October 8th, 2012

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Agence régionale pour la nature et la biodiversité en Ile-de-France

URBAN POLICIES AND BIODIVERSITY

A Selection of West-European Good Practices

ZUCCA Maxime

- October 2010 : first City Biodiversity Summit in Nagoya (Japan). Adoption of a Plan of Action on Subnational Governments, Cities and other local authorities for biodiversity

  ➔ Promotion of good practices

  ➔ Supporting local strategies in favor of biodiversity

- Natureparif and the city of Paris are among the signatories

- How does Natureparif integrate its actions to the Nagoya Plan of Action ?

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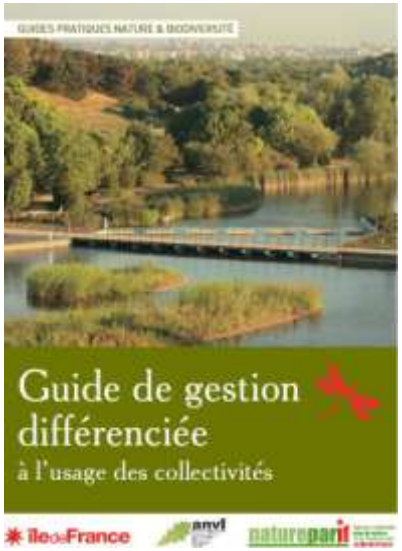
Disseminating good practices through cities and organization network



A guidebook for Ecological management of public spaces by city councils

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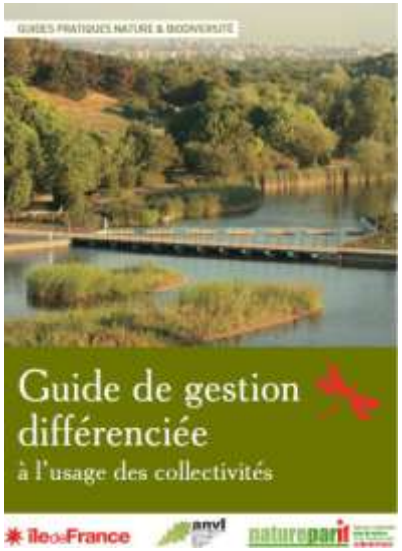

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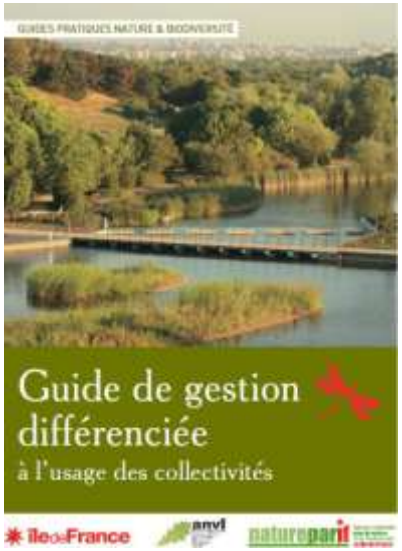

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A professional guidebook for integrating biodiversity into the conception of buildings

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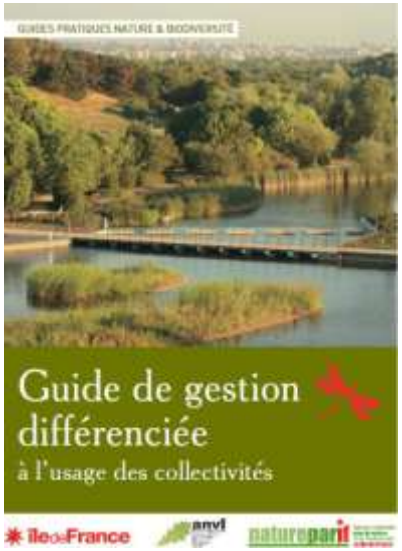

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Urban policies and biodiversity : Collection of actions in France and Europe

Why preserving biodiversity in cities ?

- Regulation services :

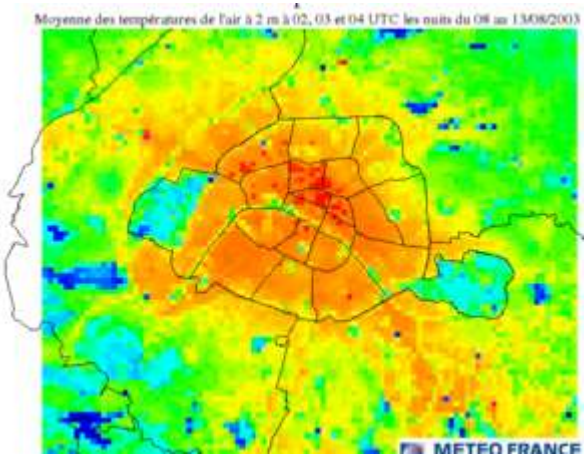
  - Water purification. Ex. Munich : needs no treatment, thanks to the preservation of forests around the cities and help to organic farming;

  ➔ leading to the cheapest costs for citizens (2,74 euros/m^3)

  - Air purification : three young trees per inhabitants.

  - Local climate cooling.

  - Control of allergy occurence



Why preserving biodiversity in cities ?

- Cultural services :
  - Well-being
  - Adequation to our biological cycles
  - Naturalist opportunities

- Philosophical aspects :
  - reconsidering the opposition Culture/Nature

What is biodiversity in cities ?

- In the 70s : reluctance of architects to introduce nature in the city

What is biodiversity in cities ?

Some attempts… Nature in pots.

What is biodiversity in cities ?

Separate the wheat from the chaff ?

What is biodiversity in cities ?

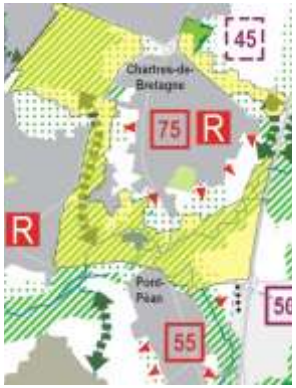
- Building cities into the countryside vs bringing back countryside into the cities

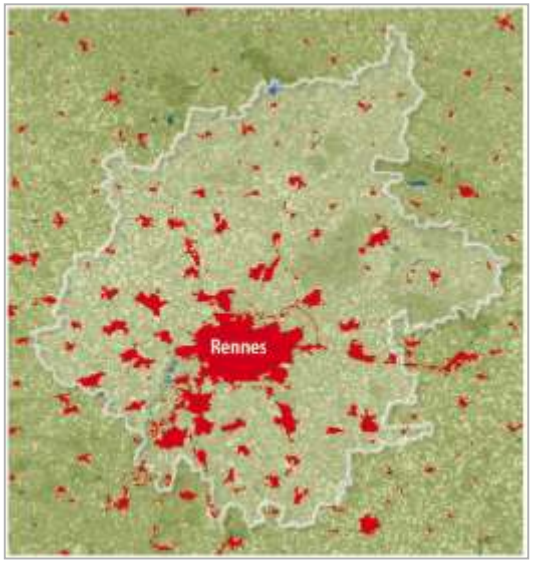
Reconciling nature and urban sprawl

Case study in France : Rennes agglomeration

-460 000 hab
-113 600 ha

Agricultural	**76%**
Natural	**13%**
Urbanized	**11%**





Currently : 250 ha are urbanized every year (at a rate three times more important than Paris area)

60 000 new inhabitants every 10 years : <u>how to minimize the consommation of agricultural and natural spaces ?</u>

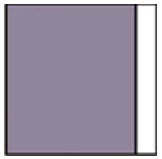
➔ Political tools (Local Urbanism Plan – PLU - and Territorial Coherence Schemes – SCOT) to prevent urbanization of chosen natural and agricultural spaces – towards an « archipelago city »

Keeping green while building

Case study in Germany : Berlin city center

$$\text{BAF} = \frac{\text{Sum of (vegetalization index * m²)}}{\text{Patch area}}$$

-Very densified et sealed district
-Building an indicator for planification : the Biotope Area Factor

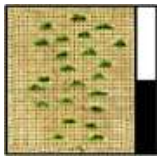


Sealed surfaces

0,0

Semi-permeable surfaces

0,3



Semi-open surfaces (permeable for water and air)

0,5

Green spaces on stab < 80 cm

0,5

Green spaces on stab > 80 cm

0,7

Green spaces (no stab – earth-continuity)

0,7

Rainwater infiltration per m² of roof surface

0,2

Vertical planting to at least 10 m

0,5

Greenroof

0,7

Objective : to reach a BAF of 0.3 in old districts, commercial and industrial areas ; of 0.6 in new districts, schools, kindergardens…

Keeping green while building

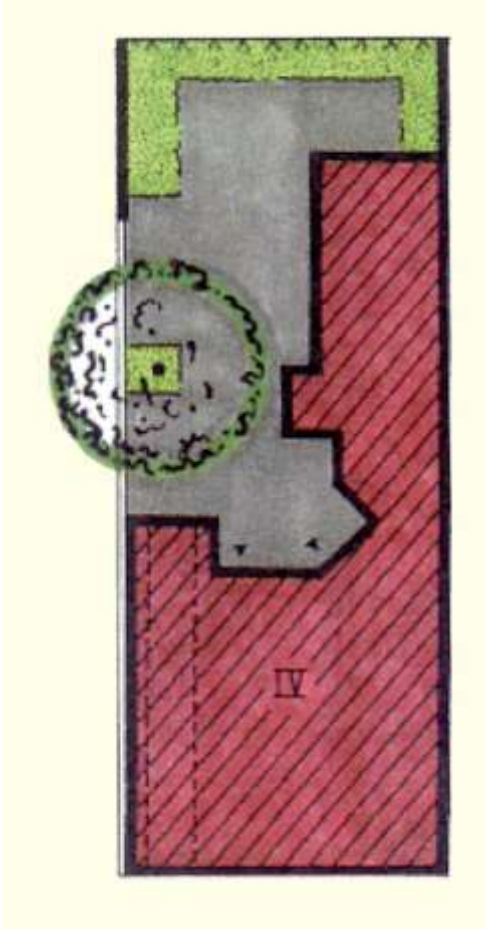
Case study in Germany : Berlin city center

Patch area	479 m²
Built-up area	279 m²
Free space area	200 m²

140 m² Asphalt x 0,0 = 0 m²
59 m² lawn x 0.5 = 30 m²
1 m² open ground x 1.0 = 1 m²

$$BAF = \frac{31}{479} = 0.06$$

BAF to reach = 0.3



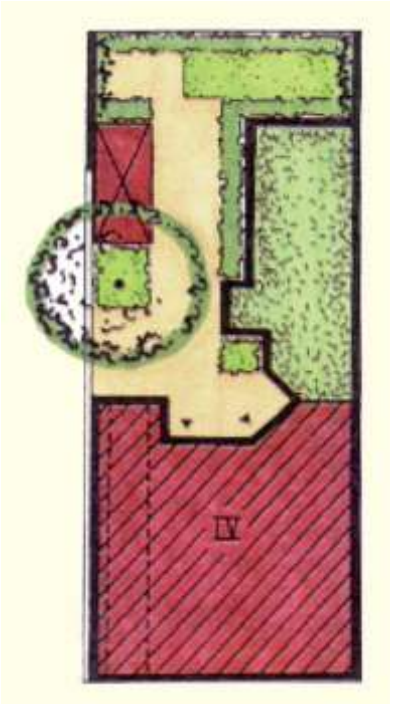
Keeping green while building

Case study in Germany : Berlin city center

How to reach a BAF of 0.3 ?

21 m² concrete slab	x 0,0 = 0
79 m² deep soil	x 1 = 79
100 m² pavement	x 0.3 = 30.0
10 m² wall planting	x 0.5 = 5.0
41 m² greenroof	x 0.7 = 29.0

$$BAF \ \frac{143}{479} = \mathbf{0,3}$$



Green and Blue Infrastructures

Case study : Strasbourg (France)

Green and Blue Infrastructures

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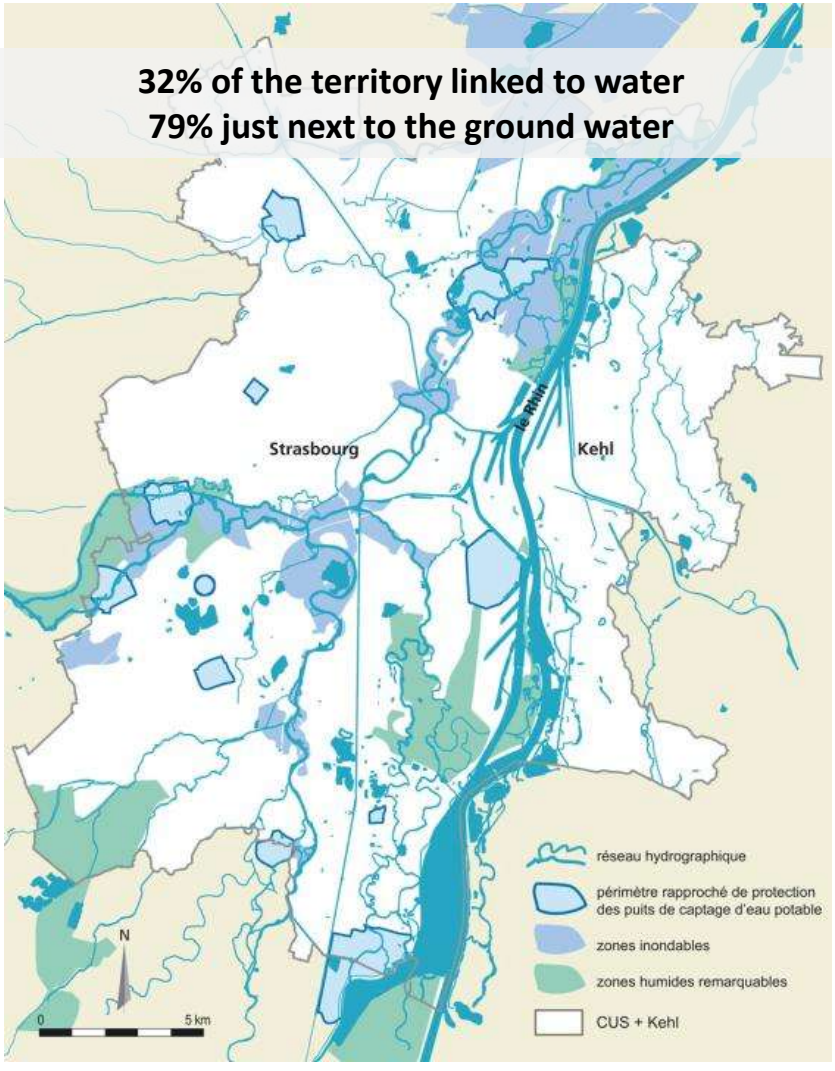
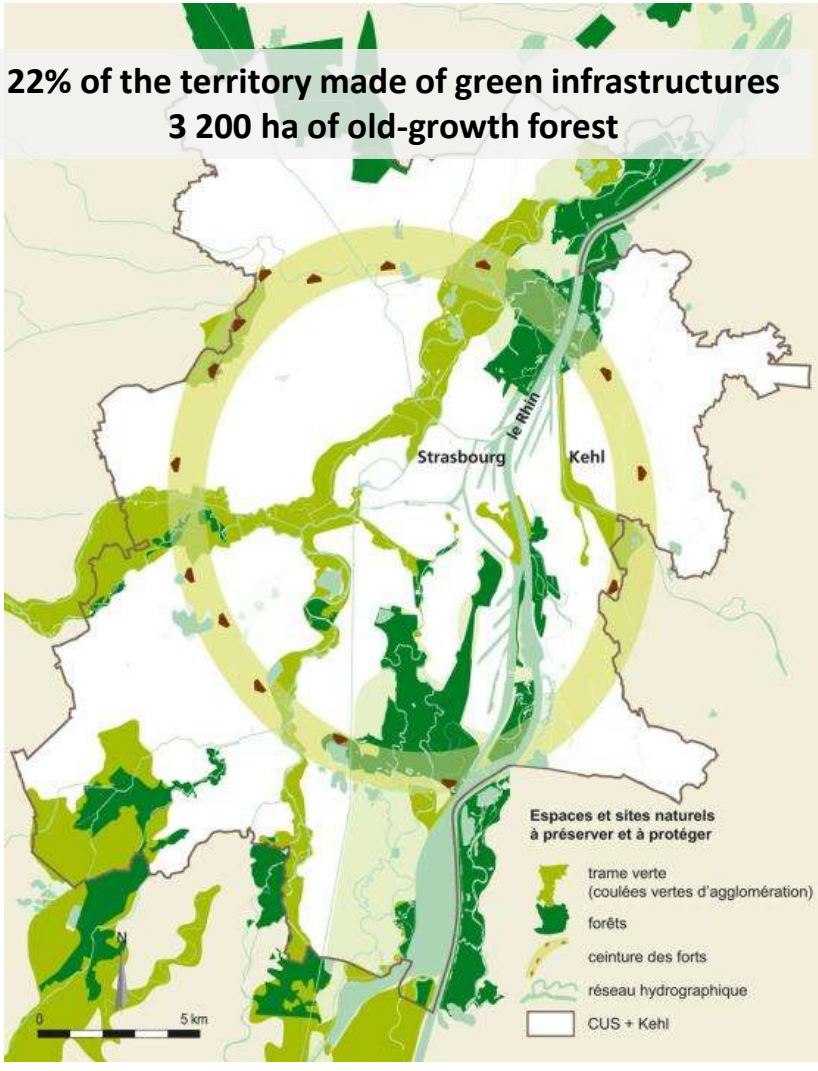
A biodiversity-orientated Policy

32% of the territory linked to water
79% just next to the ground water



22% of the territory made of green infrastructures
3 200 ha of old-growth forest



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Discovering ordinary nature

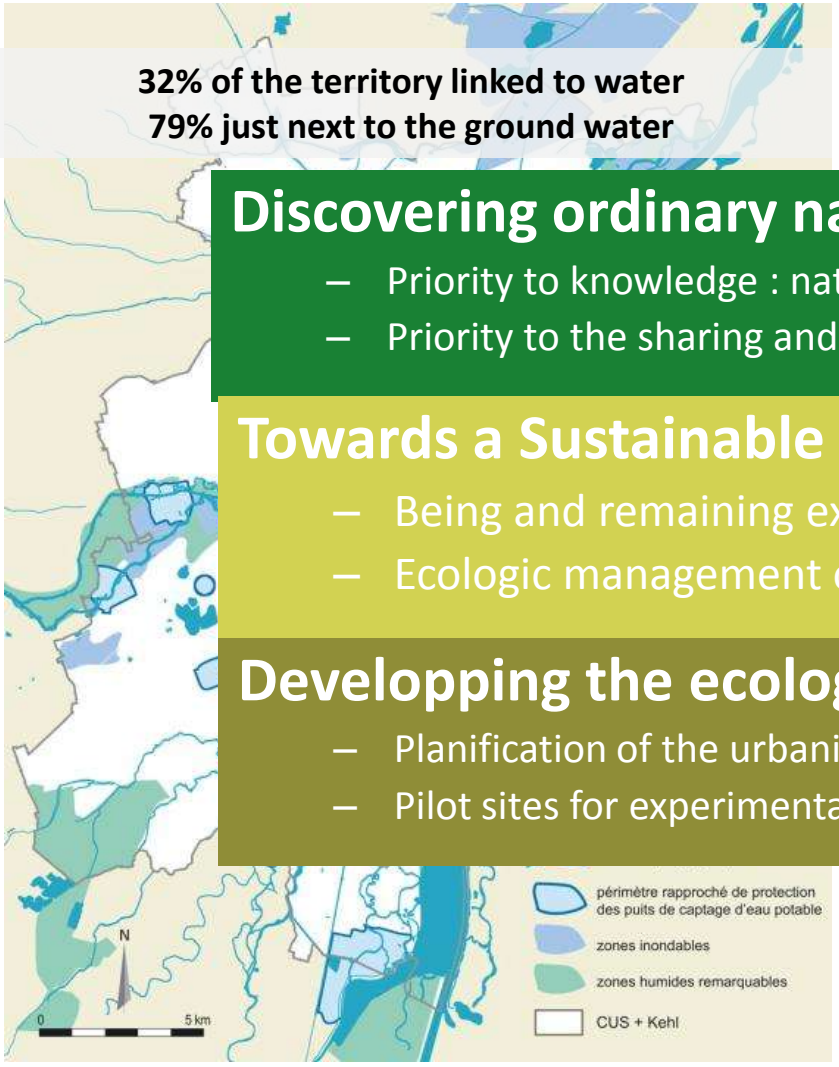
- Priority to knowledge : naturalists inventories of wetlands, woodlands…
- Priority to the sharing and diffusion and this knowledge

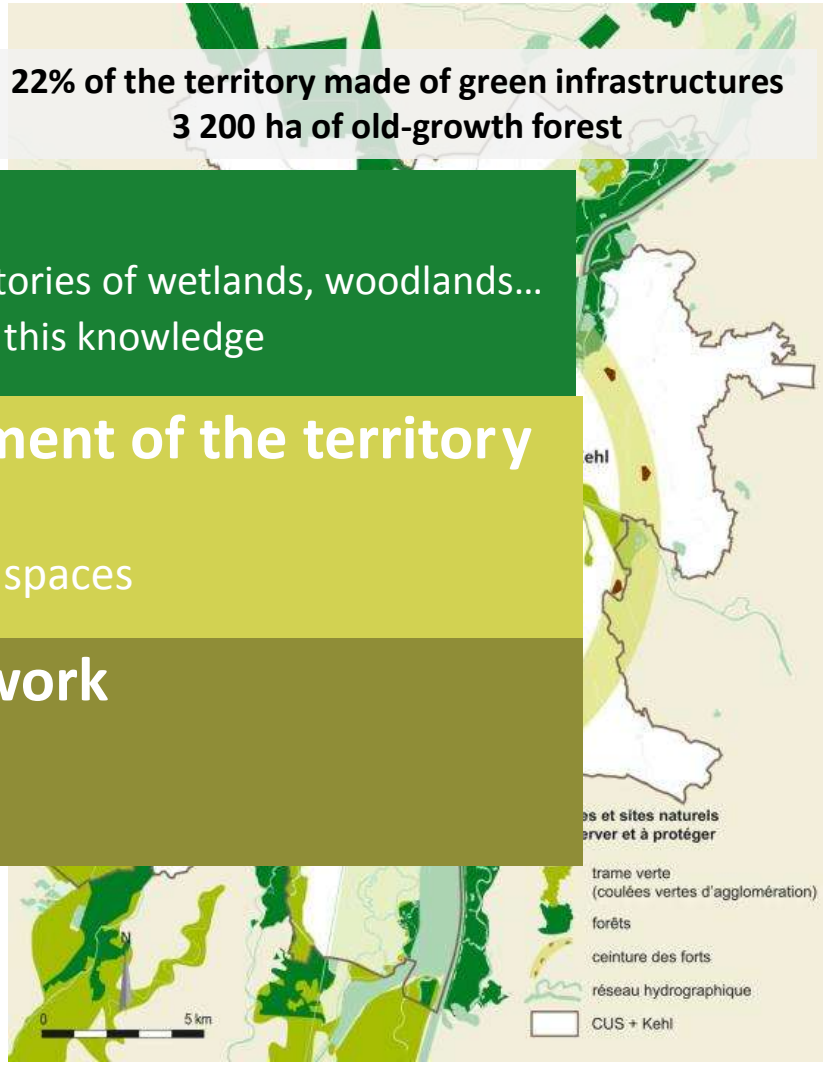
Towards a Sustainable Management of the territory

- Being and remaining examplary
- Ecologic management of the green spaces

Developping the ecological network

- Planification of the urbanisation
- Pilot sites for experimentations





Green and Blue Infrastructures

Case study : Strasbourg (France)

Urbanization towards ecodistricts

Les enjeux

- Insérer le nouveau quartier dans son environnement
- Construire un quartier en respectant les principes de développement durable
- Ambitions fortes en matière d'habitat : nouvelles typologies, mixités multiples, énergie
- Mise en valeur des éléments naturels et respect des écosystèmes existants
- Tirer le meilleur parti de l'eau : gestion écologique et maîtrise des risques d'inondation
- Le Végétal : créer des lieux de vie en habitant la nature
- La place de la voiture : mobilité et stationnement, prise en compte des modes de déplacements alternatifs

Le projet :

- Répondre aux besoins en logements de la CUS
  - 3000 habitants
  - 100.000 m² de SHON
  - 1000 logements
- Prendre en compte l' environnement
  - 17 ha urbanisés / 33 ha d 'espaces verts
  - Zone inondable
- Faire adhérer la population
  - Concertation
  - Etalement: 5 ans pour les constructions
- Montage : ZAC concédée par la CUS sous contrôle de la commune d'Ostwald
- Montant de l 'opération : 41 M€ dont 15 M€ de travaux

Linder Paysage

Renaturation

Case study : Isar river project in Munich (Germany)

Objectives:

- Revive the river
- Maintaining flood control
- Enhance biodiversity
- dedicated areas for tourism and leisure
- Costs : 35 M€

Renaturation

Case study : Isar river project in Munich (Germany)

- Re-meandering
- Banks renaturation
- River bed enlargment

To prevent the risk of flooding :

-new dikes with new processes, and with a gentle slope allowing lower erosion and sedimentation

Renaturation

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Renaturation

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Locally sourced building products

Case Study : *Eco46* in Lausanne

- Materials supplied from a 50km distance
- Materials cost - - // human costs ++
- **Reduce impacts on biodiversity : ecological footprint**

Locally sourced building products

Case Study : *Eco46* in Lausanne

Life cycle analysis of materials

Locally sourced building products

Case Study : *Eco46* in Lausanne

Training : new jobs for firms

Eco-twinning between cities

Case Study : Grenoble and Ouagadougou (Burkina -Faso)

- Cooperation between the 2 cities since 1999 mostly in cultural and educational fields
- In 2009 : aim to highlight the green belt of Ouagadougou :
- Creation of a Botanical conservatory of rare local species, for replanting
- Replanting trees in highschools yards (one per year)

- How to finance on long time ? Thanks to parking meters in Grenoble !

  ➔ 0.015 € on each parking tickets go directly to this program (60 000 €/year)

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Thank you for your attention !

http://www.natureparif.fr/