



FNAU seminar

TOWARD THE ZERO NET ARTIFICIALIZATION (ZNA) OBJECTIVE: STRATEGIES AND ACTIONS AGAINST LAND COVER IN EUROPE

June 23, 2023



Acknowledgements

Facilitators of the seminar



Invited participants:

- Constance Berté, in charge of land policy, Ministry for the ecological transition and territorial cohesion, France
- Fabrizio Cipolat, Director of territorial development, Province of Namur, Belgium
- Francis Vercamer, vice-President of Lille European Metropole, Presidence of Lille urban planning and urban development agency, France
- Giuseppe Bettoni, geography and geopolitics Professor at Tor Vergata University, Rome
- Paolo Ferrecchi, Director of the « soil and environment health » department, Region of Emilia-Romagna, Italy
- Sandra Marsaud, elected Deputee of Charente, France
- Tom Sanders, Director of territorial strategy at Perspective Bruxelles, Belgium

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Editorial

With the 2021 Climate and Resilience Act, the French government provided a framework to implement land sobriety strategies aiming for a zero net land take goal by 2050. This is part of a broader European target defined by a 2011 guideline, promoting the efficient use of resources in Europe. This guideline sets the goal to stop the net increase of land occupation in Europe by 2050. It requires that member states take better in consideration direct and indirect uses of land in their decision making, and the consequences for the environment. It also asks to limit as much as possible the use of new lands and impervious surfaces.

Protecting natural resources and land is thus a collective goal in the EU. The French national federation of urban planning agencies (FNAU) launched the initiative of a comparative analysis of approaches and choices in different states of the EU. This was done with a group of Sciences Po students (Institute of Political Studies in Paris) and based on experiences in Belgium, Italy, Germany and Spain. It gave way to a seminar that took place on June 29, 2023, with the idea being to highlight and share thoughts on various action tools used in those European countries.

Land consumption in Italy

Giuseppe Bettoni, geography and geopolitics Professor at Tor Vergata University, Rome

To address the issue of land consumption, Italy relies on ISPRA (Istituto superiore per la protezione e la Ricerca Ambientale). This national observatory analyses, measures and makes sure that land take tendencies are properly tracked down on the territory. ISPRA is an independent research organization under the lead of the Italian Ministry of the environment. It offers a three-level, multidimensional analysis to better understand challenges related to land consumption.

In 2020, Italy underwent an intensification of its land use with a notable increase of artificialized surfaces, especially in Rome. This happened despite a fairly stable economic growth. This expansion has been known as “infinite city”. It goes from Novare to Venice. It has more to do with economic growth than demographic growth.

In Italy, land consumption isn’t managed in the same way everywhere in the country. One of the specificities of the Italian system is that regions are in charge of their land development, which grants them great autonomy to manage their territory. No cohesive law exists at the national level to regulate land takes, making for strong disparities in how regions deal with this kind of regulation and what tools they use to do so.

Among these regions, three of them - Aosta Valley, Trentino-Alto Adige/Südtirol and Sardinia – provide good examples of good land protection, having managed to keep land consumption to levels similar to rates registered in the 50s. They’ve kept a balance between urban development and environmental protection. In the opposite, two other regions – Lombardy and Veneto – are notable for their high level of land consumption, which comes dangerously close if not over the critical 12% limit.

Seeing this disparity, legislating on national laws seems essential to allow for more cohesive answers. Besides, no law in Italy deals with coastal lands. This shows the need there is for a more global and cohesive approach to law making, in order to address environmental issues.

The regional law in Emilia-Romagna and the 3% territory urbanization limit

Paolo Ferrecchi, Director of the « soil and environment health » department, Emilia-Romagna, Italy

Emilia-Romagna is among the regions in Italy with the highest artificialization rate. Since 2017, a regional law has set a 3% land consumption limit that applies to urbanized land in cities by 2050. It has also defined a surveillance system that a regional observatory has to oversee. This law intends to significantly reduce land consumption and promote urban renewal projects. The goal is supported by a regional program for city urban renewal projects.

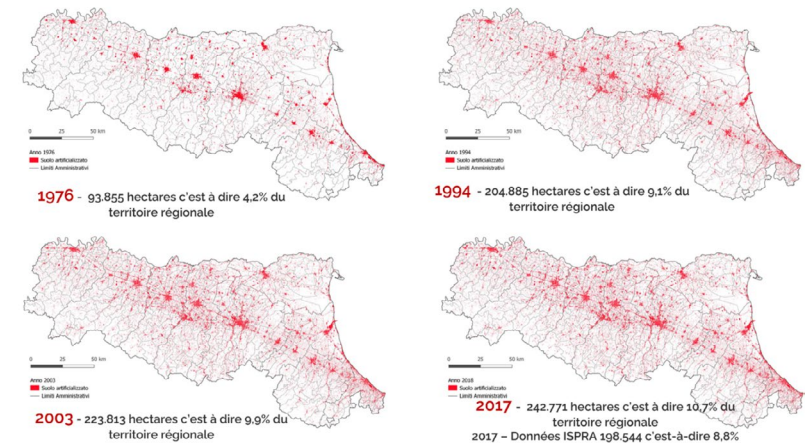
PART OF THE 3%	NON PART OF THE 3%
<ul style="list-style-type: none"> New «production» sites New interventions on housing units, only if they're connected to urban renewal projects or to «building energy restructuring» 	<ul style="list-style-type: none"> Public construction work and urban parks Extension of production installation (add-ons of complementary units to existing ones) New production sites with national or regional strategic interests Building located in rural areas dedicated to farming

Measuring land cover between 1976 and 2017: CORINE Land Cover

The differences in how ISPRA (national level) and the region of Emilia-Romagna measure land cover shows that a variety of processes can exist to assess and manage land cover. For instance, Emilia-Romagna has higher data than ISPRA because the former includes urban parks; ISPRA, however, considers photovoltaic installations which the region doesn't.

As a regional entity, Emilia-Romagna adjusts its criteria to its specific needs and context.

According to the projections of regional urban development plans (PRG) and to municipalities sectorial plans (PSC), the region is projecting the urbanization of up to 250 sqm, thanks to the implementation included in the current of PSCs' dispositions. Yet to stick to the 3% decrease goal would imply a 70% decrease compared to the plans that have been approved. Regional authorities rely on the hypothesis that a maximum of 30% of the initial plans will be implemented by 2050.



This law triggered some protests, for three main reasons:

- its impact on land use revenues
- its negative financial impact on activities (land value decrease in some cases, leaving companies with debts linked properties value loss)
- less tax revenues for municipalities

The situation led to a new general urban development plan (PUG). Its goal:

- **defining usual transformations of construction areas** : the general urban development plan specifies what transformations can be made to already existing buildings and here provides a guideline for ordinary urban development
- **setting criteria for urban expansion, limited to 3% of the area that is to be urbanized** : the plan defines rules to control the expansion of urban areas, to make sure the expansion stays within the 3% limit of the urban area's global surface.
- **including urban and environmental strategies**: the plan includes a global strategy to manage urban development, emphasizing the need for environmental quality and sustainability.

Public calls for urban regeneration as a tool of action

The region set out public calls for urban regeneration projects to limit land consumption in municipalities. These calls are used as a funding tool to initiate urban regeneration processes based on action and intervention systems tackling various aspects of regeneration needs. This means reusing, reclaiming and valuing the environmental, urban and social heritage. To this day, 47 contracts of urban regeneration were approved and signed.

This project targets small and medium-sized cities specifically and involves specific modalities. Firstly, contributions are allowed to do light repairs on already existing buildings specifically meant for temporary use. Then, this initiative supports immaterial actions of which the goal is to stimulate social regeneration processes and fruitful partnerships. Lastly, the project seeks to help with adopting energy and environmental certification protocols. The idea behind it is to expand urban development to all areas and avoid its excessive development in big cities.

Project results:

- 79 propositions brought up by local authorities
- Global cost of about 81 million € for the totality of selected projects
- Interventions were certified to ensure quality standards in the implementation phase.

Land take and climate change: Emilia-Romagna and its floods

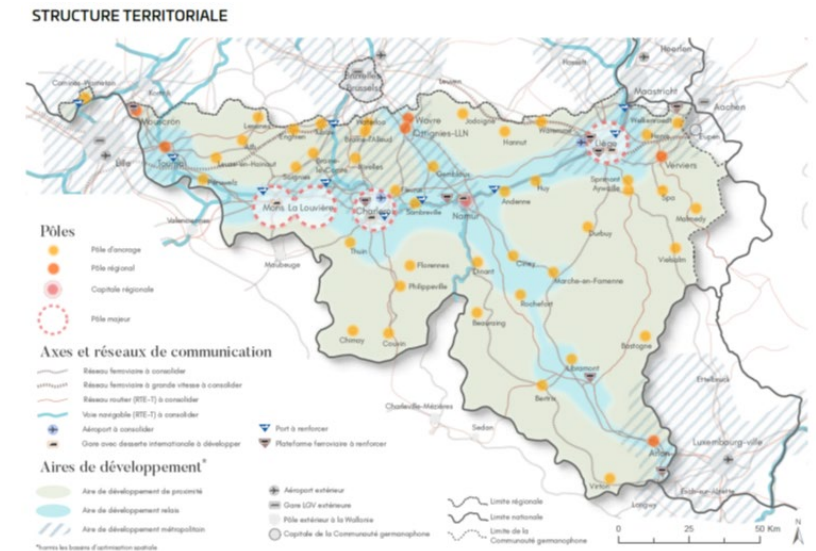
The link between land cover and climate change has become more and more obvious, including with floods. Intense urban development increased rainwater runoffs and flood risks. Lately, unordinary rain levels (about 5 billion cube meters) impacted 7 of the 9 counties of Emilia-Romagna, causing an impressive raise of water levels in 20 rivers of the area. To face such a challenge, we need to rethink territorial development, strengthen soil protection and renew the infrastructure, especially in areas located below sea levels. Adapting to climate change implies to choose for urban planning strategies that fully integrate such risks and aim to make territories more resilient (including in the face of floods).

The “stop-concrete” strategy in Wallonia, Belgium

Fabrizio Cipolat, Director of territorial development, Namur province, Belgium

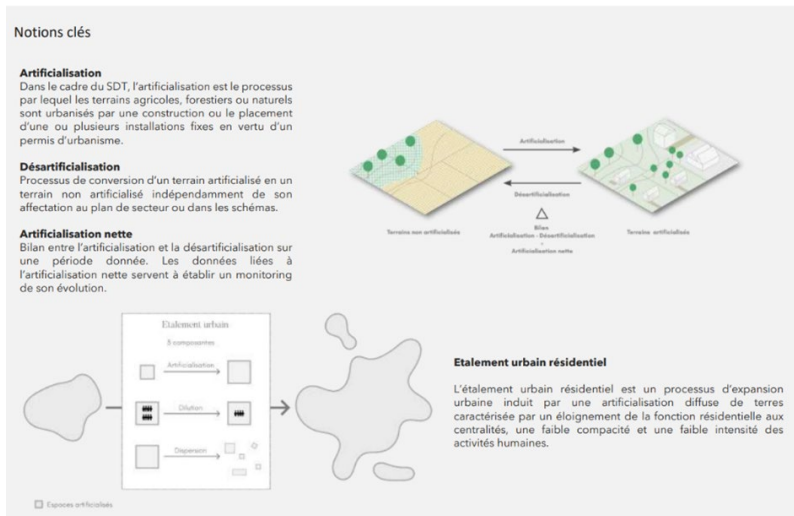
Territorial development scheme (SDT)

This is a strategic document meant to formalize the Walloon government policies to manage the evolutions of the territory. It stands at the top of the hierarchy of tools set by the territorial development code (CoDT) and provides local authorities with actions modalities to develop territorial strategies. The whole of Wallonia is organized according to a regulatory sectorial plan. It divides the region in separates areas organized around “centralities”, drawing a distinction between constructible and non-constructible areas. The document was created in the 70’s. It is set at a 1/25 000 scale.



From a legal perspective, this document only has an indicative value. Collectivities can draw away from it provided they match certain conditions and respect the modalities defined by the CoDT. The orientations and measures defined in the CoDT are in line with the goal to reduce land cover and meet the “stop-concrete” objective. It provides a big scale overview of the matter, taking into consideration topics such as mobility or individual housing development.

“Centralities” is one of the SDT’s core ideas, and as such, draws particular attention. It provides the ground for local decision-making processes. Centralities are defined as “parts of cities and towns that cumulate housing concentration, service and equipment proximity, and good access to public transport”.



Land cover

in the context of SDT, land take is the process through which farm, forest or natural lands are urbanized through construction or through the creation of one or several permanent installations allowed by urban development permits.

Land take return

Process to turn a piece of artificialized land in a non-artificialized land regardless of its affectation in sectorial plans or local schemes.

Net land take

Balance between land take and land take return, on a given time period. Data on net land take serves as a monitoring tool.

Residential urban spread

urban expansion process implying diffuse covering of land dedicated to housing and located far away from centralities, with low human activities.

The example of Namur province working toward the zero net land take objective

Namur is an interesting example of how to work toward the zero net artificialization objective (ZNA). This province is specific in that most of its municipalities count only one centrality, a situation that impacts a lot of its urban development strategies.

Currently, its registered housing areas cover 35 000 hectares, making for about 8,4% of the province's total territory. The centralities located within housing areas have a land take

rate of about 85%, though they make for only a third of the surface of those areas. Surface consumption in the province of Namur is about 170 hectares per year - though this rate has been decreasing since 2002.

Over the three years that have followed the COVID-19 pandemics though, there has been a strong return to rural areas, partly due to remote work and to tax policies encouraging mobility. This resulted in high levels of land consumption. If we follow current trends, land take could stop as soon as 2028 but in actuality, the process is most likely to happen by 2050.

Namur's strategy for the 2050 horizon is to aim for 3 housing units out of 4 to be built in centralities. This choice comes more from political will and policy making than from a more strictly technical approach.

One big obstacle to this ambition is to be found in the fact that the law states that local authorities must compensate financially land owners whose lands would become non-constructible through the process – and the amounts involved are high.

Zero net land take objective in France

Constance Berté, in charge of land policies, Ministry of the ecological transition and of territorial cohesion

Each year, in France, about 20 000 hectares of natural, farming and forest lands are lost to artificialization. More than 60% of it is due mainly to housing development; 20% has to do with various activities and the remaining to infrastructures and other usages. Land take concerns all territories, be them rural, peri-urban or urban. This is why we so importantly need laws that regulate the issue at the national level.

Law-making, zero net artificialization objective and France's national trajectory

The 2021 Climate and Resilience Act sets up a crucial framework for local territories with two concrete goals:

- reaching the zero net land take objective by 2050
- reducing land consumption in half by 2031

The French context is specific in that it heavily relies on the national level emphasizing this goal and on the will to ground the process at the regional level, using regional planning documents such as regional planning and development schemes (SRADDET), then to be deployed at local levels with territorial coherence schemes (SCOT) and local urban development plans (PLU). This configuration calls for a strong coordination between the various levels, to equally balance the share of hectares that can be consumed. It also shows a political will to let local authorities fairly free to adapt their action plan to their local context – namely rural, mountain and coastal areas.

Besides from setting this line of action, in-depths conversations are happening in France to study and observe land take processes, aiming for a cohesive legal definition. This resulted in integrating two distinct definitions to the urban planning code. A first general defini-

tion applies to the urban planning code as a whole, including development projects, and defines land take through the impact it has on the grounds' natural functions. Another and more specific definition has been set to create a tool assessing how we reach this goal. It is based on the absence of net land take – balance between newly covered and cover land return. A decree is currently being written to define how to name those surfaces; the goal being to better understand and track land take processes.

Two European regulations currently being worked on

• Soil health directive

It relies on five main pillars. First, to set a cohesive definition of "soil health". Then, to provide concrete modalities of monitoring and reporting which member States will have to implement to assess and monitor their soil quality. Also, to introduce elements to manage sustainable soils. The directive's implementation is thought out to play at various scales, with the specific EU level at heart but that member states will have to adapt to their context.

Besides, the directive deals with contaminated soils, putting an emphasis on identifying, monitoring and assessing them. It provides tools to measure soil regeneration, aiming to reach the objective of healthy soils by 2050.

Although the text doesn't make land cover its main topic, it could include a possible definition of it as well as orientation to organize how we follow it up, at the European level.

The fact that such conversations take place within the European Commission highlights the growing importance given by the EU to soil protection and to their sustainable development. The European Commission however has limited power to legislate on soil usage, because the competence doesn't belong to the EU – making it difficult to include such issues to the directive.

• Nature restoration directive

Two main goals, in this directive. First, to create protection measures to restore at least 20% of the EU's land and sea areas by 2030, and all ecosystems in need of restoration by 2050. Then, to restore ecosystems, namely sea and urban areas, with an emphasis on developing urban green space areas (ranging from urban tree canopy cover to forest areas) in all member states.

Debate – how to turn land sobriety into a reality in the territories of the EU?

How does Lille, a European metropole with a great diversity of communities, deal with its challenges to implement the zero net land take goal?

Francis Vercamer, vice-President of Lille European Metropole, president of Lille urban planning and development agency

Challenges ahead

The city of Lille holds a particular position within the territory of Lille European metropole, itself characterized by an urban web made of 95 closely-knitted towns (ranging from 200 to 200 000 inhabitants). Behind Lille's urban development stand three intertwined challenges: the preservation 50%+ of farm land, while managing the area's significant transports flows (Paris-Brussels axis, strategic passage towards London), and dealing with densely populated low-income neighborhoods.

One of the main challenges addressed by the local urban planning plan (PLU) is the integration of cohesive long term goals, which includes the development of 62 000 housing units and the 42 000 job creations – while complying with regulations of the 2021 Climate and Resilience Act. This local urban planning plan also aims to address the region's social segregation issues.

Taking action

During the years 2000, the new concept of "renewed city" was launched and promoted in Lille. It supports urban regeneration processes that start with redeveloping two thirds of the city upon itself and leaves the last third to extension. Over 20 years, the territory's expansion was thus divided by 3, almost 4.

This was however a source of conflict with rural areas, regarding limits decided for the areas that were extended. Moreover, some areas weren't understood to be a part of extension areas. In total, 29 out of the 95 municipalities got involved with urban renewal processes.

The biggest obstacles don't come from elected representatives; they come from inhabitants themselves. Some of them do not agree with new buildings being built in their area for the sake of densification. Their reaction proves that we need to promote a pedagogic approach, and to promote a better understanding of what's at stake. If we want to limit tensions, and if we want the zero net land take objective not to seem like a constraint, we need to advocate for a cohesive approach and for good understanding. To do so, we need to get past the idea of individual housing being an ideal and work instead toward the ecological transition and for social justice.

Brussels seeking for a balance between housing, economic development and nature in the city

Tom Sanders, Director of territorial strategy at Perspective Bruxelles

Brussels' urban planning bureau has had a double function since 2016. It works both as an administration serving the government of Brussels to implement political commitments and as an analysis and expertise center on urban matters.

Challenges in Brussels region

Multiple matters are at heart in the region of Brussels, some of them similar to those in Lille European metropole. One of them is to answer growing demand for housing and doing so in accordance to climate change. On other words: limiting urban spread. Among other challenges in the region, there is the need for more data and knowledge to give orientations on actions to be taken to achieve the zero net land take objective – and tools to assess their implementation. Public services also need new competence to complete until now almost exclusively private sources of expertise. Choosing the right action scale is a big topic, also, given the region is a federation – a configuration calling for strong cooperation between the regions and the federal level.

Actions to be taken

Facing such challenges implies having several action tools. Among them: the necessity to support affordable housing development, fighting negative impact of urban spread; revising urbanistic practices to support the requalification of existing soils; mutualizing resources; reconversions of buildings. Another crucial point in these new approaches is to want to work toward inclusivity and toward the capacity to measure how urban projects impact the inhabitants' health. Promoting more transparency in the funding mechanisms is also essential to support the urban transition; keeping in mind, also, inequalities and the excess of added value calling for adequate compensation for the loss of value triggered by urban development projects.

Perspectives for the Belgian presidency of the EU

An urban development agenda has been set for the Belgian presidency of the EU happening during the first semester of 2024. It promotes urban density as a key tool of urban development and encourages conversations on how to think and make our urban environments. A second topic has to do with the idea of green and blue territorial grids, to push for the need to protect green spaces and water resources in urban development strategies. Discussions are also rising about the creation of a coalition within the European Urban Agenda. All of it proves that there's a will to push for cohesive and sustainable urban approaches at the scale of the EU.

The roles of elected representatives in France to implement the zero net land take goal

Sandra Marsaud, elected Deputee of Charente

As elected representatives, we're faced with concrete issues on the territory. Among them, housing, and the need to strengthen skills in terms of engineering and to equip rural areas with their action keys as well. In urban and rural areas alike, we also have to push to strengthen biodiversity protection. Interestingly, we've seen that some territories started fighting urban spread already with the 2000 urban solidarity and renewal Act (SRU). And many regions have already started integrating the goal to reduce land consumption by 50%, which is the first step to reaching the zero net land take objective.

Obstacles to the zero net artificialization objective

France has given itself three decades to achieve the zero net land take goal. The first is meant to focus on reducing the consumption of farm land, forest land and natural land by 50%. One big topic appears to be in the interactions between territories: between regions first, and between territories at the local scale as well – with the territorial cohesion schemes (SCOT), public organizations for cooperation between municipalities (EPCI), and the way these documents split responsibilities to structure urban planning strategies.

The zero net land take objective is central in itself, but it is also a part of a broader context involving density matters, the fight against poor-quality housing and the regeneration of living areas through circular urban planning.

This is why elected representatives hold a responsibility to raise awareness among citizens and to promote the exchange of knowledge needed to achieve such a complex transition.

Conclusions and perspectives

Giuseppe Bettoni, geography and geopolitics Professor at Tor Vergata University, Rome

Several topics arose by the end of this morning of work. First of all, terminologies and definitions relating to artificialization trigger complex conversations in each country. Regarding the collective goal to stop land cover, 15 of the 27 countries have set an objective to decrease land consumption; 19 of them have created measures to assess this consumption.

Besides, the many political and economic stakes and tensions that relate to land artificialization and land consumption show how strong preoccupation it is. This only confirms that we need cohesive tools to define and measure the phenomenon within a collective framework, in all 27 member states.

Lastly, it is now clear that we currently lack conversations on how to transform urban planning models. The EU can play a significant role in this regard, by creating collective measure tools and by drawing up European directives. This is why the EU level stands as the core player to embrace and promote a collective approach on the zero net artificialization objective.

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