Landscape policy for a green, sustainable city

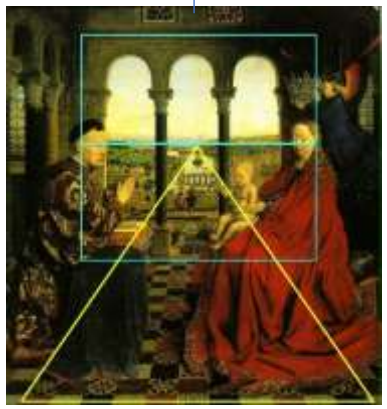
Damien Butin
Director of Natural Heritage at Bordeaux Métropole
(Landscape, nature, trees, management of aquatic environments and flood prevention)

I. From garden art to urban ecology

Antiquity / Middle Ages

Renaissance

Alberti



Jan Van Eyck

Classic garden

Le Nôtre

Nicolas Poussin

I. From garden art to urban ecology

19th century

Haussmann Garden

Caspar David Friedrich

20th century

Horticultural garden

Monet

21st century

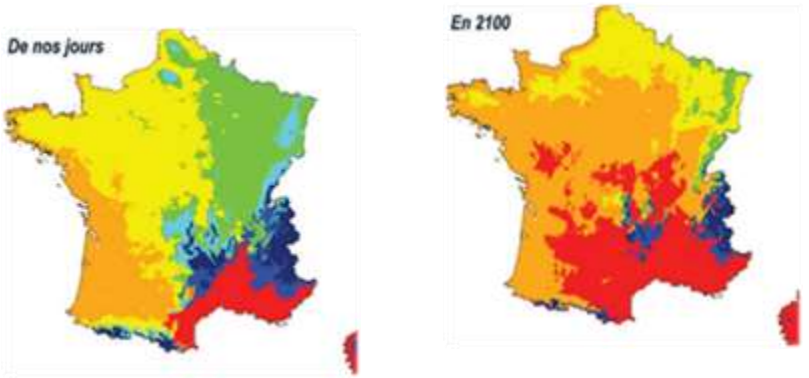
Natural city

Land’art

II. Climate change and biodiversity loss

- Temperatures up +1.5 degrees
- More frequent heat waves Average
- Temperatures +4°degrees by 2100
- Soil dryness of 6 to 7 months by 2100
- Increased heat islands, particularly in cities

- Over the last two hundred years, species extinctions have been 10 to 1000 times faster than the natural rate
- At this rate, the planet will lose 75% of its species in 500 years.
- New diseases and pests
- Accelerating changes in species ranges



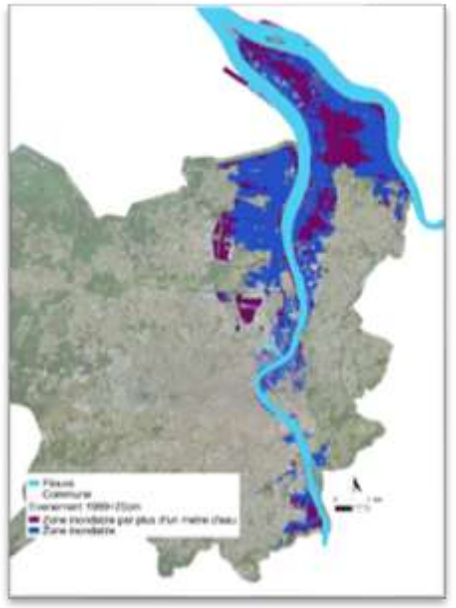
Pinus pinaster, *Quercus pyrenaica*
Quercus ilex

Leptura aurulenta

III. The causes and consequences of climate change

a. Multifactorial causes :

- Energy production
- Deforestation
- Agriculture
- Urbanization (soil artificialization, densification,…)



flood zone in the Bordeaux metropolitan area

b. Multifactorial causes :

- Multiple consequences for our territories
- Increased exposure and vulnerability (floods, droughts, fires, etc.)
- Accelerated loss of biodiversity
- Transformation of the landscapes that make up our heritage and identity
- Social fractures
- Public health problems

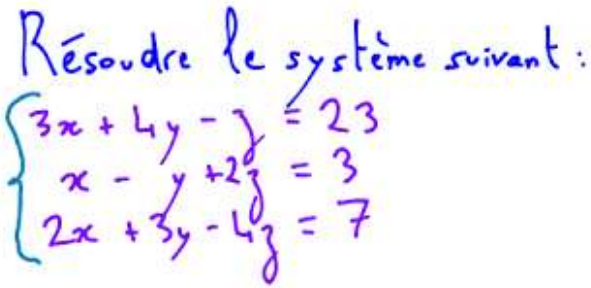
water mirror

IV. Urgent need to react by rethinking the territory with a view to ecological transition

- 20th century: addition of separate public policies with no real coherence

Equation: Mobility + economic development + infrastructure + buildings + landscape + ... = disordered territory

Adaptation strategy : climate, ecosystems and human societies are highly interdependent - landscape and nature are key levers for mitigating change :



- 21st century: public policy coherence based on a common denominator (landscape & nature)

Equation: (Mobility x landscape/nature) + (economic development x landscape/nature) + (infrastructure x landscape/nature) + ... + citizen & actors in the public space = a sustainable, integrated and resilient region (systemic approach)

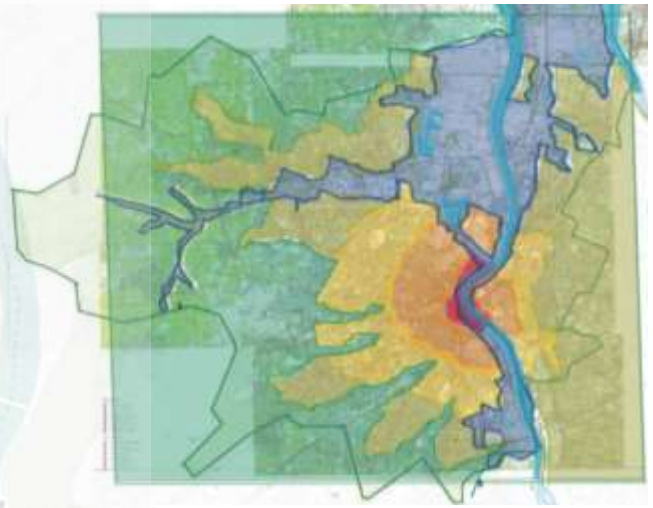
V. Drawing up a territorial project : macro-scale thinking, “landscape and ecology plan”

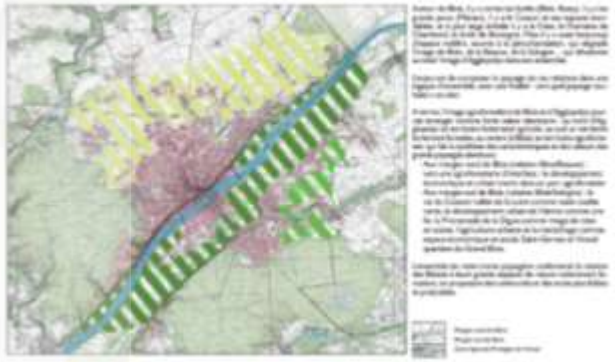
Objectives : Build a territory project to frame its short-, medium- and long-term changes.

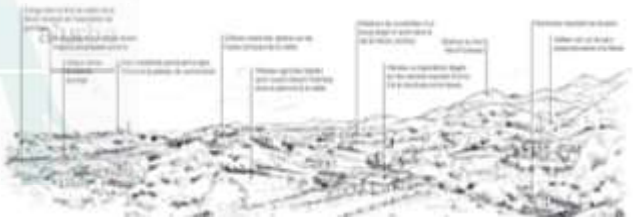
1. Diagnose an area based on landscape and biodiversity: subjective and objective analysis based on rating criteria (nature, heritage, sealing, etc.).

2. Analyze and characterize strengths and weaknesses to identify issues by landscape unit: prioritization of issues by landscape unit (housing landscape, infrastructure landscape, industrial landscape, etc.)

3. Setting targets for landscape quality and ecological richness: A political vision to guide the strategy for adjusting the territory's development plan





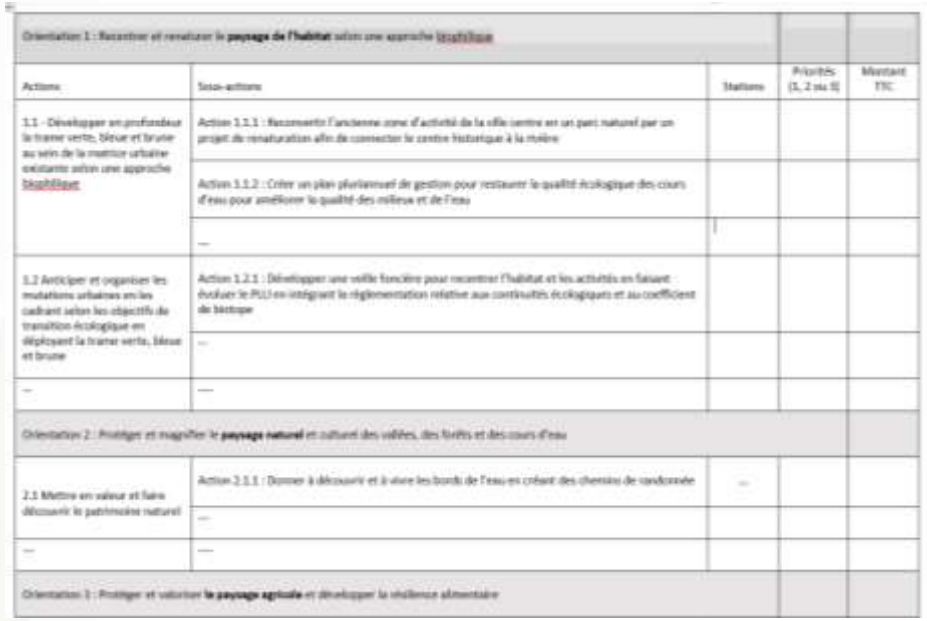


IV. Drawing up a territorial project : macro-scale thinking, “landscape and ecology plan”

4. Define a strategy, in conjunction with local stakeholders, which is translated into an action plan: Participative approach (information, awareness-raising, consultation, etc.)

5. Draw up and implement an action plan :
   - Macro : Adapt urban planning rules to provide a framework for territorial development and enable landscape and ecological continuity.
   - Micro : Define a series of operational projects

6. Promoting and evaluating the regional project to fine-tune it : consultation, information, tools, education, landscape and ecology committee, landscape and nature center, achievements, pedagogy, education…

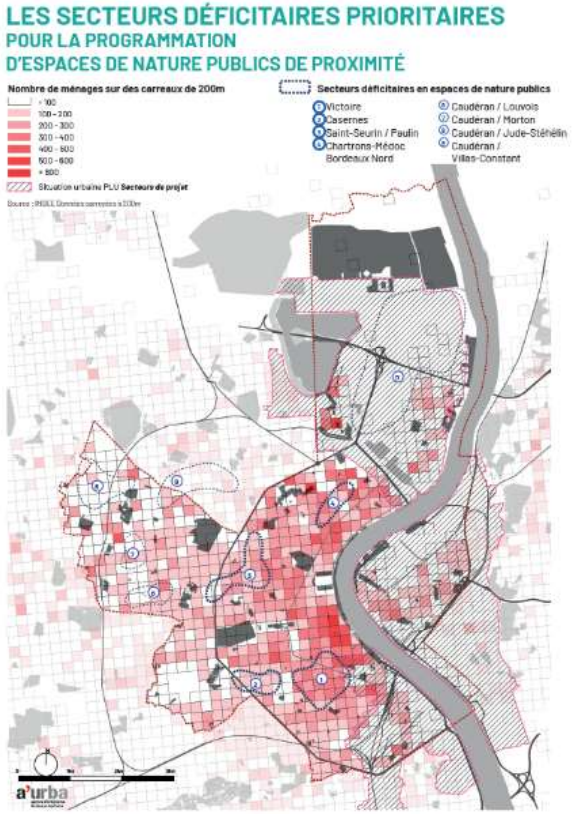


Actions	Sous-actions	Stations	Priorités (1, 2 ou 3)	Montant TTC
1.1 - Développer en profondeur la trame verte, bleue et brune au sein de la matrice urbaine existante selon une approche biophilique	Action 1.1.1 : Reconnecter l'ancienne zone d'activité de la ville centre en un parc naturel par un projet de renaturation afin de connecter le centre historique à la rivière			
	Action 1.1.2 : Créer un plan pluriannuel de gestion pour restaurer la qualité écologique des cours d'eau pour améliorer la qualité des milieux et de l'eau			
	…			
1.2 Anticiper et organiser les mutations urbaines en les cadrant selon les objectifs de transition écologique en déployant la trame verte, bleue et brune	Action 1.2.1 : Développer une veille foncière pour recentrer l'habitat et les activités en faisant évoluer le PLU en intégrant la réglementation relative aux continuités écologiques et au coefficient de biotope			
	…			
…	…			
Orientation 2 : Protéger et magnifier le **paysage naturel** et culturel des vallées, des forêts et des cours d'eau				
2.1 Mettre en valeur et faire découvrir le patrimoine naturel	Action 2.1.1 : Donner à découvrir et à vivre les bords de l'eau en créant des chemins de randonnée	…		
	…			
…	…			
Orientation 3 : Protéger et valoriser **le paysage agricole** et développer la résilience alimentaire				

Place de la Victoire – Bordeaux (France) 2024

V. Example: work on the “habitat landscape” landscape unit

- Objectives: identify nature-deficient areas in the “habitat landscape” to optimize isochromes (200ml).

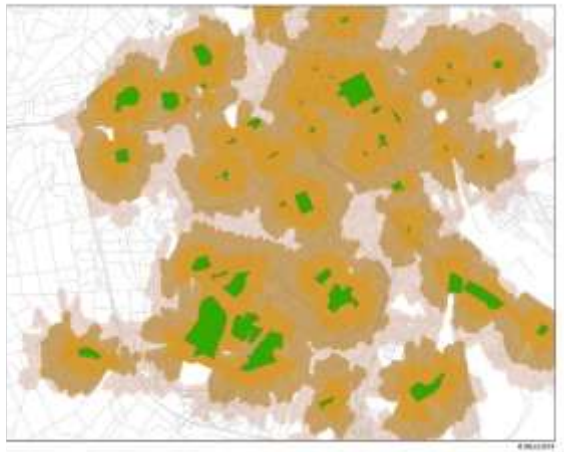


1. Mapping work by cross-referencing population data with landscape and biodiversity diagnosis

1. Locate areas with nature deficits

2. Undertake corrective actions to reintegrate nature into priority areas by spreading it into public spaces, based on the concept of “second skin”, integrating mobility and buildings.

3. Co-construct projects with residents at every stage of the project



VI. Example of an action plan project carried out with local residents: renaturation of a former industrial wasteland into a nature park

VI. Example of an action plan project carried out with local residents: renaturation of a former industrial wasteland into a nature park

Community garden

Eco-grazing

Phytoremediation

Orchard

Nature in sanctuary

Wetland

VI. Example of an action plan project carried out with local residents: renaturation of a former industrial wasteland into a nature park

Human + Landscape + Biodiversity = Green, sustainable and happy city ☺