

# Green space – an essential element of green infrastructure in localities

## Spațiul verde – element esențial al infrastructurii verzi din localități

Author: CS eng. Amelia Cazacu,  
R&DNI URBAN-INCERC, Urbanproiect Branch

### Context

From the moment of the appearance of the first human settlements, the natural environment began to be "altered" by human activity and then, gradually, more and more fragmented, as the built-up areas continued to expand.

The concept of green infrastructure was born from the need to reconnect with the natural space, as a result of the recognition of the benefits it brings. Although the concept of green infrastructure appeared recently, urban green space has always existed in various forms: parks, public or private gardens.

In the present material, green space is analyzed as an essential element of green infrastructure, through examples of integration and development of green infrastructure in the urban environment.

### Materials and methods

#### Definitions

- Vegetated parcel that separates or surrounds areas of intensive residential or industrial use (EEA, 2023);
- Urban open space with vegetation available directly (active or passive recreation) or indirectly (positive influence on the urban environment) (Iraegui *et al.*, 2020).

In Romanian legislation (law 24/2007) there is no clear definition of green space in general, but only for certain spaces (park, square, garden) that are considered as such.

#### Classification criteria - examples

<b>Access</b>		
unlimited	limited	restricted
		
Fig. 1. Public park (Mihaiu, 2021)	Fig. 2. Sports base (Măgrădean, 2016)	Fig. 3. Private garden (Trancă, 2018)
<b>Destination</b>		
leisure	specialised	protection
		
Fig. 4. Leisure park (Tripadvisor, 2023)	Fig. 5. Zoo garden (Bloanca, 2023)	Fig. 6. Infrastructure protection (PS3, 2023)
<b>Dimension</b>		
		
Fig. 7. Square (Cazacu, 2023)	Fig. 8. Park (Mihaiu, 2021)	Fig. 9. Forest-park (Băneasaforestun, 2023)

### Discussion

#### Integration models of green space in the urban environment

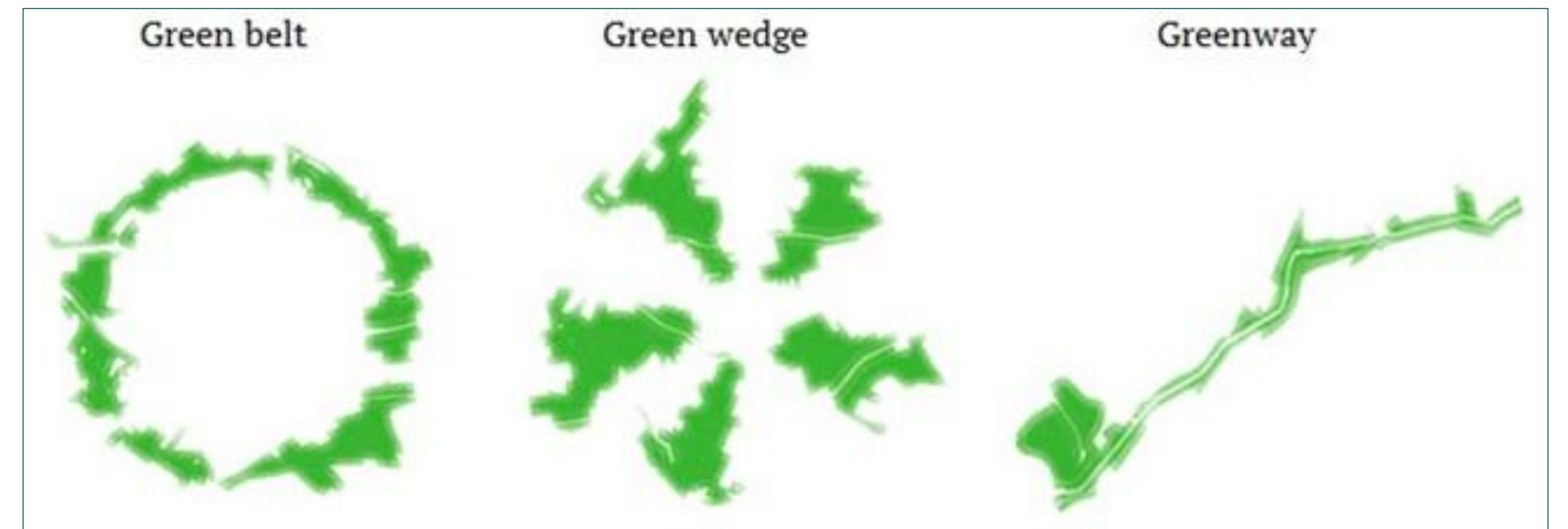


Fig.10. Green space model arrangements on large areas (Meneguetti & Oliveira, 2020)

The three types – green belt, green wedge and greenway differ from each other in their ability to include both existing green areas in the vicinity and green spaces spread throughout the city (Meneguetti & Oliveira, 2020).

#### Examples of urban green space development



Fig. 11. Londra in 1827 (londonhua.wpi.edu, 2023)

Londra, before and after Howard's garden city concept, which was the starting point of the green belt as a restriction to urban sprawl (Yu, 2014; Samora-Arvela *et al.*, 2017).

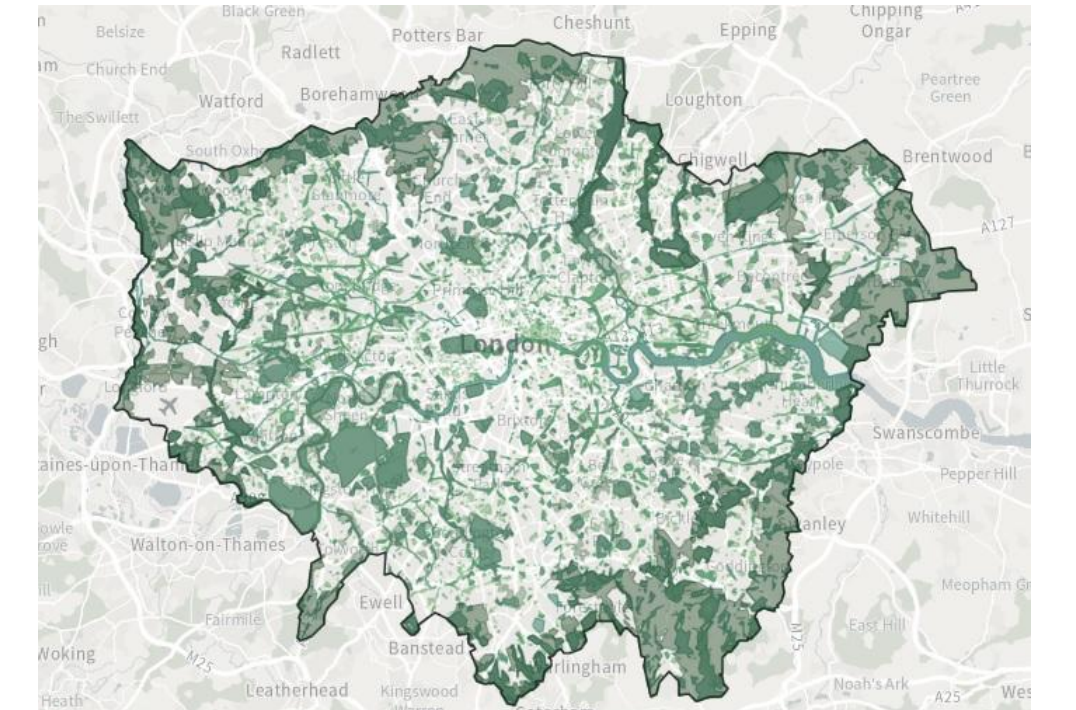


Fig. 12. Londra – green space map (Mayor of London, 2023)

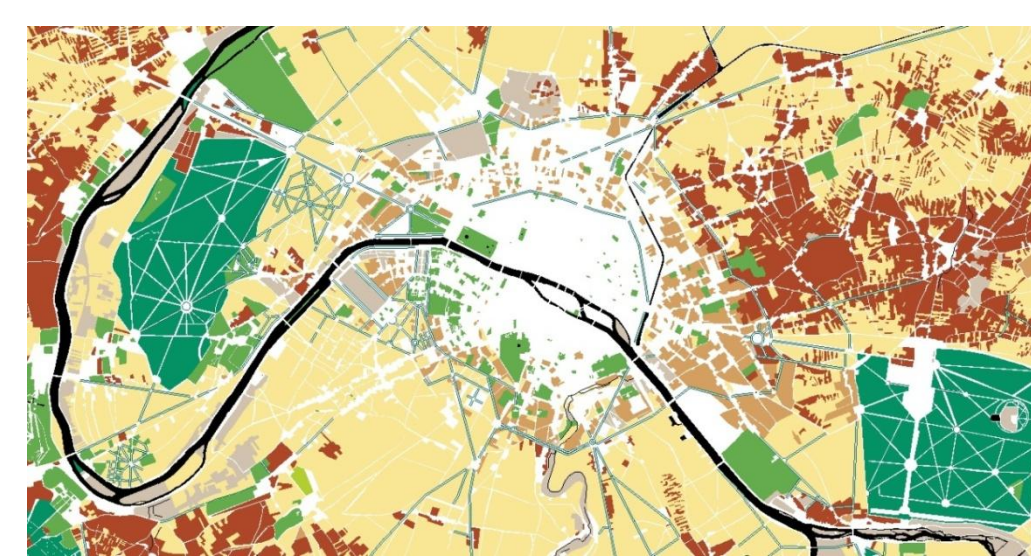


Fig.13. Paris-1830 (apur.org, 2018)

Paris, before and after the systematization made by Haussmann in the middle of the 19<sup>th</sup> century, "the beginning of parks for all" (Niculae, 2018)

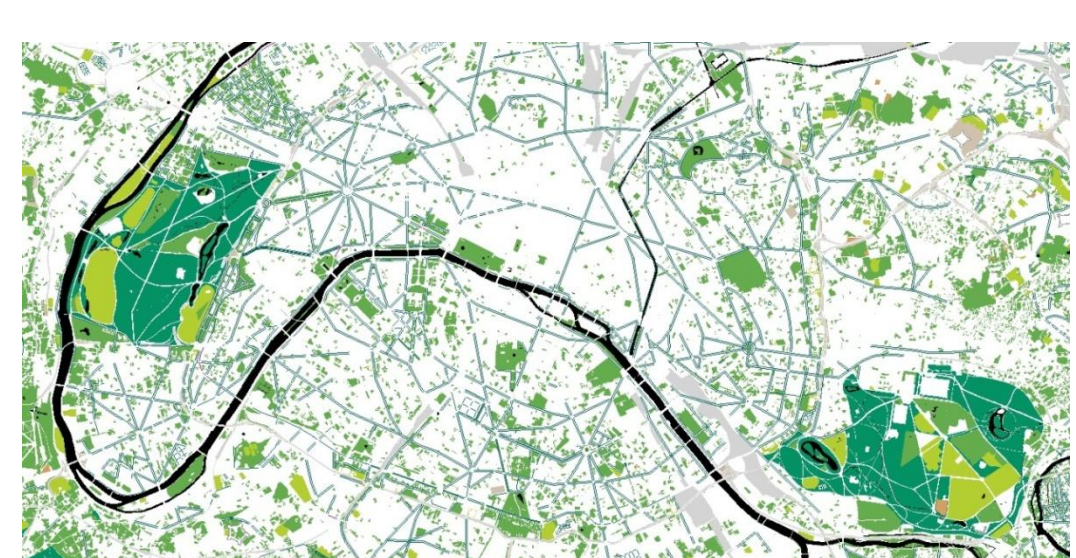
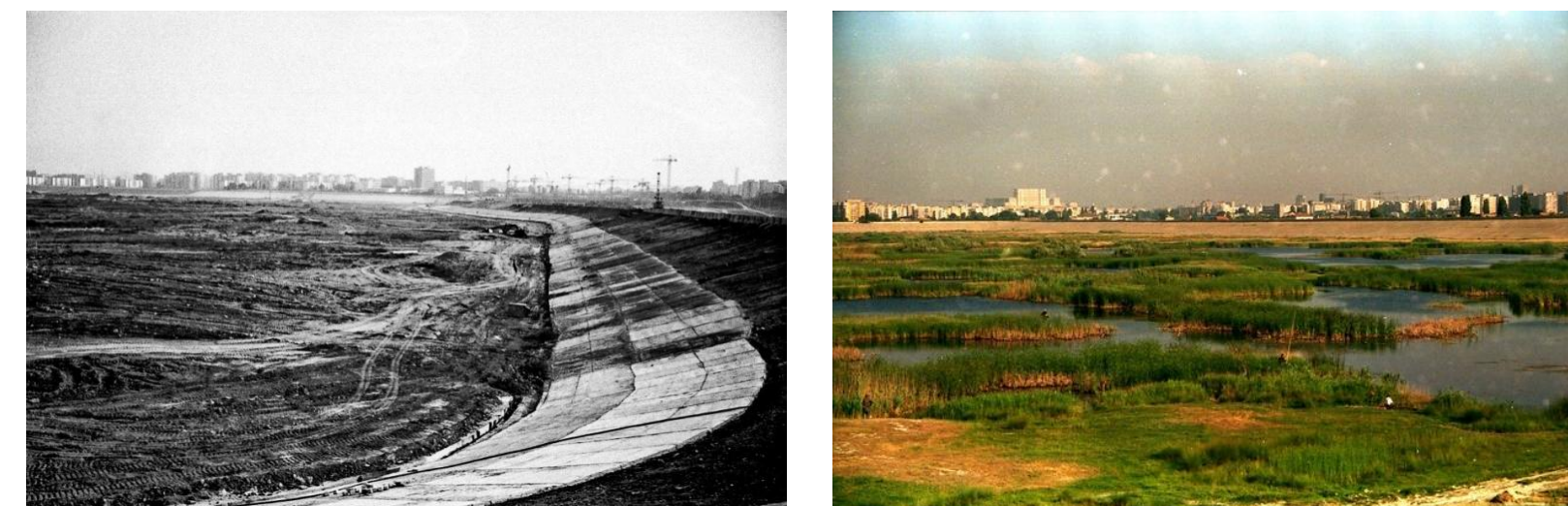


Fig.14. Paris-2017 (apur.org, 2018)

#### The development of urban green space in Bucharest



a) Before the '90 b) After 2000  
Fig.16. Văcărești Natural Park are (PNV, 2023)

Văcărești Natural Park was formed after the abandonment of a hydrotechnical development started before 1990. It was declared a natural park in 2016 (PNV, 2023)

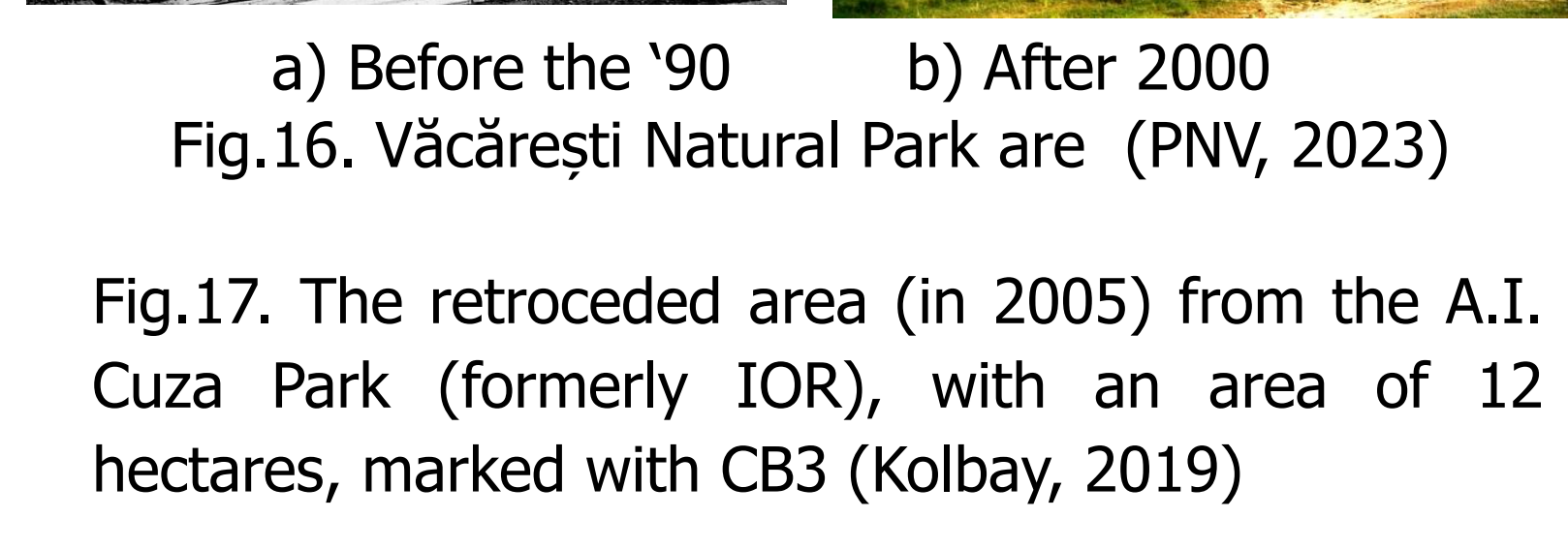


Fig.17. The retroceded area (in 2005) from the A.I. Cuza Park (formerly IOR), with an area of 12 hectares, marked with CB3 (Kolbay, 2019)

### Conclusion

The existence of multiple formulations of the green space definition, as well as the lack of a clear and widely accepted classification system, make it difficult to analyze the problems of this infrastructure, especially in relation to the field of urban planning.

In order to avoid situations in which urban green spaces with large areas are abolished through various ways (such as the retrocession of the 12 hectares of the A.I. Cuza Park, in Bucharest), taking advantage of the lack of specific legislative provisions, it is necessary to introduce clear regulations regarding these areas status and preserving their integrity.

### Selective references

- APUR (2018), L'évolution de la nature de 1730 à aujourd'hui, [apur.org/dataviz/evolution\\_nature/index.html](https://www.apur.org/dataviz/evolution_nature/index.html), 2018
- European Environment Agency (2023), Green space, <https://www.eea.europa.eu/help/glossary/gemet-environmental-thesaurus/green-space>
- Parlamentul României (2009), Legea nr.24/2007 (republicată) privind reglementarea și administrarea spațiilor verzi din intravilanul localităților, <https://legislatie.just.ro/Public/DetaliiDocument/78673>

### Acknowledgment

The material was developed within the project PN 23 35 06 01 - "Integrated computer-urban planning system for the assessment of blue green infrastructure at the level of municipalities and cities in Romania with a view to implementation in urban development plans. Case study: "Râmnicu Vâlcea Municipality", financed by the Ministry of Research, Innovation and Digitization and carried out, within the ECODIGICONS Core Program, by the Urbanproiect branch