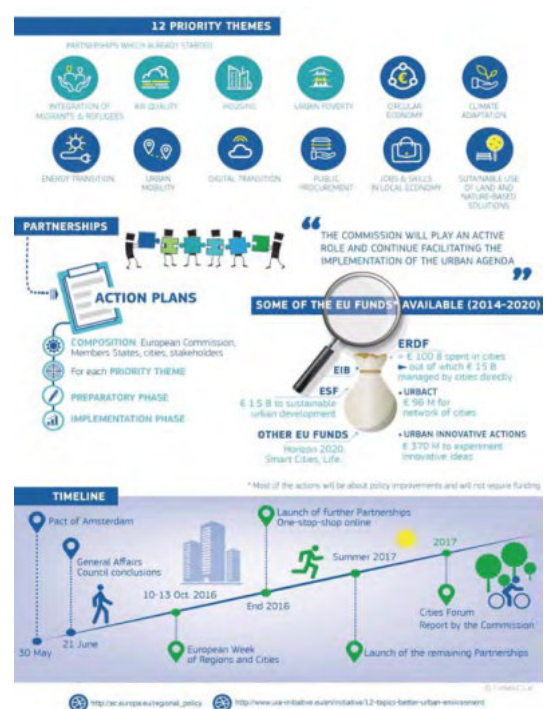
## Looking through the Planning lens

Multiple references to planning throughout the text

Commitments (Para 16):

- “reinvigorating long-term and integrated urban and territorial planning and design”
- **Social inclusion (Para 25-42)**
- Urban prosperity (Para 43-62)
- Sustainability and resilience (Para 63-80)
- **Effective implementation (Para 93-125)**
- Means of implementation (Para 126-160)

# EU Urban Agenda



## 3 Challenges

- Urban sprawl – together with uncontrolled land consumption

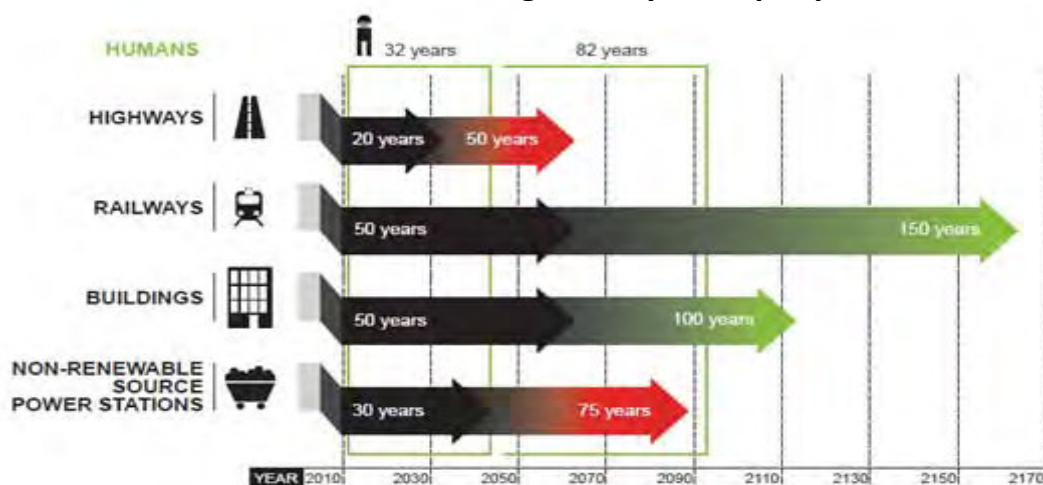
## Urban Sprawl





# Urban Sprawl

Urban Lock-In effect – the challenge: Lifespan of people, assets and infrastructure



Source: Are we building competitive and liveable cities? Guidelines for developing eco-efficient and socially inclusive infrastructure – UN Habitat (page 19)  
<http://www.unescap.org/esd/environment/infra/documents/Guidelines.pdf>

# Urban Sprawl

Urban Rebound –

The difference between the original engineering estimate and the real energy savings after implementing new technologies



Source: Can rebound effects explain why sustainable mobility has not been achieved? Hans Jakob Walnum, 2014

# 3 Challenges

- Urban sprawl – together with uncontrolled land consumption
- Competing jurisdictions within the same metropolitan area

## Urban Governance

Good Governance: multi-level / causal loop

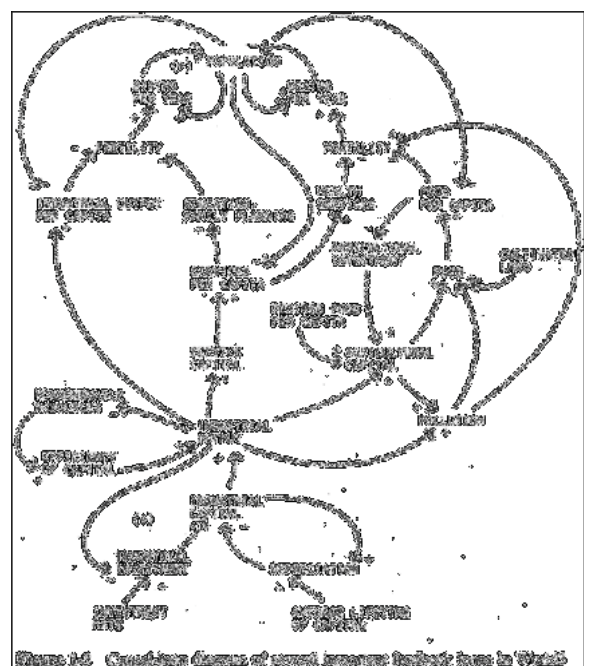
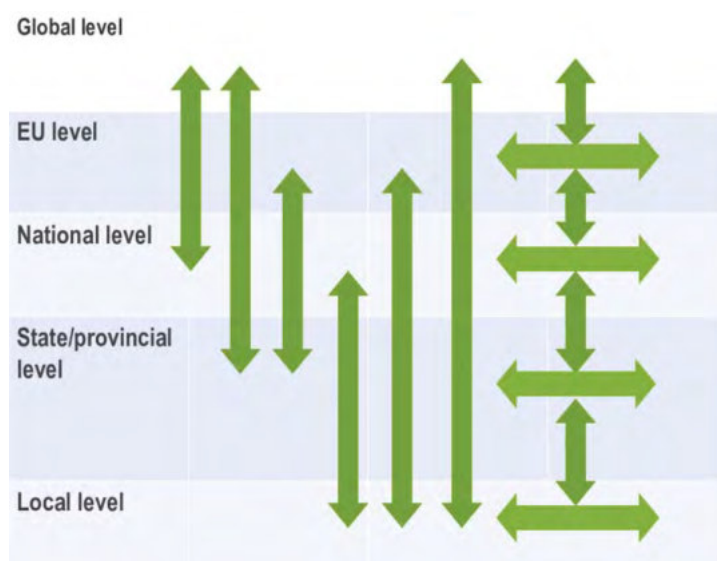
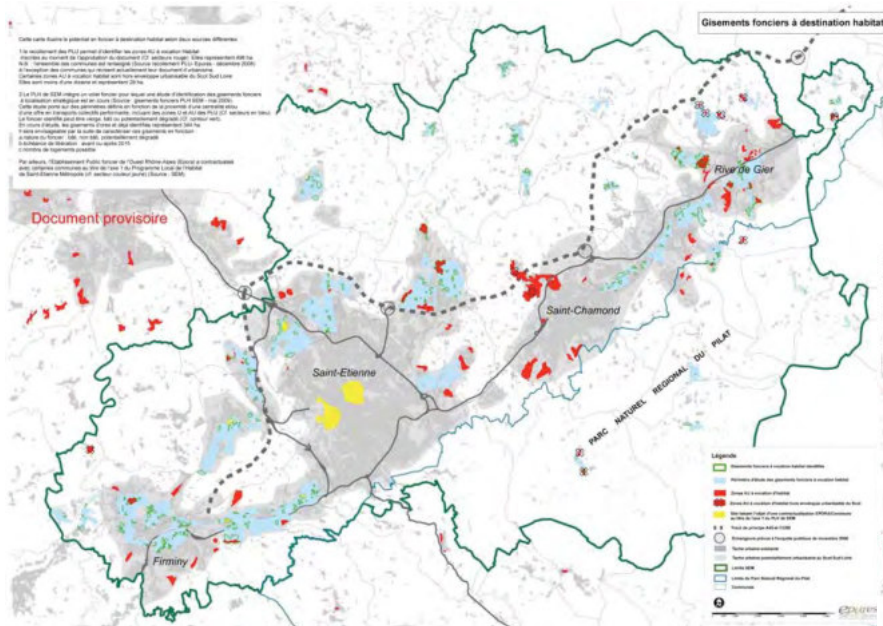


Figure 16. Causal-loop diagram of spatial governance feedback loops in World

Source: Limits to Growth

# Urban Governance

## Land use Management: LUMASEC project URBACT (Saint-Etienne)



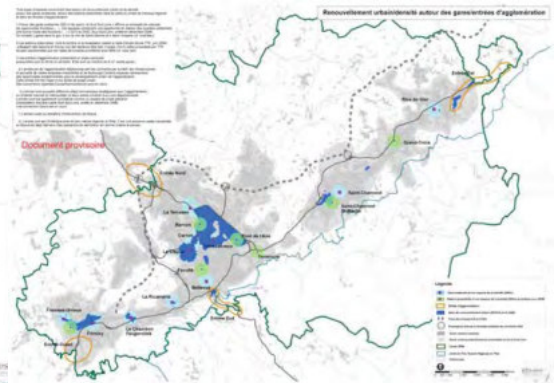
Development of a Land Use Strategy as a Governance tool

**Operational Tool** to limit urban sprawl and promote urban renewal, preserve natural spaces and promote social housing  
Strategic tool to establish a governance capacity without new institution

Actions to promote a smart green and incentive city:

**Public Land Banks in peripheries** (organizing urban development, prevent uncontrolled development) and existing urban areas (urban renewal, public investment with incentive role)

**Identify strategic places for social housing development**, transport, etc  
Development of mixed-uses programs, organization of land exchanges with investors, etc.



## 3 Challenges

- Urban sprawl – together with uncontrolled land consumption
- Competing jurisdictions within the same metropolitan area
- Rising awareness on land and soil role in the future of our humanity and cities - combined with education and capacity-building



# Awareness rising – capacity-building

Education at all levels: think tanks, workshops, training, YPPs, School Tool Kit

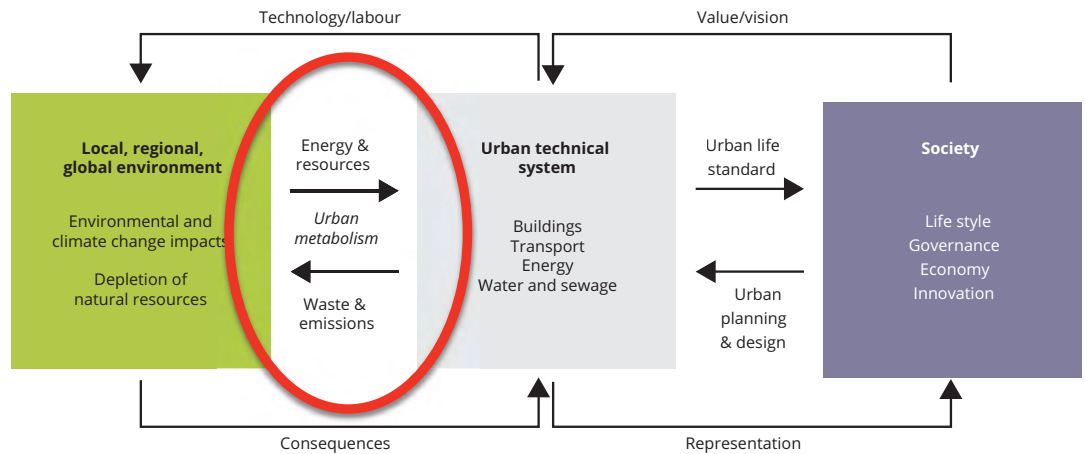


**How should the cities of the future be thought of?**

**And what will be the future of land and soil?**

# Urban System

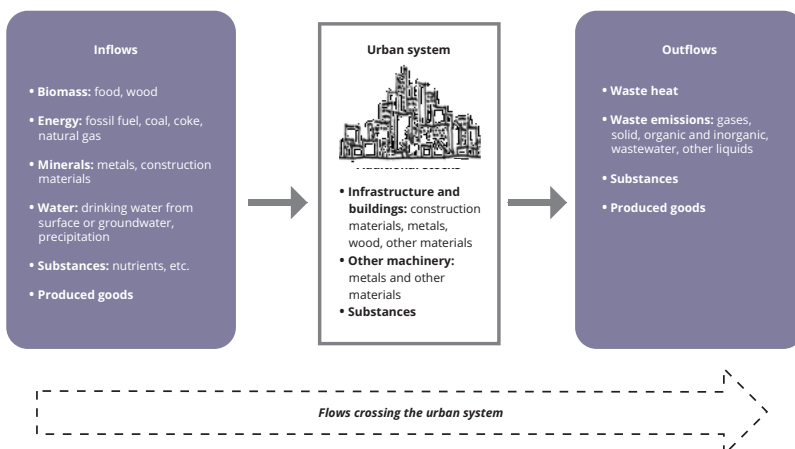
- Our urban system: getting increasingly complex
- Past years: research and practices on understanding system
- Assure long-term viability of our system: social, economic, quality of life, urban conditions
- Implement SDGs
- Implement NUA
- Urban Innovation



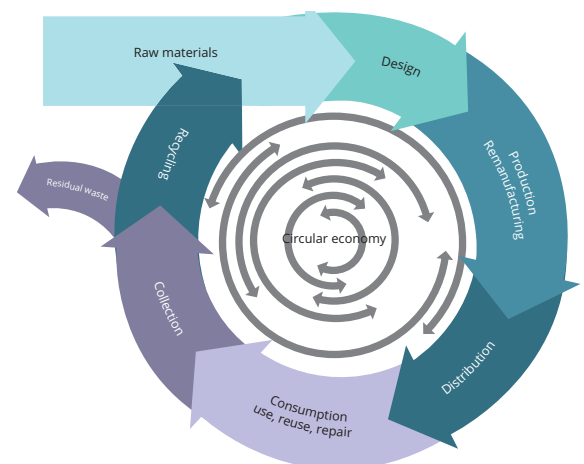
Source: EEA 2016

# Urban System

## Urban Metabolism – from linear to circular



Source: Adapted from Kennedy and Hoornweg, 2012 — modified by the EEA.



Source: Adapted from EC, 2014c.

# Food for Thoughts

Soil and land research needed - related to urban and territorial planning:

- Food security
- Nature-based solutions and green infrastructure
- Water – Groundwater protection
- Awareness rising and participation
- Education and capacity building
- Interdisciplinary cooperation
- Cooperation on level of Territorial Impact Assessment and EIA
- Urban ecosystem services
- Climate change adaptation and CO2 soil storage
- Agro-food value chain
- Urban-rural linkages
- Land Value and Land Pricing

