

## The Concept of Land Sobriety: Zero Net Land Take

The new challenges of urban and rural planning in Europe  
Proposal of a game to set up the territorial strategy

Xavier PRIGENT, France



### INTRODUCTION

It has been observed that, over the last fifty years, in order to respond to the urban and even metropolitan aspirations of the territories, France, like other countries, has experienced unprecedented urban sprawl corresponding, among other things, to a rural exodus from the countryside to the city and to public policies favouring aid to housing.

On 13 December 2000, the French parliament passed a law called SRU (Solidarity and Urban Renewal), a law to renovate its urban planning documents with the appearance of local urban plans (PLU) and territorial coherence schemes (SCOT), which has been aiming to “rebuild the city on the city”.

It has to be said that twenty years after the enactment of the SRU law, the objective of rebuilding the city on the city has not been achieved.

In order to respond to the challenges of climate change in our territories, the "Climate and Resilience" law of 22 August 2021 set a trajectory to be followed called ZAN (zero net land take).

## CONCEPT OF ZERO NET LAND TAKE

The principle of ZAN "zero net land take" resulting from the "Climate and Resilience" law is broken down into two timelines:

- In 2030, a 50% reduction in the consumption of natural and forest areas
- In 2050, obtaining "zero net land take" on a compensation perimeter that remains to be determined.

Artificialization is defined as the lasting alteration of all or part of the ecological functions of a soil, in particular its biological, hydric and climatic functions, as well as its agronomic potential, through its occupation or use.

Soil renaturation, or disartificialization, consists of actions or operations to restore or improve the functionality of a soil, resulting in the transformation of an artificial soil into a non-artificial soil.

"Zero net land take" is defined as the balance of soil artificialization and renaturation recorded over a given area and period.

The "Climate and Resilience" law also specified that the objectives to be achieved could be broken down by geographical sector, taking into account 7 criteria:

- housing needs
- the need for economic activity
- the potential for mobilising land in already urbanised and to be urbanised areas
- the diversity of urban and rural areas,
- the efforts to reduce the consumption of natural, agricultural and forest areas already made by local authorities over the last twenty years
- projects of national or regional scope
- projects of municipal or inter-municipal interest

The question that arises is how to arbitrate between land sobriety and contextualization. This is the purpose of the game presented below.



## PRESENTATION OF THE GAME

The board is similar to the one in the world-famous game "Monopoly". There are slots for the different cards and for the bank.

The game consists of four sets of cards:

- player profile cards
- context cards
- issue cards
- tool cards

16 stakeholder families have been listed and their attachment to the territory studied according to 6 criteria (housing, services and shops, family history, local environment, local heritage, work). There are 4 types of family (mobility & anchorage, rupture & renewal, sense & passion, here & elsewhere). The players must take on an actor's profile in the course of the game.

There are 16 context cards (numbers 1 to 4) (climate change, demography, energy, governance). Each context is further divided into 4 cards according to the gradation of the hypothesis chosen by the player (e.g. energy - context 3 - divided into 4 cards 3A, 3B, 3C and 3D). All cards have an explanation on the reverse side.

There are 43 issue cards (numbers 5 to 14) (consumption & trade, health & well-being, transport & mobility, leisure & tourism, work, public spaces, my home, agricultural model, nature in the city, relationship with living things)

There are 27 tool maps (numbers 15 and 16) which challenge urban forms and land action. The tools are then applied to the issues as identified in the previous step.

## ORGANISATION OF THE GAME

The game starts with a presentation of the context of the territory in which the game will take place.

The game leaders present several diagnostic panels:

- A panel presenting the ZAN context
- A landscape analysis panel
- An architectural and heritage analysis panel
- A panel summarising the issues analysed in the area

The game takes place with six to ten people gathered around a table. The players start by discussing the context maps and the issues maps.

The first part of the game consists of arbitrating the different hypothesis proposed on the context maps. The positioning of climate change, demography, energy and governance will have an impact on the determination of the issues.

The second part of the game consists of selecting one or two options from among the 43 proposed issue maps, bearing in mind that the approach is iterative since the positioning on one theme can have an impact on the determination of another. We can see, for example, the relationship that can exist between work and mobility.

Once all the issues have been determined, we check that they are compatible with the previously chosen context maps (e.g. energy - context 3- with mobility - issue 7-).

If not, a new choice of context maps or issue maps must be made to achieve this compatibility.

The third part of the game consists of spatially translating the previously defined issues on an aerial photograph of the territory placed next to the players. It is a question of identifying the zones of soft urbanisation, the zones of urban renewal, the zones of green spaces, the public spaces, the zones of renaturation, by relying on the tool maps which allow the operational implementation of these identified challenges. Once again, we see the need for iteration between the issues, the spatial translation and the tools. It will sometimes be necessary to revisit certain issues because of their operational difficulty.

The game should normally be played in two timelines:

- 2030: date of achievement of the 50% reduction in the consumption of natural areas and forests
- 2050: date of the implementation of "zero net land take".

It is recommended that the game be played over two days: each day focusing on the separate objectives of 2030 and 2050 respectively.

## **CONCLUSIONS**

The aim of this game is to make people understand that each territory has its own specificities and that the objective of "zero net land take" cannot be applied uniformly to all territories. It must be applied across the board to a number of issues that require arbitration, each of which has an impact on the others. The aim of this game is to stimulate debate on the territorial strategy that must be implemented to achieve the objectives of "zero net land take" and to better meet the challenges of climate change.

## **CONTACTS**

Mr Xavier PRIGENT  
Ordre des géomètres-experts  
49, avenue Hoche  
75008 Paris  
FRANCE  
Tel. +33 1 53 83 88 18  
Email: [xavier.prigent@geometre-expert.fr](mailto:xavier.prigent@geometre-expert.fr)  
Web site: [www.geometre-expert.fr](http://www.geometre-expert.fr)