

GERER LE TERRITOIRE AVEC PARCIMONIE

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Le paysage construit

Entre logement abordable et « stop au béton »

Infrastructure verte et grise dans le cadre du dialogue transfrontalier



Research « *Gérer le territoire avec parcimonie* » (2018-2019):

- Financed by Wallonia through the « CPDT »
(*Conférence Permanente du Développement Territorial*)
- Partners: IGEAT-ULB / Lepur-ULiège
- Research method:
 - Quantitative / qualitative diagnosis
 - Benchmarking
 - Living Lab approach
 - Reflexion on operationalisation (more detailed objectives, specific measures...)

Plan of the presentation:



- 1) Definitions
- 2) Diagnosis
- 3) Objectives
- 4) Challenges, strategies & tools
- 5) Cross-border considerations



1) Definitions

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« Land take »? (FR: *Artificialisation des sols*)

1) Definitions



« Land take »? (FR: *Artificialisation des sols*)

European Environmental Agency:

Change in the amount of agricultural, forest and other semi-natural and natural land taken by urban and other artificial land development. It includes areas sealed by construction and urban infrastructure, as well as urban green areas, and sport and leisure facilities. The main drivers of land take are grouped in processes resulting in the extension of: housing, services and recreation; industrial and commercial sites; transport networks and infrastructures; mines, quarries and waste dumpsites; construction sites.

1) Definitions



Land use

vs.

Land cover?

Agriculture,
Housing,
Economic activities,
...

Buildings,
Lawn,
Trees,
...

1) Definitions



Land take

vs.

Soil sealing?

**Terres
imperméabilisées:**

Autoroute
Parking asphalté
Terrasse carrelée
Bâtiment
Etc.

**Terres
naturelles:**

Forêts pas/peu gérées
Marécages
Cours d'eau
Etc.

**Terres
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Etc.

**Terres
naturelles:**

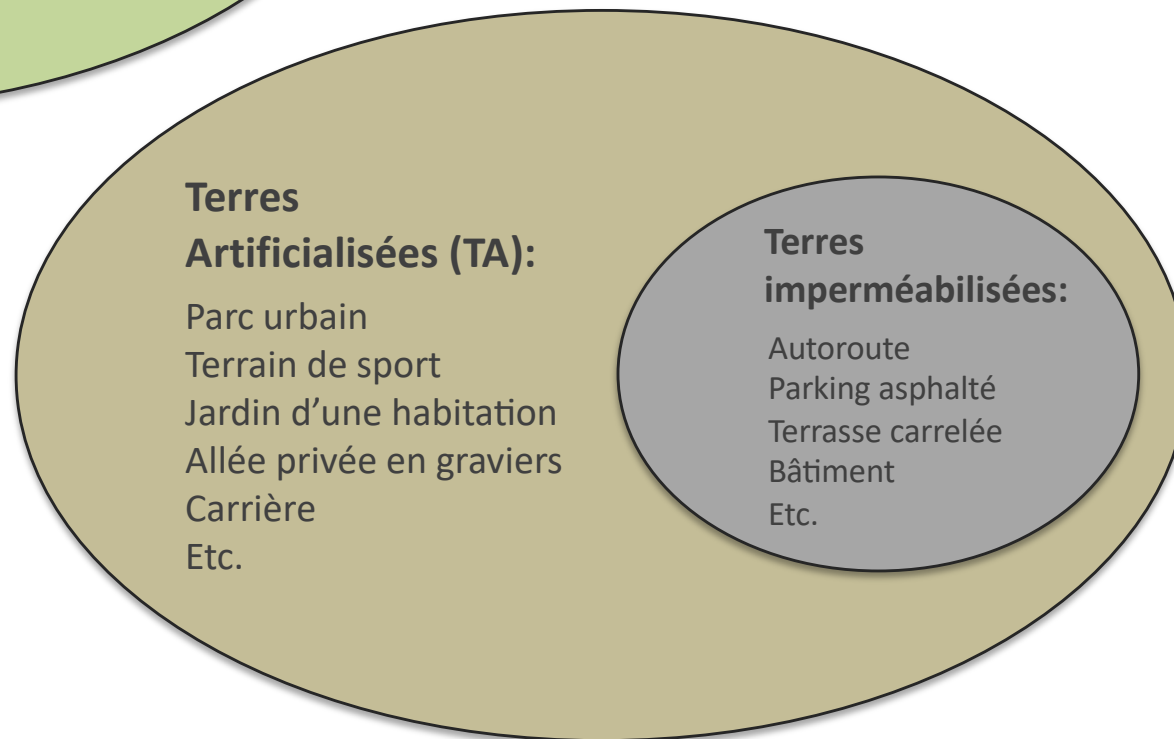
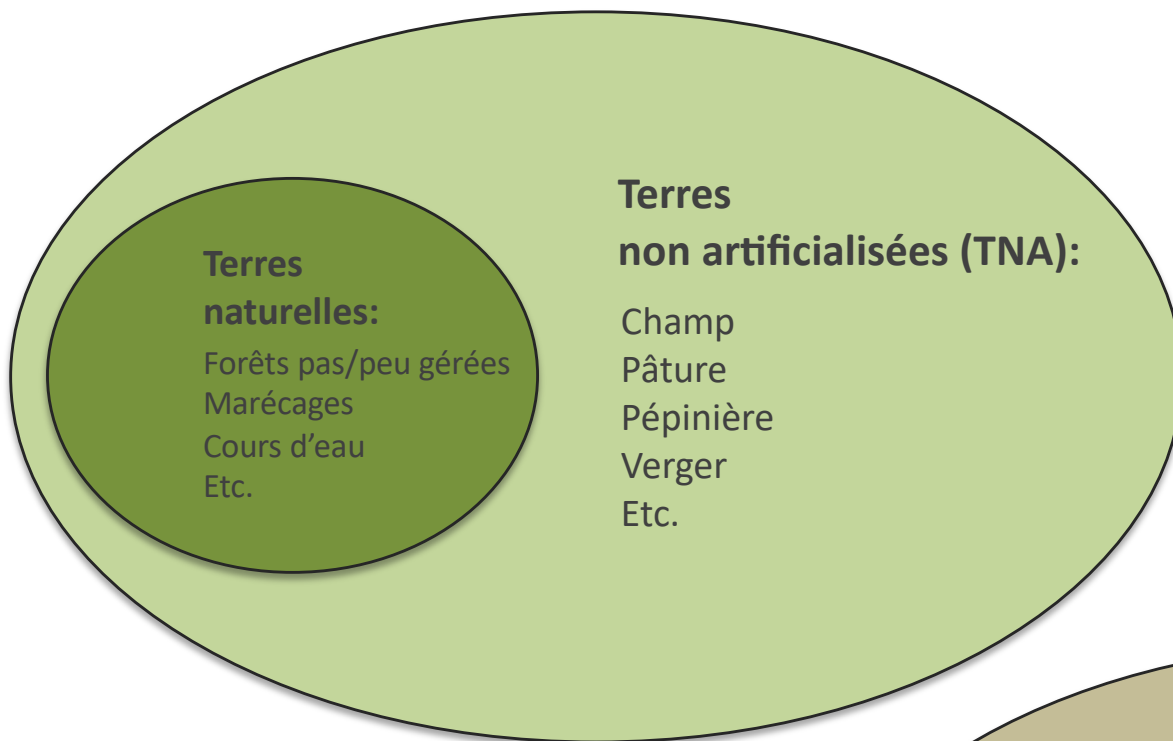
Forêts pas/peu gérées
Marécages
Cours d'eau
Etc.

**Terres
Artificialisées (TA):**

Parc urbain
Terrain de sport
Jardin d'une habitation
Allée privée en graviers
Carrière
Etc.

**Terres
imperméabilisées:**

Autoroute
Parking asphalté
Terrasse carrelée
Bâtiment
Etc.



1) Definitions



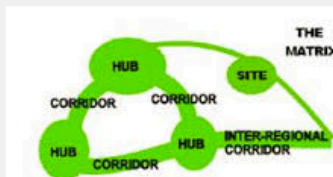
Limits of the “land take” concept?

“**Urban green infrastructures**” providing various **ecosystem services** are considered as « taken ». Yet they are weak urban functions that need to be promoted and protected face to other, stronger urban functions (e.g. housing, commerce...).

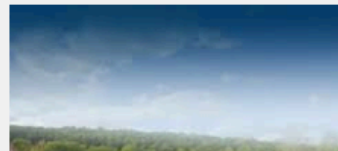
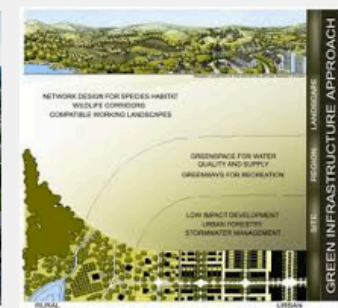
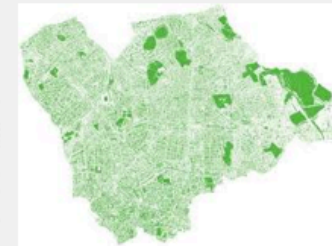
1) Definitions



> Need for “green infrastructure planning”

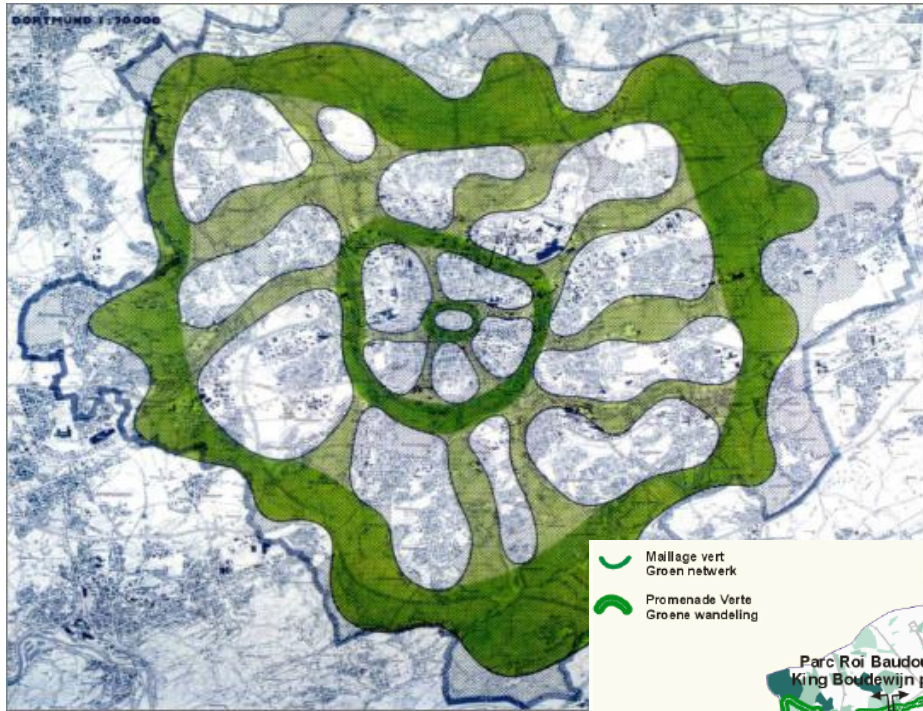


WORLD GREEN
INFRASTRUCTURE
CONGRESS

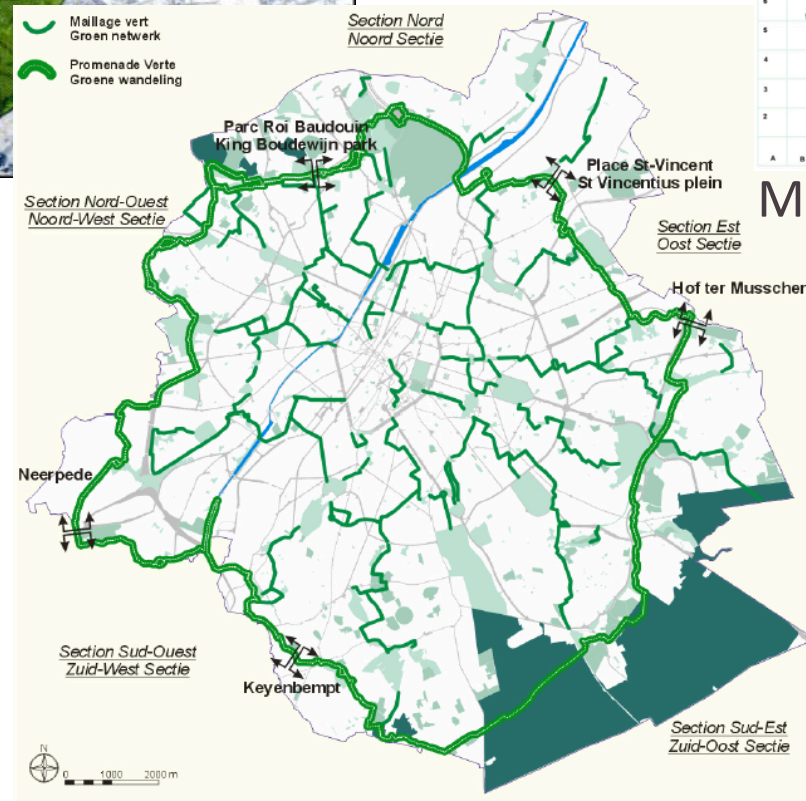


- interconnected network of green space that helps conserve natural ecosystem values and functions
- prevents and receives runoff, 24 hours a day

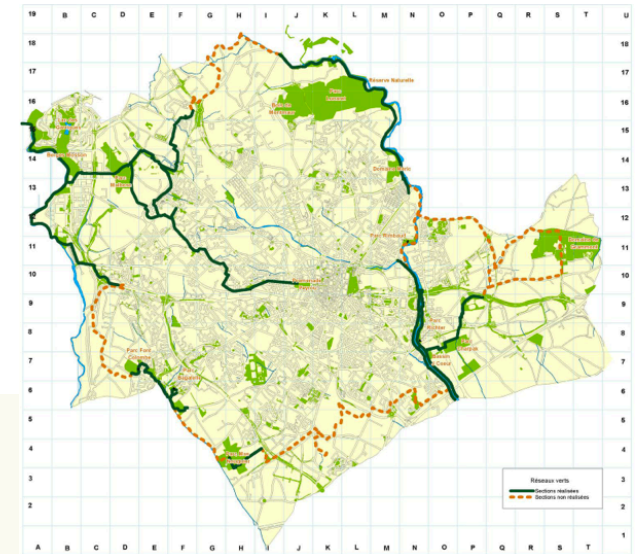




DORTMUND

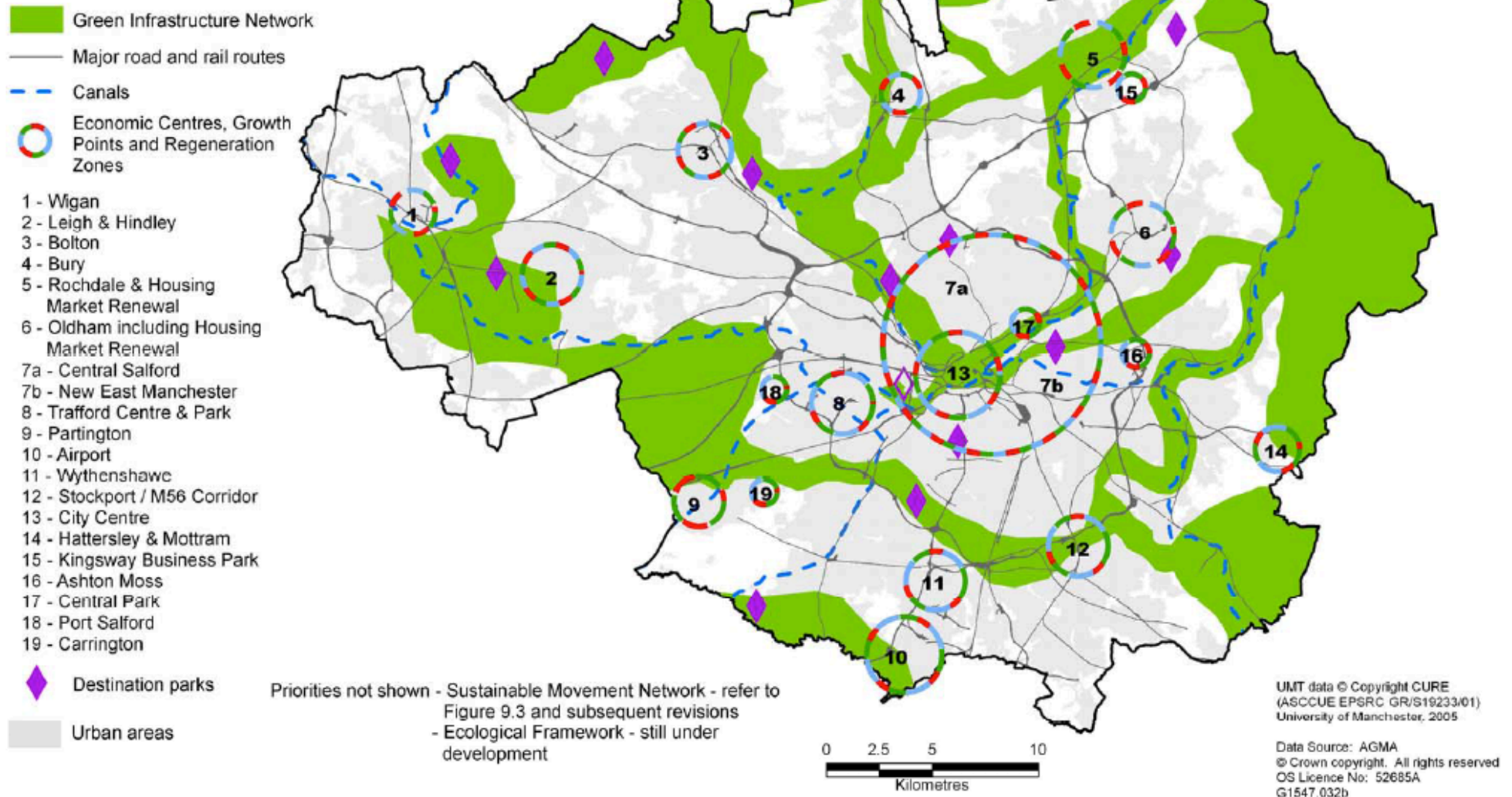


BRUXELLES



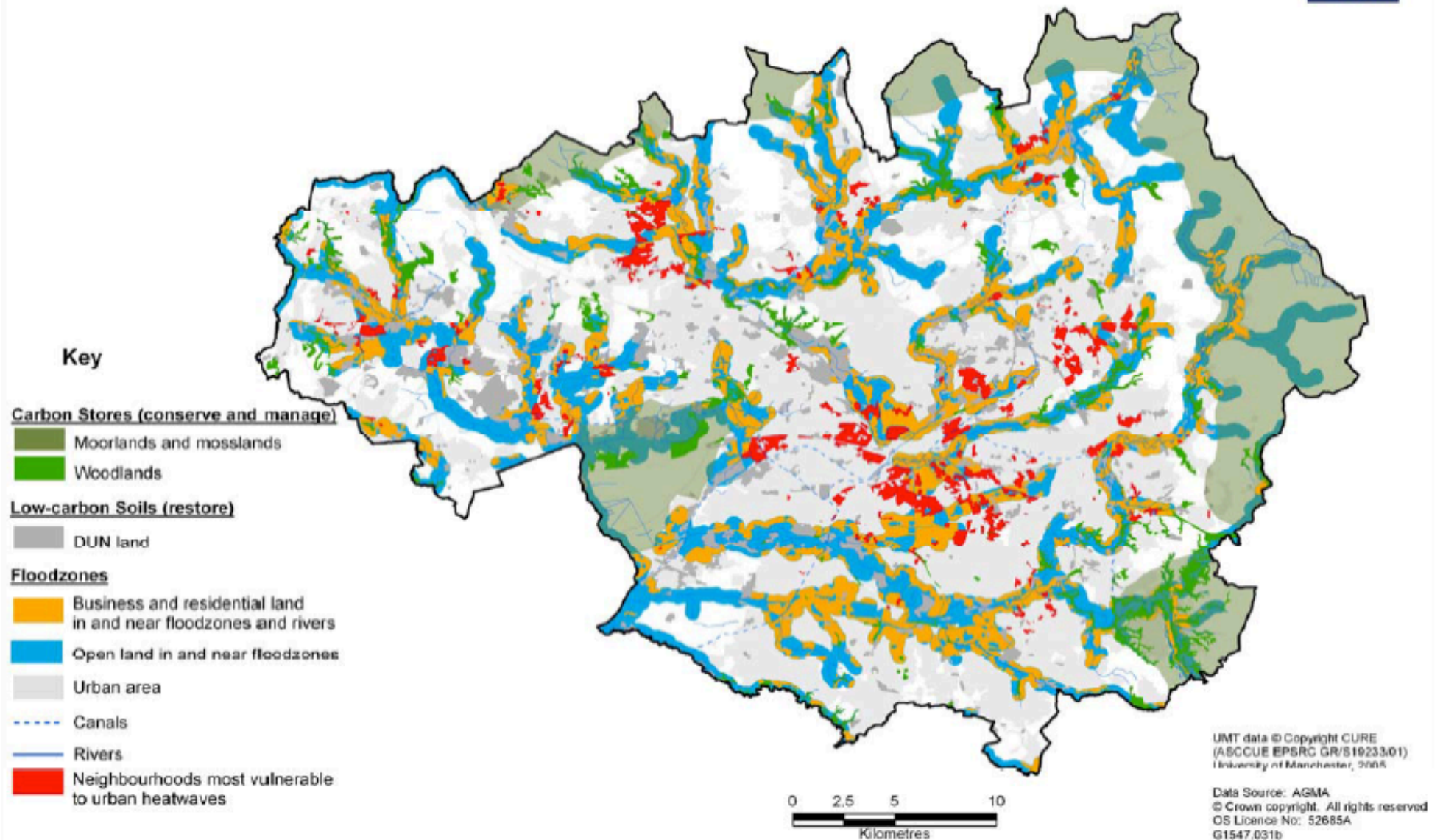
MONTPELLIER

Priority Areas for Green Infrastructure Investment



SOURCE: GREEN INFRASTRUCTURE FEASIBILITY STUDY FOR GREATER MANCHESTER (2008)

Figure 9.4 Green Infrastructure in a Changing Climate - Key Diagram



SOURCE: GREEN INFRASTRUCTURE FEASIBILITY STUDY FOR GREATER MANCHESTER (2008)

1) Definitions



> Ongoing CPDT research on this topics

(Partners: Lepur-ULiège & IGEAT-ULB)

1) Definitions



Monitoring of « land take »?

EU:

CORINE Land Cover:

Remote sensing > Land Cover > Land Use

Resolution: 25 ha (5ha for change observation)

Wallonia:

Land register (« *Cadastre* »)

Resolution: parcel

1) Definitions



Monitoring of « land take »?

EU:

CORINE Land Cover:

Remote sensing > Land Cover > Land Use

Resolution: 25 ha (5ha for change observation)

Wallonia:

Land register (« *Cadastre* »)

Resolution: parcel > **Limits !**

1) Definitions



« Urban Sprawl »?

3 dimensions:

- Land take
- Spatial distribution (sprawl, fragmentation...)
- Efficiency

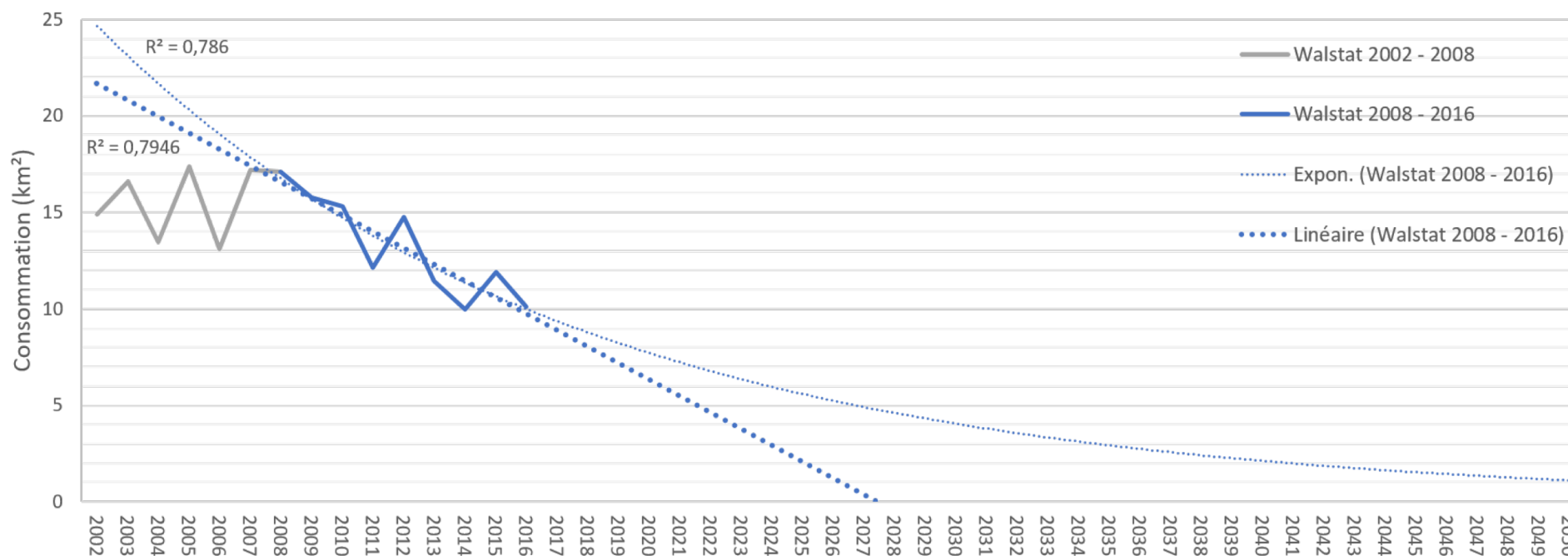
« Urban sprawl is a prime example of the tragedy of the commons. The benefits of using land go to a single citizen or commercial outlet while the detrimental effects are shared by society » (EU Commission, 2016).

2) Diagnosis

2) Diagnosis



Rythme de l'artificialisation (CPDT, 2018):

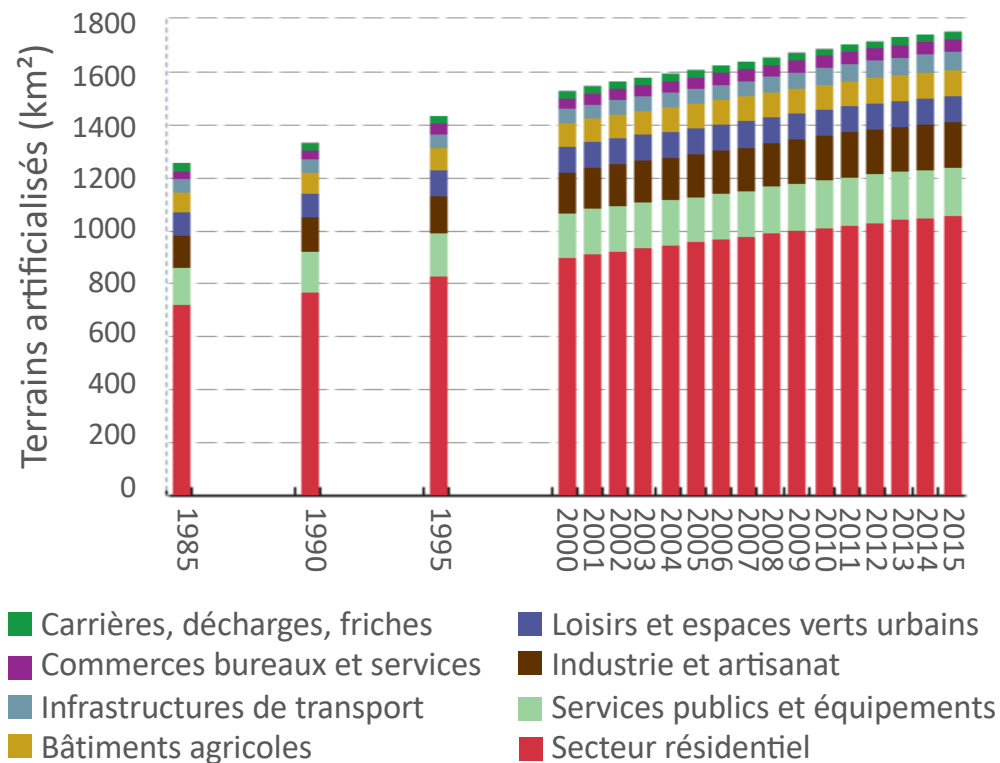


CPDT, 2018 – Sources : données d'artificialisation du territoire (IWEPS, 2018)

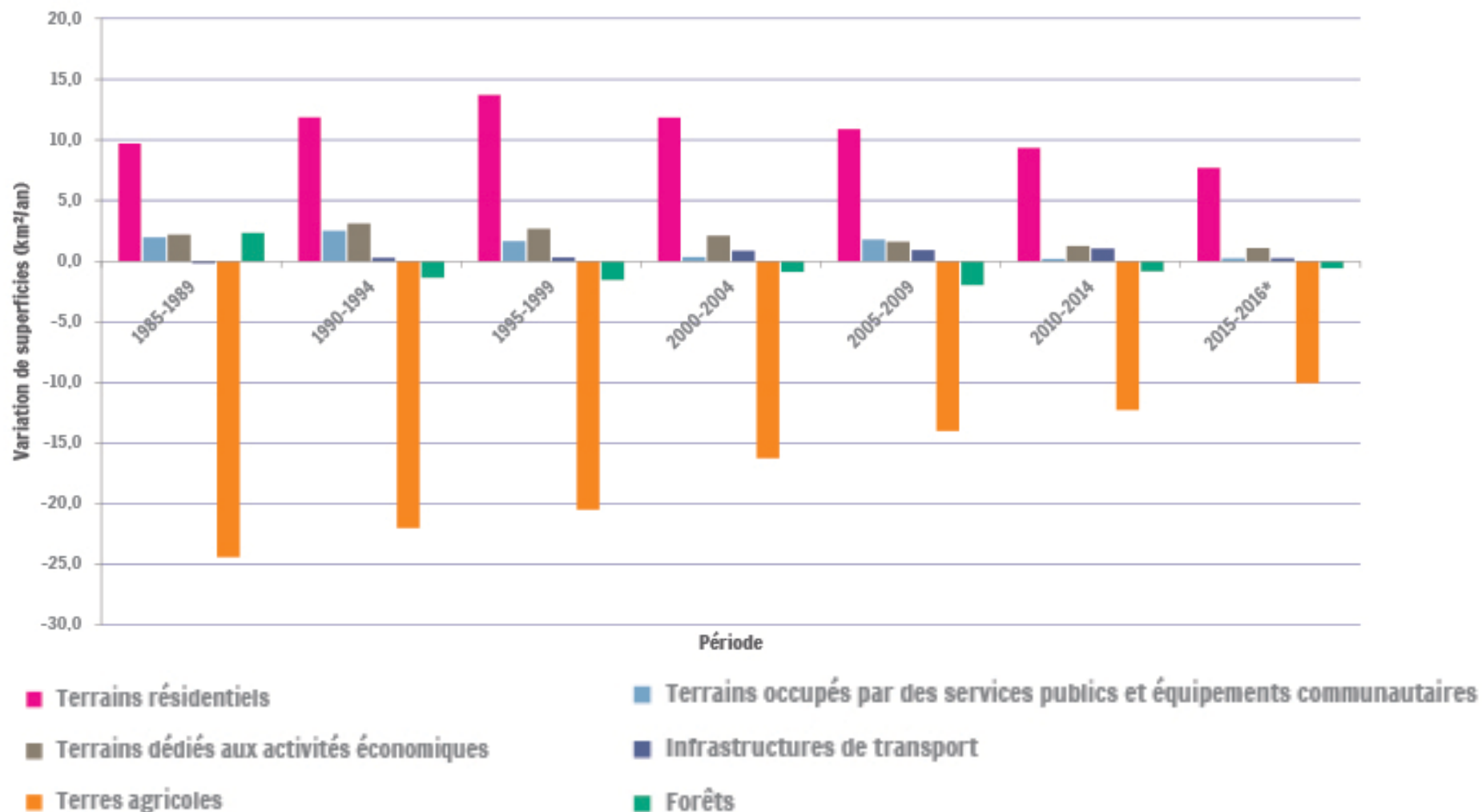
2) Diagnosis



Superficie artificialisée (REEW, 2017)



2) Diagnosis

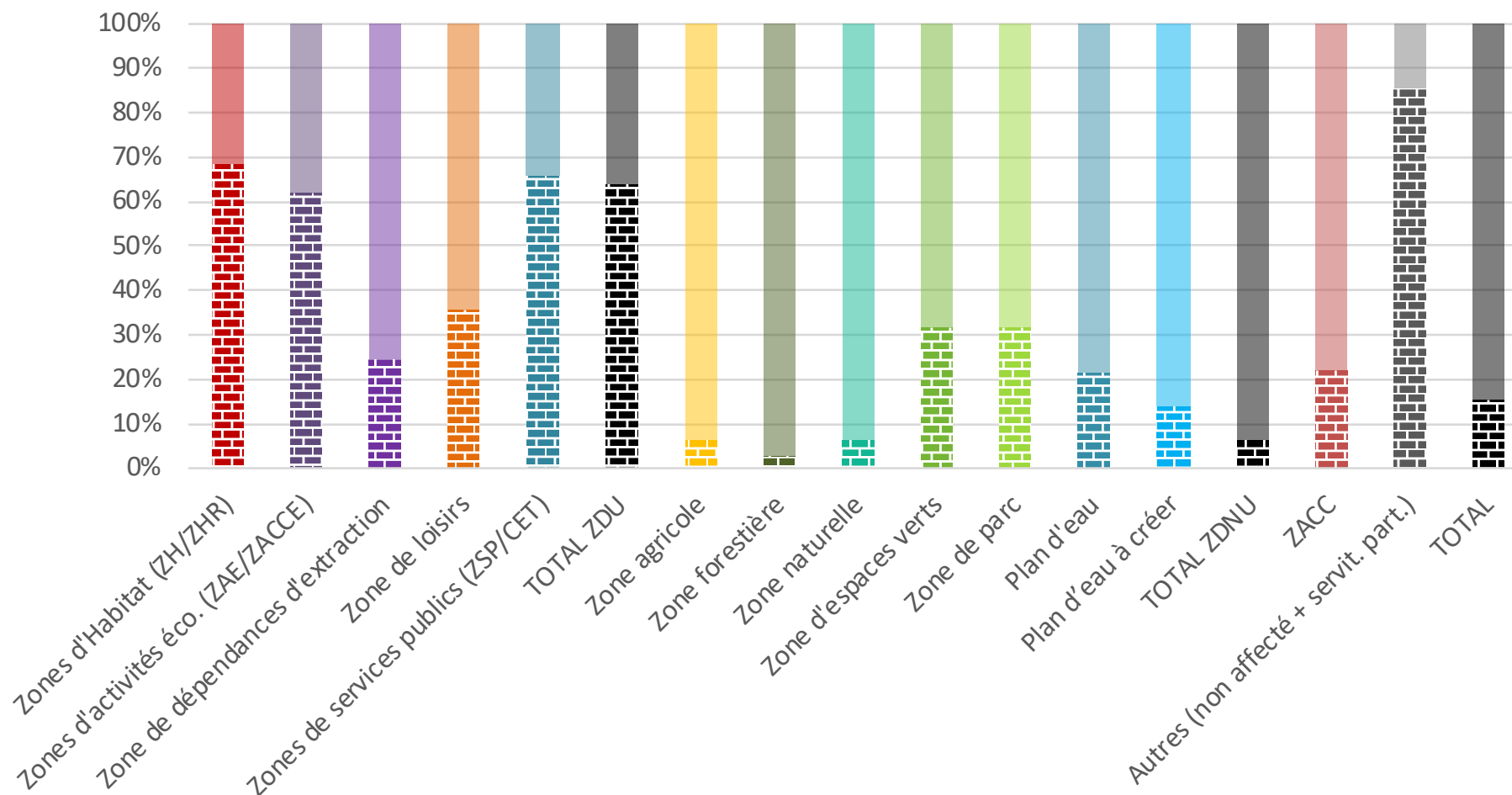


CPDT, 2018 – Sources : IWEPS Fiche Artificialisation du sol ;
dernières données régionales disponibles au 01/09/2018

2) Diagnosis



Taux d'artificialisation par affectation au plan de secteur:



CPDT, 2018 – Sources : SPF Finances – AGDP Cadastre ; SPW DGO4 – Plan de secteur

2) Diagnosis

Approche systémique de l'artificialisation des sols (CPDT, 2018):

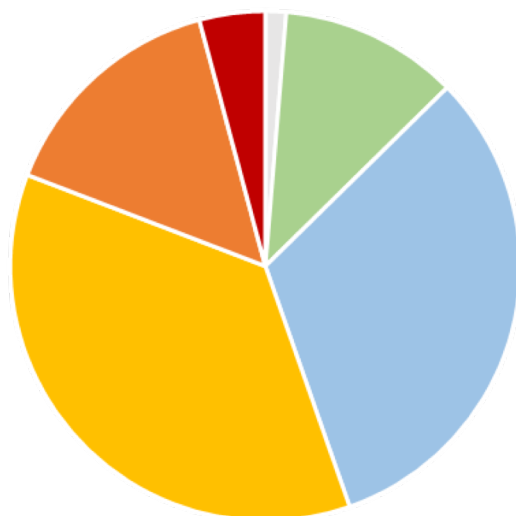


2) Diagnosis



Nombre de logements actuels :
1.553.749

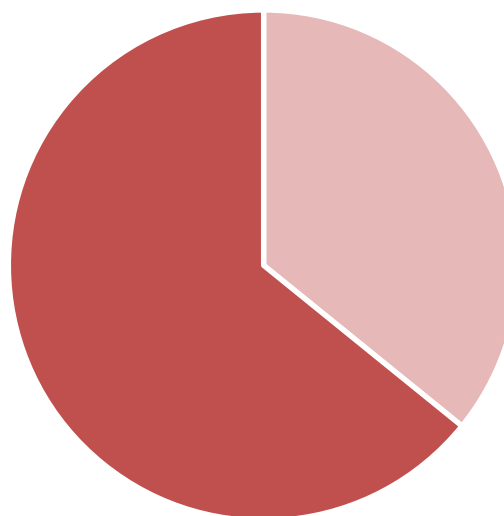
Taille des logements actuels :



■ Pas de chambre
 ■ Deux chambres
 ■ Quatre chambres
 ■ Une chambre
 ■ Trois chambres
 ■ Plus de quatre chambres

Nombre de ménages actuels :
1.576.749

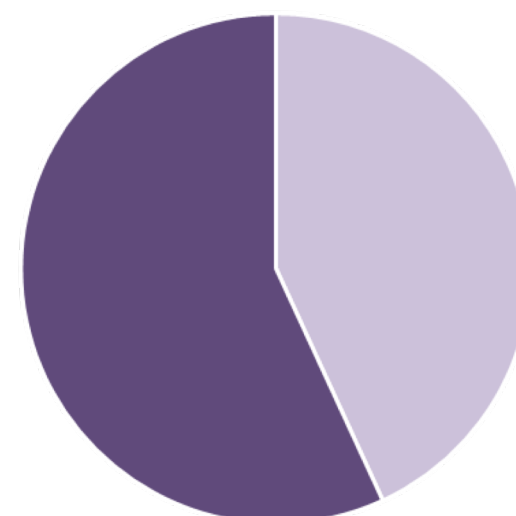
Taille des ménages actuels :



■ Ménage isolés 2018
 ■ Ménage non isolés 2018

Nombre de ménages attendus en 2050 :
1.832.654

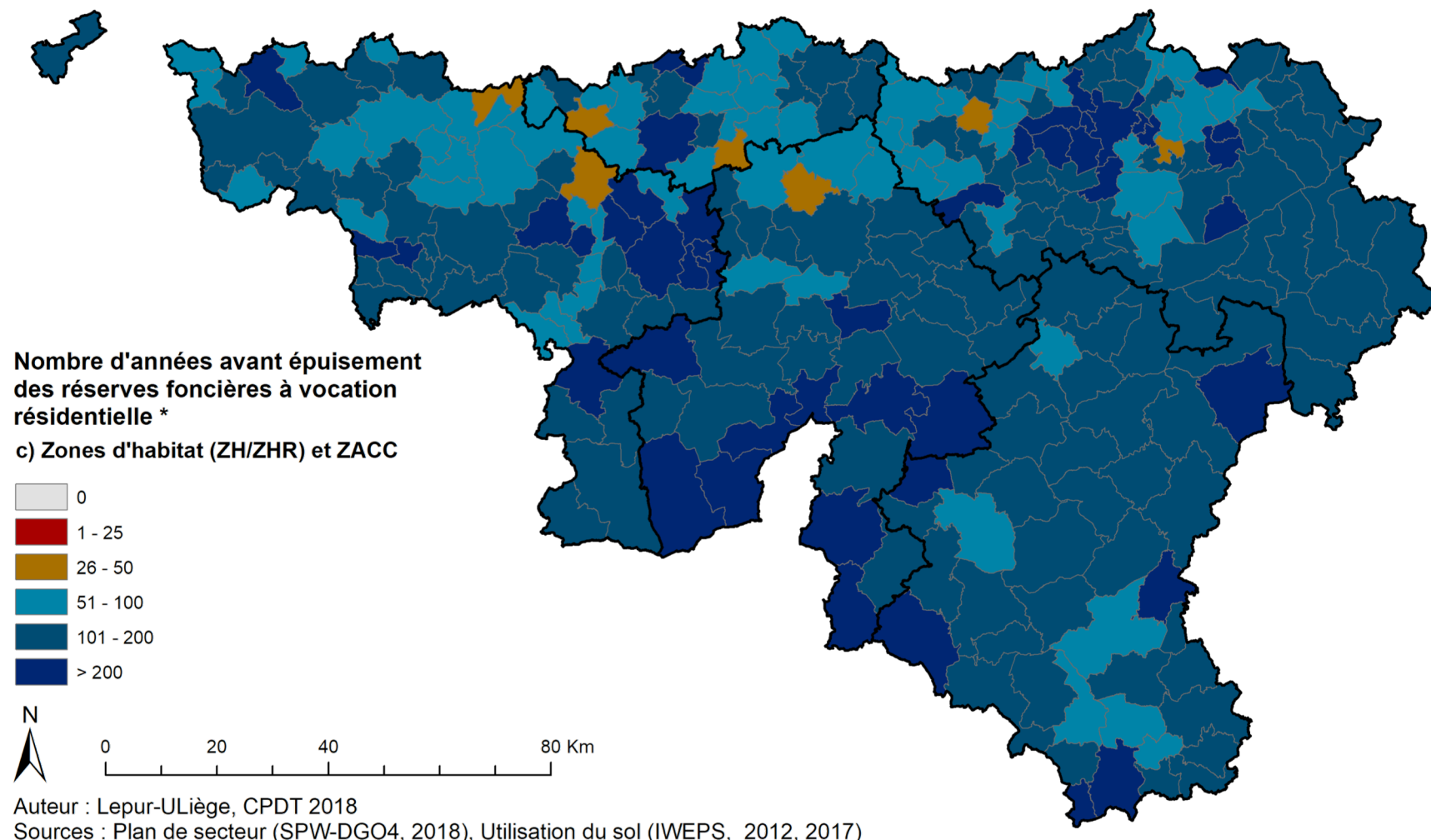
Taille des ménages en 2050 :



■ Ménages isolés 2050
 ■ Ménage non isolé 2050

CPDT, 2018 – Sources : Perspectives des ménages (BFP, 2017),
enquête qualité de l'habitat (CEHD, 2012), statistiques des logements (IWEPS)

2) Diagnosis



* A partir de 2017, dans l'hypothèse d'un scénario tendanciel basé sur la consommation observée de 2012 à 2017.

2) Diagnosis

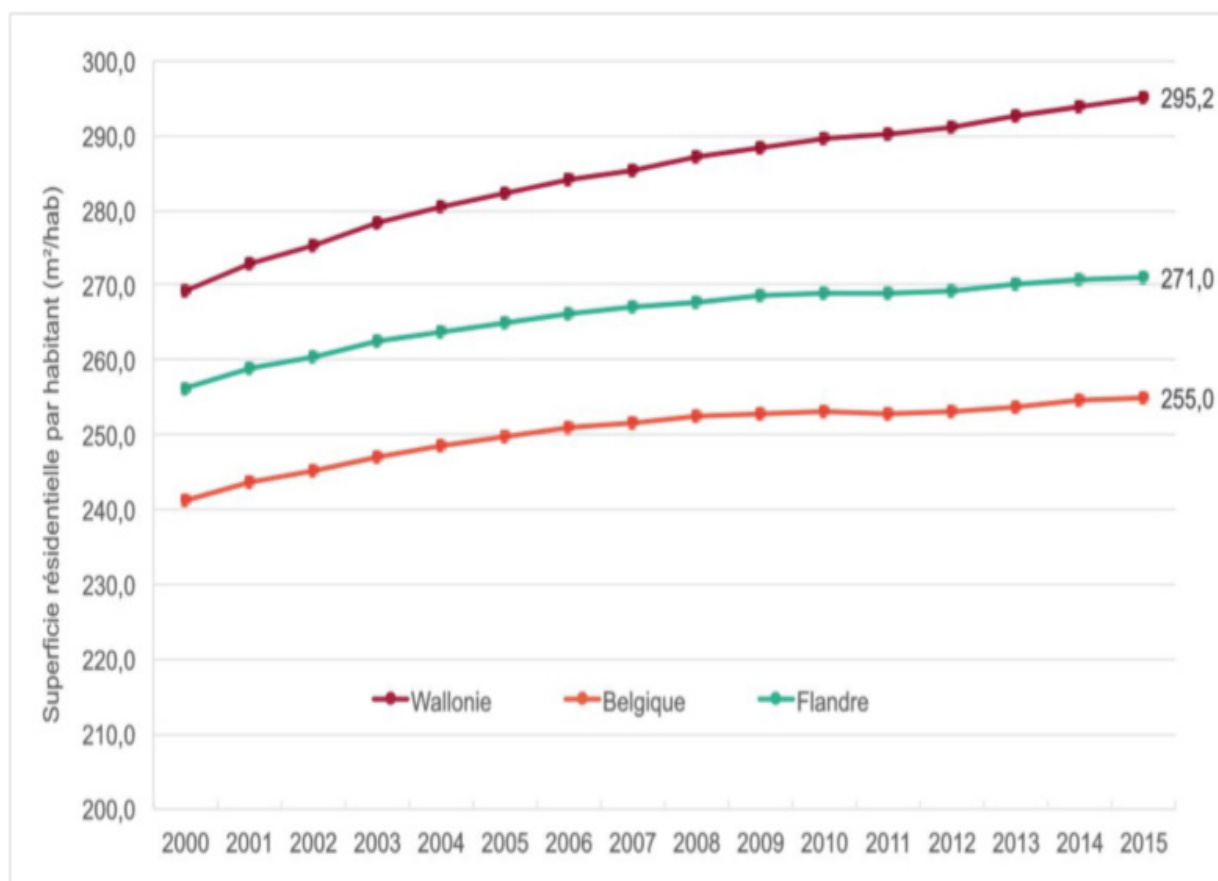


	<u>Belgique, Wallonie</u>	<u>Belgique, Flandre</u>	<u>Luxembourg</u>	<u>Allemagne, Rhénanie- Palatinat</u>	<u>Allemagne, Rhénanie- du-Nord Westphalie</u>	<u>Suisse</u>
Disponibilités foncières (ha)	56 460	29 344	2 719	6 000	19 043	27 960
Population	3 602 206	6 477 804	590 700	4 052 803	17 890 100	8 431 702
Taux de disponibilité (ha/pour 1000 habitants)	15.7	4.5	5.1	1.5	1.1	3.3
Croissance moyenne annuelle relative de population (%)	0.49	0.60	2.46	0.11	0.39	1.19

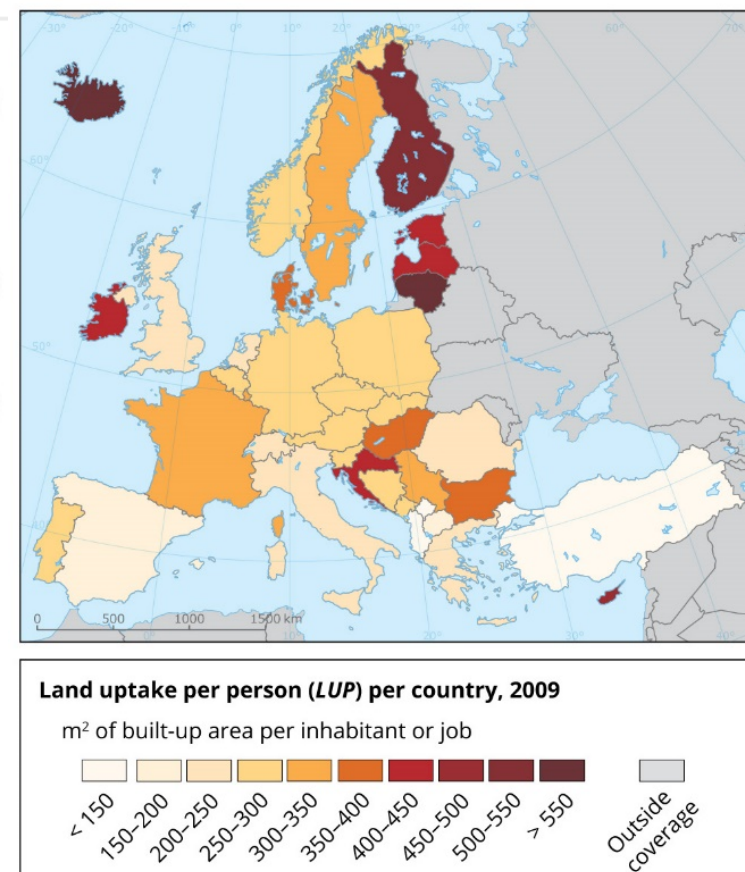
Lepur-ULiège, 2018. Années des données et sources : 2018 (Direction de l'Aménagement régional, 2018), 2016, entre 2010 et 2016 (Statbel, n.d.) pour la Wallonie ; 2016 (Departement Omgeving, n.d.), entre 2010 et 2016 (Statbel, n.d.) pour la Flandre ; 2013 (Observatoire de l'Habitat, 2015), 2013 et entre 2010 et 2013 (STATEC/CTIE, 2018) pour le Luxembourg ; 2014 (Lagemann, 2016), 2016 et entre 2016 et 2018 (Rheinland-Pfalz Statistisches Landesamt, 2016, 2018) pour la Rhénanie-Palatinat ; 2014 (Osterhage, Eichhorn, & Rönsch, 2015), 2017 et entre 2012 et 2017 (Information und Technik Nordrhein-Westfalen, 2016) pour la Rhénanie-du-Nord Westphalie ; 2017 (Giezendanner & Maurer Weisbrod, 2017), 2017 et entre 2010 et 2017 (Statpop, 2017) pour la Suisse.

2) Diagnosis

Superficie résidentielle par habitant:



Sources : Charlier et Reginster, 2017 - SPF
Economie/Direction générale Statistique, SPFF/AGDP



Sources : EEA & FOEN, 2016

2) Diagnosis



At the EU level?

« Since the mid-1950s, the total surface area of cities in the EU has increased by 78% while the population has grown by just 33% » (EU Commission, 2016).



3) Objectives

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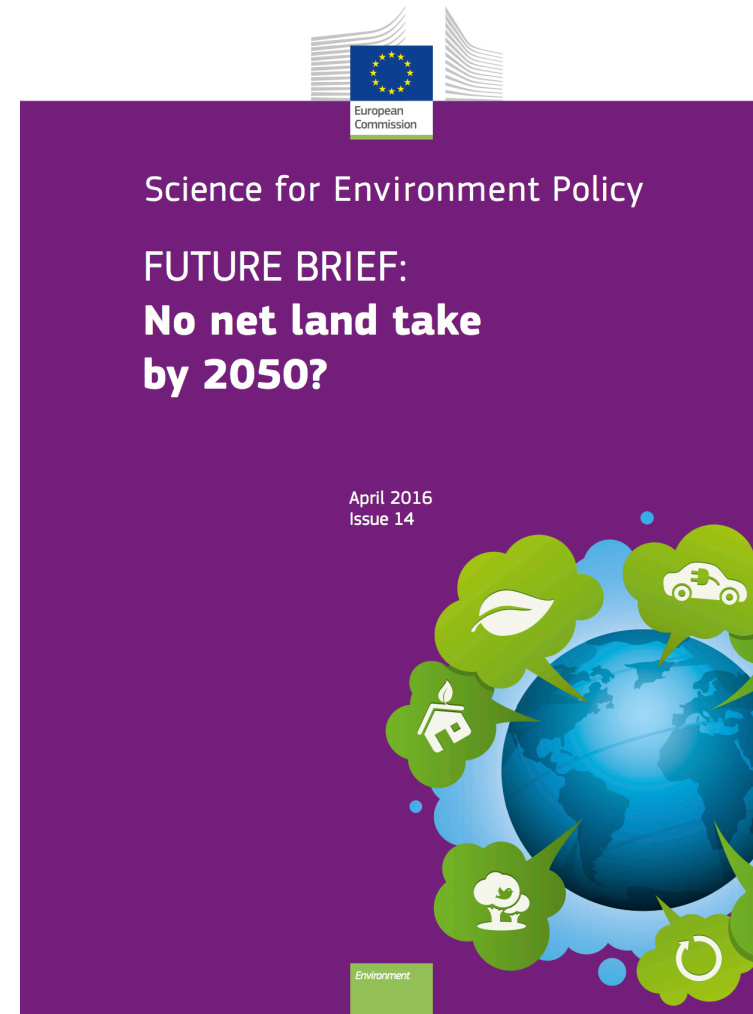
EU target:

No net land take by 2050
(EU Commission, 2011)



3) Objectives

> **EU operational objective :**
Average annual land
consumption limited to
1,6 square meter per capita
by 2020 !



3) Objectives

Wallonia:

Objectives of the SDT* are to progressively reduce land take in order to:

- Limit it to 6 km²/year by 2030
(= half of the actual consumption)
- Tend towards 0 km²/year by 2050.

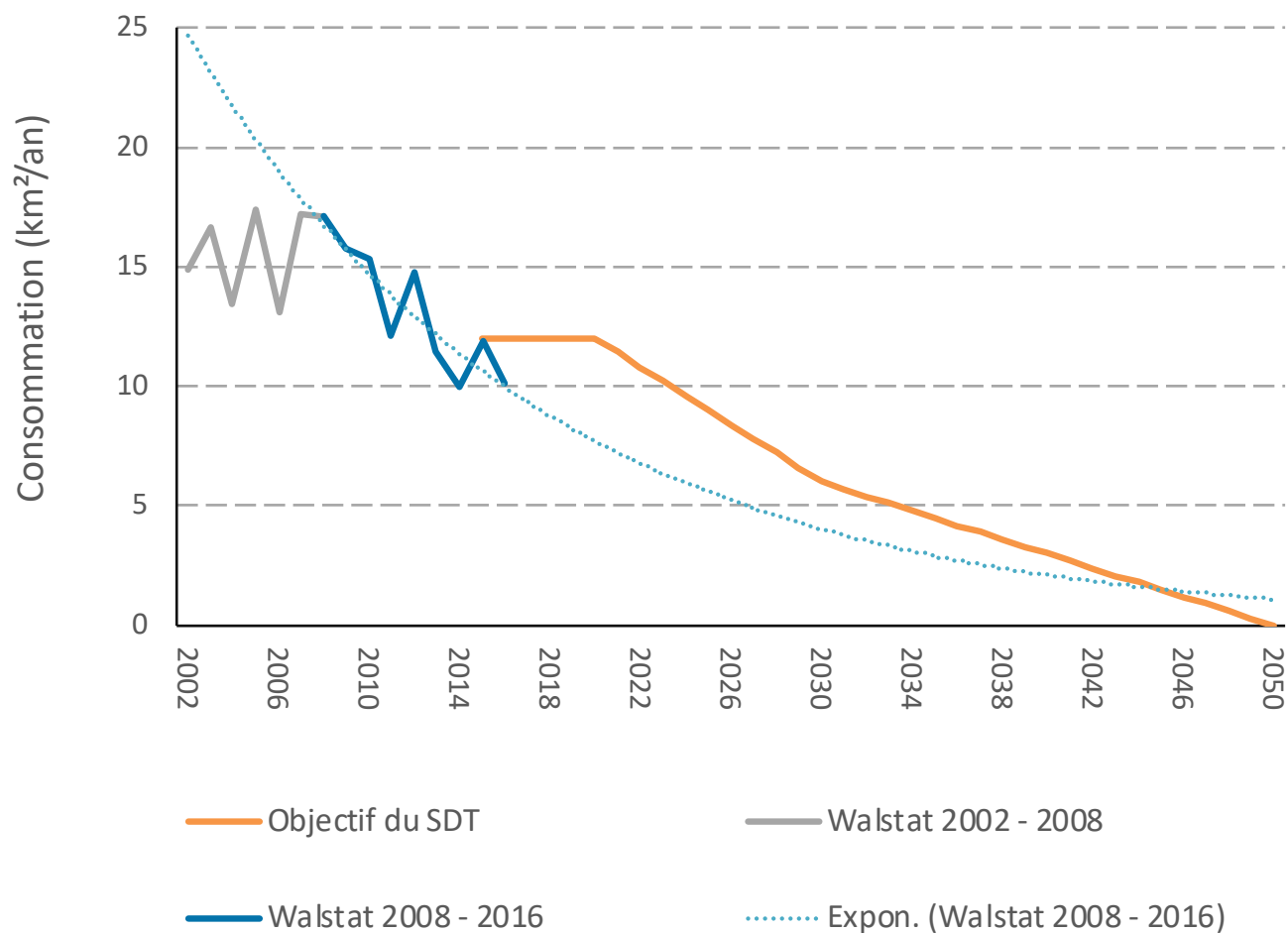
* *Schéma de Développement du Territoire*



3) Objectives



Objectives of the Walloon SDT:



3) Objectives



Other targets included in the SDT:

- Housing:

By 2030: At least 50% of new housing created through recycling (demolition & reconstruction / reuse of existing buildings)

By 2050: 100% new housings created through recycling

- Economic activities:

By 2030: At least 30% of economic buildings created through recycling (demolition & reconstruction / reuse of existing buildings)

By 2050: 100% economic buildings created through recycling

+ Location of commercial functions in urban-rural “centralities” / offices in areas well served by public transport.

3) Objectives



Objectives of the new Walloon government (DPR 2020-2024):

Stop **urban sprawl** by 2050 through the following objectives:

- Reduce and cap land take by 2025;
- Preserve as much as possible agricultural areas;
- Maintain, reuse or renovate existing buildings;
- Direct as much as possible new construction towards existing urban fabrics (urban, rural or periurban) well served by services and public transport;
- Restore biodiversity.

3) Objectives



Objectives in other EU Member States :

	Belgique, Wallonie (projet de SDT)	Belgique, Flandre	Luxembourg	Pays-Bas	Allemagne	Royaume- Uni	Suisse
Artificialisation (objectif quantitatif)	1,6 ha/j. en 2030 0 ha/j. en 2050	3 ha/j. en 2025 0 ha/j. en 2040	1 ha/j. en 2020	-	30 ha/j. en 2020 20 ha/j. en 2030	-	-
Logement (objectif quantitatif)	2030 : 50% des nouveaux log. en tissus bâtis 2050 : 75%	-	-	-	1 log. hors tissus urbains pour 3 log. en tissus urbains	60% des nouveaux log. sur <i>brown- fields</i>	Max. 20% de résidences secondaires par commune
Objectifs qualitatifs	-	Rendement spatial	-	Utilisation efficace du sol	-	Evaluation continue des besoins fonciers	Densification des zones bâties



4) Challenges, strategies & tools

4) Challenges, strategies & tools

Challenges:

- Boost urban recycling
- Direct new construction towards existing urban fabrics
- Change general public values
- Regulate densities
- Ensure housing affordability
- Finance the policy
- ...

4) Challenges, strategies & tools

Five possible strategies (inspired by benchmarking):

1. Business as usual
2. Authoritarian
3. Swiss style
4. Structural changes
5. American style

4) Challenges, strategies & tools

Participants' reactions during the « Living Lab » sessions?

The ideal would be a mix of measures adapted from scenarios 2 to 5.

4) Challenges, strategies & tools

> Objectives of the 2019 research (ongoing):

Decision support tool (multi-criteria analysis models) for:

- Spatial and sectorial specifications of the land take reduction objective
- Revising land use plans (*plan de secteur*) in order to reduce the size of the buildable area

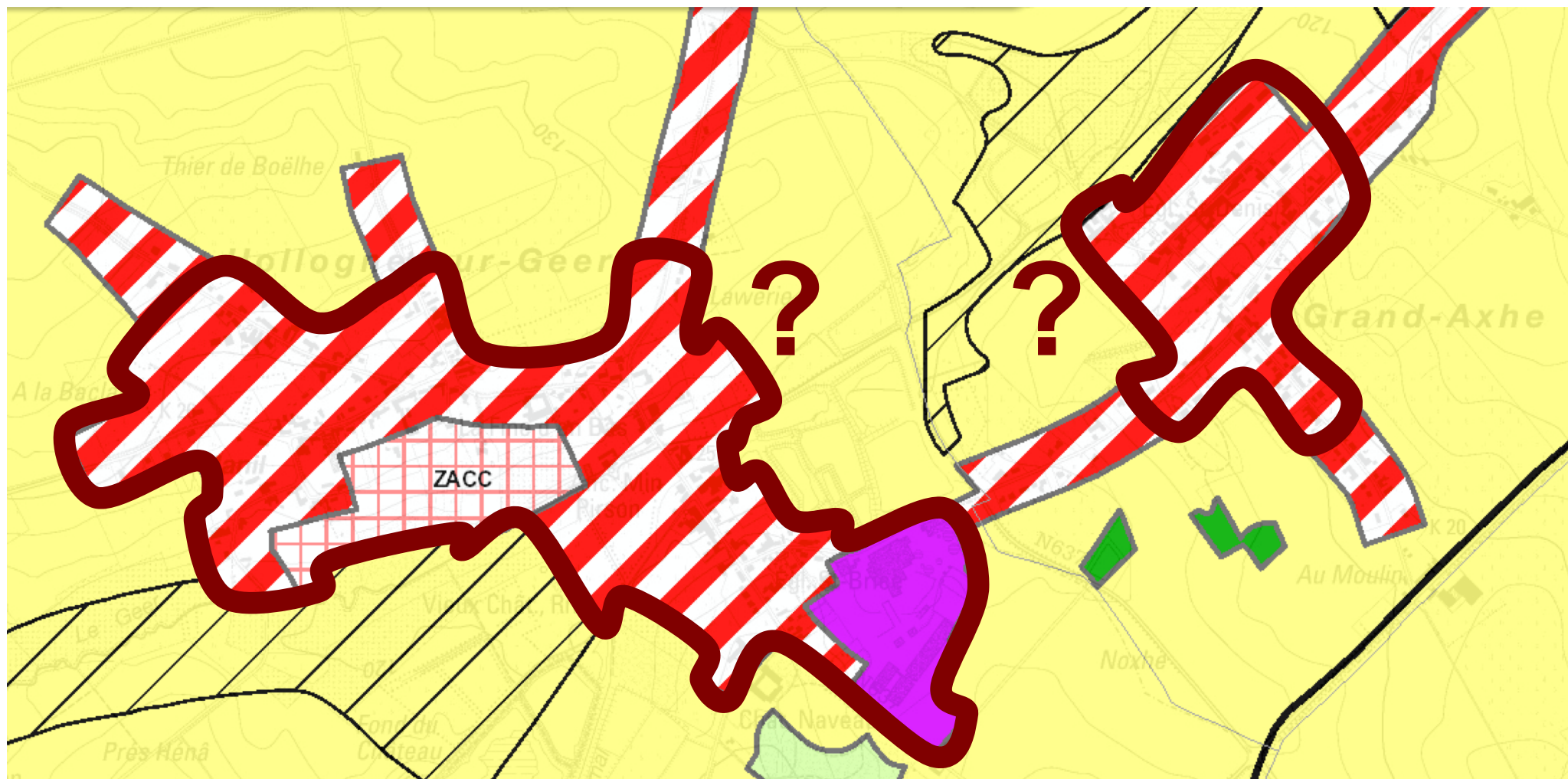
+ Recommendations for measures to support implementation of the policy (planning tools, VAT reduction for land recycling, tax on sprawl, partial capture of the added value generated by higher densities, etc.)

4) Challenges, strategies & tools

Planning tools to reduce the buildable area and contain urban sprawl ?

4) Challenges, strategies & tools

« Settlement boundaries » ? (inspired from UK)



4) Challenges, strategies & tools

Refine the status of the buildable areas (inspired from Germany, Luxembourg...)?

- Existing urban fabrics
- Extension areas
- Extension reserves
- Areas to be preserved

4) Challenges, strategies & tools

Advantages of planning tools aimed at containing urban sprawl:

- Legal certainty for developers
- Direct developments to the right places
- More efficiency for public services / amenities
- Protection of open countryside (from fragmentation)
- Based on assessment of land requirements

4) Challenges, strategies & tools

Risks associated to planning tools aimed at containing urban sprawl:

- Increase of land values
- Risk of density (need for regulation)
- Higher pressure on open spaces

4) Challenges, strategies & tools

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- Higher pressure on open spaces

> Additional arguments in favour of green infrastructure planning !

4) Challenges, strategies & tools

Other tools: financial, governance, educational, etc.

- Raise awareness (change values and practices)
- Support recycling (of land and buildings)
- Discourage new construction out of existing urban fabrics
- Encourage functional mix in urban-rural polarities
- Develop urban green infrastructure (quality of life,...)
- Finance the policy (compensate depreciation thanks to a part of the added value generated)
- Ensure housing/land affordability



5) Cross-border considerations

Thank you!