



# Colloque international Espaces urbains : une nouvelle forme de nature en ville ?

International symposium  
Urban wastelands: a form of urban nature?

Approaches to develop urban wastelands as elements of urban green infrastructures

Potentials for ESS and Biodiversity

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## Challenges for City Development

**ensuring eco-system services** → well-being, public health, environmental justice

create competitive cities

**space-saving target** (30 ha/day)

stopping loss of habitats (plants, animals)

**solving wasteland problems**

→ **urban biodiversity** → ecological urban restructuring → urban wasteland as reserves

managing climate change → **mitigation, adaptation**

**Urban Green Infrastructure**

## Potentials for City Development

Commercial Settlements    Residential Areas

Re-densification → Compact City

Buildings + Green Spaces = Smart Inward Development

Greening → Greened City

Conversion to Green Spaces    Wilderness in the City

## Urban Green Infrastructure (GI)

- strategically planned network of high quality natural and semi-natural areas with other environmental features,
- designed and managed to deliver a wide range of ecosystem services (ESS) and protect biodiversity
- spatial structure providing benefits from nature to people, aims to enhance nature's ability to deliver multiple valuable ecosystem goods and services, such as clean air or water
- one of the key attractions: **multifunctionality**. One area can provide several ESS, assumed that the ecosystem is in a healthy condition.

## Ecosystem Services

Classification after TEEB 2011

**Provisioning Services**

- storage and infiltration of rainwater → groundwater recharge

**Regulating Services**

- carbon storage
- green volume for micro-climatic effects → mitigation, adaptation

**Habitat Services**

- alternative habitats (plants, animals) → biodiversity

**Cultural Services**

- recreation, mental and physical health, education → human well-being

## Approaches for Urban Wastelands

Urban Agriculture    Urban Forest    Gardens    Sports/Games

Location for Events (temporary)    Extensive Parks    Areas for Nature Experiences    Succession/Wilderness

→ new types of urban green spaces, new partnerships



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**Urban Agriculture**

- crop growing or recycling of biomass for energy
  - short rotation (e. g. poplars)
  - recycling of mowing
- grazing
- productions of seeds
- self-picking of flowers, ...
- profitable, temporary, increase the value, initial for long term commercial use

**Public Gardens / Public Allotments**

- gardens for tenants provided by landowners
- gardens of self-organised neighbourhood initiatives
- international gardens for immigrants and refugees
- Relief of owners, integration of citizens, upgrading neighbourhoods

**Urban Forest**

- cheap, easy to maintain, lower safety standards

**Sports and Leisure**

- unconventional sports
- city as a continuous spaces for moving
- temporary use
- attendance, places for youth, vitalisation of abandoned sites

**Nature Discovery Areas**

- naturalness: wild natural areas
- no or less maintenance measures
- freedom: less rules, no equipment
- independent uses: contact to nature without instructions
- distance home: ca. 300 m
- children's age: 7-14 years
- minimum area: 1-2 ha

**Events**

- partly demands for big areas, centrally located
- transformation into continuous uses
- Temporary appreciation public awareness initial for follow-up uses

**Succession/Wilderness**

- naturalness: wild natural areas
- no or less maintenance measures
- new aesthetics
- higher biodiversity
- "Ordered Wilderness"

**Wild Industrial Forests**  
e. g. IBA Emscherpark

**Succession/Ruderal Parks**  
e. g. Leinepark Göttingen

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**Low Maintenance Park**

- public owned and maintained
- robust and simple equipment
- low level of maintenance
- naturalness
- Appreciation durable elements of the green space system ecological benefits

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**Evaluation of Options**

Category	Economic aspects		Climate change			Green space planning		Uses	Perception	
	profitability	value	adaptation	mitigation	vulnerability	green space network	biodiversity	functions	acceptance	aesthetics
Urban agriculture	++	+/-	+	++	+	+/-	+/-	+/-	+/-	+/-
Urban forestry	++	+	++	++	++	++	++	+	+	+
Gardens	+/-	++	++	++	+/-	+	+/-	++	+	+/-
Sports/Leisure	+/-	++	+	+/-	+	+/-	+/-	++	+	+/-
(Temporary) events	+/-	++	-	-	-	-	-	+	+	+/-
Nature discovery	-	+	++	++	+	++	++	++	+/-	+/-
Public parks	+	+	++	++	+	++	++	++	+/-	+
Wilderness	++	+/-	++	++	++	++	++	+/-	+/-	+/-

++ very appropriate  
+ appropriate  
- inappropriate  
+/- detailed consideration (depends on specific framework and implementation)

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**Land Register of Urban Wasteland**

**Information on current status**

- size, location, contamination
- ownership
- previous, current, planned use
- legal framework
- land use plan, ...
- restrictions: nature protection, flood protection, monument protection
- continuity, actuality, availability

→ base for effective and target-oriented future uses

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**Planning with Urban Wastelands**

- Use of the potentials for recreation and nature experience
- Keep accessibility, design and recreation possibilities
- Conservation of as many types of nature as possible → Biodiversity
- Allow spontaneous use if there are no hazards
- Combine use by residents with biotope preservation
- Temporary habitats, temporary biotope conservation
- Succession also in economically used areas
- Increased acceptance through partial upgrades and public relation

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