



Territorial Areas for Inter-Municipal Planning. Best practices for the definition of “homogeneous zones” in Italy

Áreas territoriales para la planificación intermunicipal. Mejores prácticas para la definición de «zonas homogéneas» en Italia.

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How to cite: Mariano, C. & Filicetti, C. (2025). Territorial Areas for Inter-Municipal Planning. Best practices for the definition of “homogeneous zones” in Italy En libro de actas: *XVII Seminario Internacional de Investigación en Urbanismo*. Valencia, 19-20 de junio 2025. <https://doi.org/10.4995/SIIU2025.2025.19766>

Resumen

Los procesos de metropolización, que han transformado las ciudades en sistemas territoriales complejos caracterizados por una fragmentación creciente y un desarrollo más allá de las fronteras administrativas, representan una cuestión clave en el debate científico y disciplinario sobre la gobernanza intermunicipal. Estas dinámicas ponen de relieve la necesidad de definir criterios para delimitar áreas de cooperación óptimas, denominadas zonas homogéneas, con el fin de mejorar los esfuerzos de planificación coordinada. Esta contribución, enmarcada en un proyecto de investigación doctoral realizado en el Departamento de Planificación, Diseño y Tecnología de la Arquitectura (PDTA) de la Universidad Sapienza de Roma, analiza el marco teórico y metodológico para definir las áreas de cooperación intermunicipal. Examina los criterios adoptados tanto a nivel nacional como europeo para su delimitación, con un enfoque específico en el concepto de zonas homogéneas. El objetivo es comprender cómo la planificación intermunicipal puede superar las limitaciones impuestas por la fragmentación administrativa mediante modelos innovadores de gobernanza territorial. Para ello, la investigación presenta un análisis comparativo de dos casos de estudio italianos: las regiones de Emilia-Romaña y Toscana. Ambas han desarrollado estrategias de cooperación intermunicipal, pero han adoptado enfoques distintos a la hora de definir las zonas homogéneas con fines de planificación. El análisis comparativo destaca el papel clave que desempeñan estas áreas territoriales en la planificación intermunicipal, promoviendo una gestión territorial más integrada y estratégica. Al responder a las especificidades locales y a las transformaciones socioeconómicas en curso, las zonas homogéneas se perfilan como una herramienta esencial para fomentar modelos de gobernanza eficaces y adaptables.

Palabras clave: *planificación intermunicipal; fragmentación administrativa; áreas territoriales; políticas intermunicipales en Italia.*

Abstract

The processes of metropolization, which have transformed cities into complex territorial systems characterized by increasing fragmentation and development beyond administrative boundaries, represent a key issue in the scientific and disciplinary debate

on intermunicipal governance. These dynamics highlight the need to define criteria for delineating optimal cooperation areas, referred to as homogeneous zones, to enhance coordinated planning efforts.

This contribution, framed within a doctoral research project conducted at the Department of Planning, Design, and Technology of Architecture (PDTA), Sapienza University of Rome, analyzes the theoretical and methodological framework for defining intermunicipal cooperation areas. It examines the criteria adopted at both national and European levels for their delineation, with a specific focus on the concept of homogeneous zones.

The objective is to understand how intermunicipal planning can overcome the limitations imposed by administrative fragmentation through innovative models of territorial governance. To this end, the research presents a comparative analysis of two Italian case studies: the Emilia-Romagna and Tuscany Regions. Both have developed intermunicipal cooperation strategies but have adopted distinct approaches in defining homogeneous zones for planning purposes.

The comparative analysis highlights the key role that these territorial areas play in intermunicipal planning, promoting a more integrated and strategic territorial management. By responding to local specificities and ongoing socio-economic transformations, homogeneous zones emerge as an essential tool for fostering effective and adaptive governance models.

Keywords: *inter-municipal planning; administrative fragmentation; territorial areas; inter-municipality policies in Italy*

Thematic line: *TERRITORY. Land use planning*

1. Introduction

The ongoing processes of metropolization in cities have significantly transformed the social, administrative, and economic organization of urban space. Contemporary cities have evolved into complex territorial systems characterized by increasing spatial fragmentation and extensive development that extends beyond traditional administrative boundaries, giving rise to new territorial and functional dynamics.

In this context, cooperation and territorial cohesion are becoming increasingly relevant, especially in a global landscape marked by environmental, social, and economic challenges. In recent decades, socioeconomic dynamics and pressures from European markets have increasingly pushed local governments to experiment with intermunicipal cooperation strategies (Hulst, Van Montfort, 2007). These strategies not only enable municipalities to jointly manage public services and generate economies of scale but also allow for more effective coordination of local policies, addressing issues that transcend municipal boundaries and require an integrated territorial approach.

The sharing of resources, infrastructure, and services becomes essential for balanced and sustainable development, fostering collaboration among municipalities to tackle shared challenges: from environmental resource management to mobility coordination, from economic development to territorial resilience in the face of climate change.

Within this framework, intermunicipal planning emerges as a crucial tool for addressing the complexity of contemporary transformations. It allows overcoming the limitations imposed by administrative boundaries while promoting an integrated and flexible approach to territorial management. The intermunicipal dimension, in fact, has the capacity to go beyond the constraints of local planning without compromising the principle of subsidiarity, ensuring at the same time a more efficient and strategic governance of the territory. Furthermore, it enables a better understanding and orientation of ongoing

socioeconomic and spatial dynamics, providing an interpretative framework that captures the interconnections between different territorial levels. This approach allows addressing the complexity and specificity of the territory at an "appropriate distance" (Paris, Casella, 2018).

1.1. Optimal Territorial Areas: Definition and Relevance in Intermunicipal Planning

The increasing territorial complexity and the need for effective intermunicipal planning make it essential to establish clear criteria for defining optimal territorial areas. Within these areas, municipalities can collaborate in a structured and functional manner to develop strategies capable of addressing territorial challenges in an integrated and interactive way, ensuring social cohesion, balanced economic development, and sustainable resource management. Overcoming administrative fragmentation and planning at a supramunicipal scale requires an adequate delineation of cooperation areas, taking into account socioeconomic dynamics, structural invariants, and functional relationships between territories.

The delineation of optimal territorial areas is a central theme in the interdisciplinary scientific debate, characterized by extensive discussions on the most appropriate criteria and methodologies. The literature identifies the "homogeneity criteria" (Carrer, Rossi, 2014) as the guiding principle for the delimitation of such areas, articulated into three main components: (i) the demographic component, which considers the quantification of the resident population and its distribution; (ii) the morphological component, related to the physical structure of the territory, the configuration of settlements, and their territorial contiguity; (iii) the functional component, which analyzes socioeconomic dynamics and infrastructural flows, including mobility, access to services, and the localization of productive areas (Pumain, 1998).

In general, optimal territorial cooperation contexts rarely coincide with well-defined administrative boundaries. Instead, they overlap with a plurality of diverse territories, following variable-geometry aggregation models that are not merely conjunctural (Moretti, 2002; Ricci, Mariano, Valorani, 2020).

The European Spatial Planning Observation Network (ESPON, 2013) conducted research aimed at identifying territorial aggregates with common characteristics. In this context, two key concepts were defined: *Morphological Urban Areas* (MUA), consisting of clusters of contiguous, densely populated municipalities, and *Functional Urban Areas* (FUA), which adopt a more functional approach based on economic and infrastructural relationships, defining commuting catchment areas. Sustainable urban development policies, particularly the Urban Agenda 2021–2027, take *Functional Urban Areas* (FUA) as territorial action targets, considering them as new paradigms for the territorialization of development policies (De Donno, 2024; Ombuen, 2024; Vinci, 2024). These areas not only support sustainable mobility and energy-efficient infrastructure renewal within the FUA but also define broader action lines aimed at restoring green and blue networks to counteract the effects of climate change.

Today, intermunicipal planning based on homogeneous territorial areas in Italy relies on a mix of homogeneous and functional criteria. Homogeneous criteria include recognizing environmental components, strengthening their ecological value, and addressing challenges related to the delimitation of peri-urban and inner areas. To this end, operational tools and coordinated criteria for protection management have been introduced (Legislative Decree 42/2004). These instruments aim to influence planning and design processes, with particular attention to contexts characterized by specific criticalities or potentialities in landscape planning (Arcidiacono et al., 2016; Cattivelli, 2023; Galderisi et al., 2022).

On the other hand, functional criteria relate to the socioeconomic components of the territory, including infrastructure and services, analyzing relationships between different areas as a parameter to determine the optimal dimensions for intermunicipal cooperation. This approach is reflected precisely in the *Functional Urban Areas* model.

In the European context, Italy represents an emblematic case for studying the definition and delimitation of optimal territorial areas, due to its high degree of territorial fragmentation. This peculiarity makes the

adoption of homogeneity and functionality criteria particularly relevant to overcoming the limitations imposed by rigid administrative boundaries and fostering more flexible and effective supramunicipal cooperation models.

1.2. Administrative Fragmentation in Italy and the Role of Municipal Unions in Territorial Reorganization

Italy's administrative fragmentation, characterized by 7,904 municipalities, over 70% of which have a population of fewer than 5,000 inhabitants (Istat, 2021), represents a significant challenge for territorial development. This high degree of territorial dispersion creates substantial difficulties in integrated territorial management, making Italy an emblematic case for exploring intermunicipal planning strategies and policies aimed at overcoming the limitations imposed by fragmentation, defining optimal territorial areas, and promoting more effective governance.

To address these limitations, the legislator has progressively introduced various regulatory instruments aimed at fostering cooperation among local authorities. Among these, Municipal Unions (*Unioni di Comuni*), second-level entities designed to ensure greater efficiency and quality of local services through the joint exercise of municipal functions, play a central role. Municipal Unions are part of a broader project of administrative reorganization in the country, promoting a more integrated approach to territorial management.

The legislative evolution that has regulated and encouraged the establishment of Municipal Unions in Italy has unfolded through several key phases. It began with Law 142/1990, which, in Article 26, introduced for the first time the associative model of the *Union of Municipalities*. In its initial formulation, the Union was conceived as a transitional form of aggregation, required to either merge or dissolve within ten years of its establishment. With the subsequent Law 265/1999, several constraints were eliminated, including the demographic threshold of 5,000 inhabitants, the requirement for participating municipalities to belong to the same province, the ten-year maximum duration, and the subsequent obligation to merge.

Further legislative developments occurred between 2000 and 2010, with the Consolidated Law on Local Authorities (TUEL, Legislative Decree No. 267/2000) and Law 122/2010. These regulations formally recognized Municipal Unions as local authorities with regulatory powers, transforming them from transitional instruments into stable forms of intermunicipal cooperation.

A third significant phase took place between 2010 and 2014, starting with Law No. 135/2012 and culminating in Law 56/2014, which made intermunicipal cooperation mandatory for municipalities with up to 5,000 inhabitants (3,000 for mountain municipalities) in the exercise of ten fundamental functions, including administration, public services, land registry, civil protection, urban waste management, school infrastructure, municipal police, urban and building planning, and participation in supramunicipal territorial planning (Mariano, Valorani, 2018; Marotta, 2019).

A substantial transformation occurred with the Delrio Law (Law 56/2014), which redefined the role of Provinces, stripping them of their function as *Area Vasta* (wider-area) entities and replacing them with Metropolitan Cities, particularly regarding General Territorial Planning (Mariano, 2018; Rota, 2020).

Within this legislative framework, a crucial role in defining the territorial boundaries of associative forms was assigned to the Regions (Article 19, Law 135/2012), which were entrusted with the task of identifying, *"in consultation with the concerned municipalities [...], the optimal and homogeneous territorial dimension by geographical area for the mandatory associated exercise of fundamental municipal functions."*

This shift resulted in the Regions assuming an almost exclusive role in planning and management, creating a disparity between their decision-making power and the progressive reduction of the role of municipalities and provinces (Giaino, 2024).

2. Research Objectives and Methodology

In light of the institutional transformation brought about by the Delrio Law (Law 156/2014), which assigned Italian Regions a central role in planning, this study analyzes the best practices adopted at the regional scale. Specifically, through a comparative analysis of the experiences of Emilia-Romagna and Tuscany, the study highlights how their respective governance models have facilitated the definition of homogeneous zones. The research focuses on regional regulations and the ways in which they have structured the identification of intermunicipal cooperation areas, emphasizing innovative parameters for territorial redesign.

This contribution is part of the broader doctoral research project *"Intermunicipal Planning and Environmental Governance: Ecological Strategies for the Regeneration of Contemporary Territories"*, conducted at the Department of Planning, Design, and Technology of Architecture, Sapienza University of Rome. The research aims to develop new theoretical, methodological, and operational tools for intermunicipal planning, with a particular focus on structural plans and the identification of innovative delineation criteria that consider the natural components of the territory as a matrix for regenerating physical and socioeconomic structures.

Emilia-Romagna and Tuscany were selected as case studies due to their pioneering role in promoting intermunicipal planning and associated territorial governance. Emilia-Romagna has 39 Municipal Unions, involving 253 municipalities, with an average of 6.5 municipalities per Union (Open Italiae, 2025), whereas Tuscany has 22 Unions, encompassing 134 municipalities, with an average of 6 municipalities per Union (Open Italiae, 2024). Both regions have developed regulatory and procedural tools to promote intermunicipal cooperation, yet they have adopted different criteria and methodological approaches in defining homogeneous zones.

The comparative analysis is structured into multiple phases:

1. Definition of a regulatory and institutional framework:
 - Analysis of regional laws and planning instruments adopted by the two regions, with particular attention to governance mechanisms and coordination tools between Regions and Municipalities.
 - Examination of the Region's role in coordinating and supporting associative processes.
2. Analysis of the methodologies for identifying cooperation areas, considering:
 - The criteria used for defining homogeneous zones.
 - The degree of decision-making autonomy granted to municipalities.
 - The presence of innovative elements regarding the monitoring of functions and services within homogeneous zones.

The research methodology is based on a qualitative analysis of regional policies, supported by an examination of legislative and planning documents.

3. Research Development: A Comparison of the Two Regions

The Emilia-Romagna Region and the Tuscany Region stand out for actively promoting the consolidation of intermunicipality and associated territorial governance within their territories through coordination policies between the Regional authority and Municipalities. Such policies are often absent in many other Italian regional contexts. The following sections will analyze the characteristics of each model.

3.1 The Emilia-Romagna Region

The Emilia-Romagna Region, within the framework of its territorial reorganization policies, promotes the enhancement of the organizational and functional capacities of its territory through the strengthening of Municipal Unions and the definition of Optimal Territorial Areas (ATO).¹

To support this process of territorial delineation, the Region encourages consultation processes between municipal authorities and the Regional government, promotes the sharing of baseline knowledge, fosters collective reflection on territorial development strategies, and ensures priority access to sectoral funding programs.

Through this process, 47 Optimal Territorial Areas have been identified, subdivided by province and coinciding with socio-health districts, as regulated by Regional Resolution DGR 286/2013. (Fig. 1)

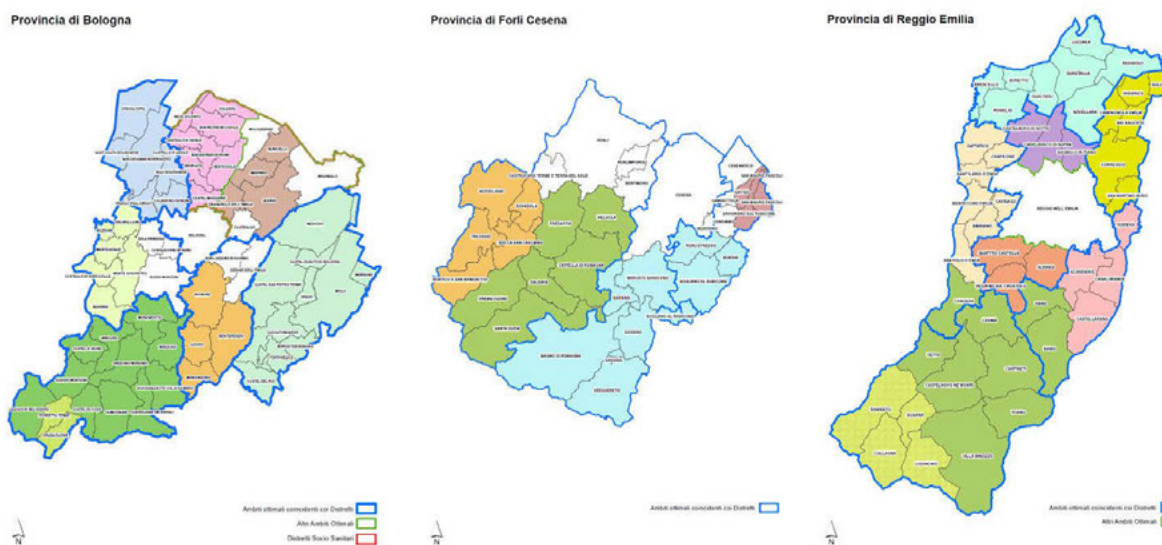


Fig. 1. Optimal Territorial Areas of the Provinces of Bologna, Forlì-Cesena, and Reggio Emilia. It is evident that the ATOs coincide with the Socio-Health Districts. Source: Emilia Romagna Region (2013)

This approach is materialized in the Atlas of Optimal Territorial Areas, an operational tool that identifies areas for the associated exercise of municipal functions. The Region defines specific municipal functions to be carried out in an associated form and encourages the establishment of a single union per territorial area.

The Atlas serves as a knowledge framework, containing demographic, social, economic, and territorial indicators for each Optimal Territorial Area (ATO), classified by province. It begins with a "Regional Overview" section, where the 47 Optimal Territorial Areas are represented alongside key data, including:

¹ This reorganization is implemented through the adoption of Decree-Law 78/2010, which, in Article 14, co. 30, assigns Regions the task of identifying, "in consultation with the concerned municipalities, the optimal and homogeneous territorial dimension by geographical area for the mandatory associated exercise of fundamental municipal functions, according to principles of effectiveness, cost-efficiency, and efficiency". This mandatory association applies to municipalities with a population of fewer than 5,000 inhabitants (or 3,000 if they belong to mountain communities) (co. 28). Regional Law No. 21/2012 establishes the criteria for territorial and functional reorganization, defining Optimal Territorial Areas (ATO) as "adequate areas for the associated exercise of fundamental municipal functions." The law pursues a dual objective: (i) Preserving existing associative experiences, (ii) Encouraging aggregation into larger-scale areas. In Title II of the regional law, "Identification of Optimal Territorial Areas and Regulations on the Associated Exercise of Municipal Functions," the criteria for territorial delimitation are specified, based on demographic thresholds and territorial continuity, as well as the procedures for municipalities to join or request the redefinition of territorial boundaries. The regulation stipulates that only one Municipal Union can be established within each Optimal Territorial Area, with a minimum demographic threshold of 10,000 inhabitants.

the number of municipalities, the type of municipalities (associated or independent), the number of ATOs and Municipal Unions, Population data, surface area (in km²) (Fig. 2).

Within the Atlas, 19 indicators are defined to represent socioeconomic aspects and the provision of services. Each indicator is accompanied by cartographic representations, where color intensity illustrates its value. Additionally, for each indicator, a comparison table is provided, contrasting the values of Emilia-Romagna with national data, along with a summary commentary. To complement the Atlas, three thematic maps are included, detailing: physical and territorial characteristics, main infrastructure for accessibility and mobility, health and education services.

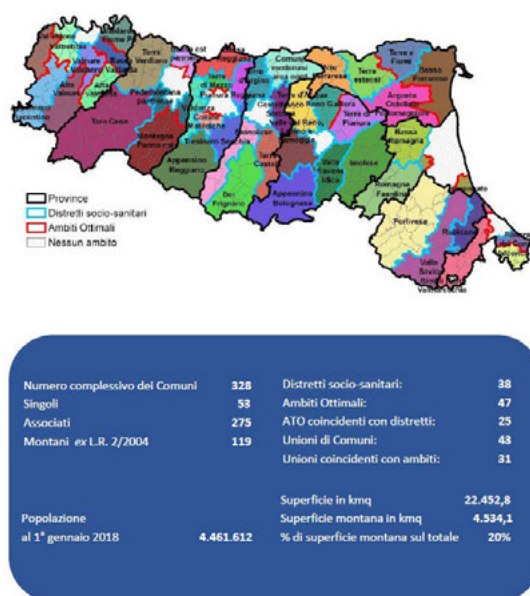


Fig. 2 "Regional Overview" Sheet of Optimal Territorial Areas. Source: Emilia-Romagna Region (2019)

The indicators on which the entire classification of Optimal Territorial Areas (ATO) is based were developed in 2008/2009 by the Service for Reorganization, Institutional and Territorial Development, with the participation of the Emilia-Romagna Region and ART-ER. Their purpose is to contribute to a better understanding of the territory and the main social and economic dynamics in progress. The indicators are categorized as follows:

1. Socioeconomic Indicators, further divided into:

- Demographics: Resident population, Population growth rate, Residents over 64 years old, Foreign resident population
- Education, Economy and Employment: Tertiary education attainment (ages 30–34), Employees in local business units, Employment in high-tech and knowledge-intensive sectors, Manufacturing sector employment, Tourism sector employment
- Well-being and Social Inclusion: Average per capita income, Labor market participation by gender

2. Service Provision Indicators, further divided into:

- Broadband Access: Households with at least 30 Mbps internet connection
- Education and Social Services: Nursery schools and similar services, Number of students (primary, middle, and high schools), Social care facilities for the elderly
- Culture: Number of museums, Number of municipal libraries,
- Environment and Mobility: Waste recycling rate, Public transport (bus stops for local public transport - TPL)

3.2 The Tuscany Region

The Tuscany Region, through Regional Law 65/2014 (with subsequent amendments and integrations in Law No. 32/2017), places wide-area planning at the core of territorial governance, considering a supramunicipal approach essential to ensuring sustainable resource use and fostering territorial development.

This law builds upon the innovations introduced with Regional Law 5/1995 and later confirmed by Regional Law 1/2005, particularly regarding the territorial division into UTOE (*Elementary Organic Territorial Units*). These units aim to ensure a balanced distribution of resources necessary for high-quality territorial development (Irpel, 2011).

Initially, UTOEs were conceived as homogeneous zones within local planning (Law 1/2005), serving as a reference for both settlement forecasts and the assessment of urban standards. Subsequently, their application was extended to wide-area planning (Law 65/2014), allowing their delineation beyond administrative boundaries.

In the case of UTOEs for Municipal Unions, where the territorial units involve multiple municipalities, their dimensions are determined by considering both the administrative division and the territorial equalization mechanisms established by Article 94, paragraph 4, of Regional Law 65/2014 (Fig. 3).

The delineation of UTOEs is delegated to planning instruments, such as municipal and intermunicipal structural plans, assigning municipalities and municipal unions the task of defining their boundaries. This ensures greater consistency with territorial characteristics, aligning with regional guidelines and criteria.

In particular, the intermunicipal structural plan defines UTOE boundaries based on the territorial charter and within the framework of territorial knowledge.

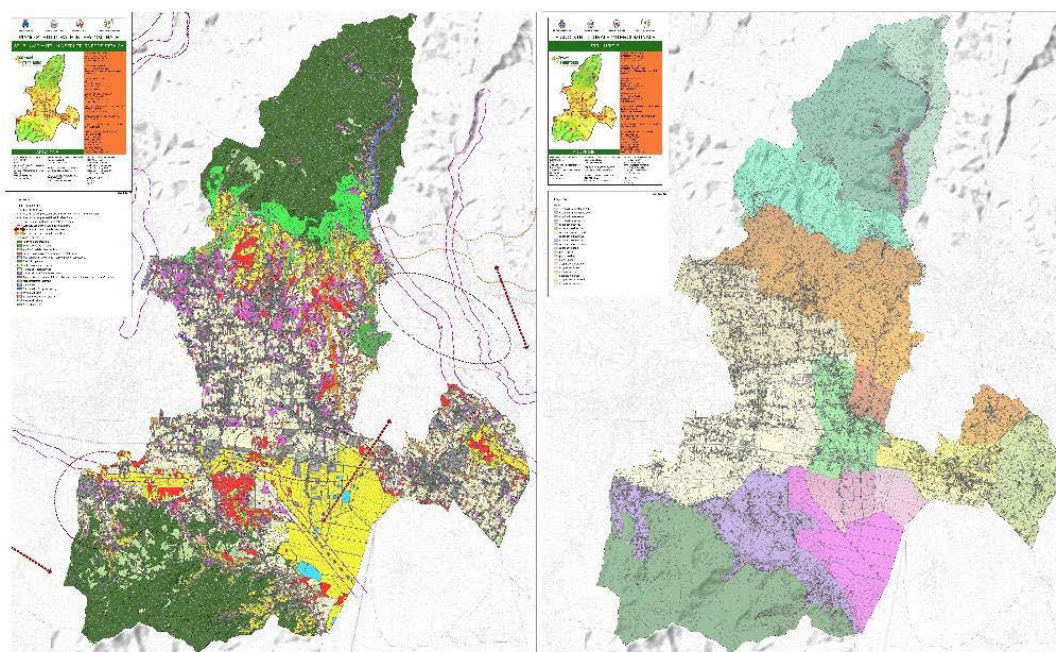


Fig.2 Comparison between the Identification of Structural Invariants (Left) and UTOEs (Right) f. In this case, the UTOEs have been classified based on the administrative boundaries of the respective municipalities. Source: Intermunicipal Structural Plan of a Municipal Union of Capannori, Altopascio, Porcari, Villa Basilica (LU) (2019)

The Territorial Charter (*Statuto del Territorio*) is defined by Article 6 of Regional Law 65/2014 and is developed in accordance with the *Territorial Address Plan* (PIT) and the *Territorial Coordination Plan* (PTC). It serves as the identity recognition document through which the local community acknowledges

its territorial heritage, establishing the rules for its protection, reproduction, and transformation. The Territorial Charter includes the elements that constitute territorial heritage (*Art. 3*), namely:

- The hydro-geomorphological structure, which includes geological, morphological, pedological, hydrological, and hydraulic characteristics.
- The ecosystemic structure, which encompasses natural resources such as air, water, soil, and ecosystems of fauna and flora. The settlement structure, which includes cities, minor settlements, infrastructural, artisanal, industrial, and technological systems.
- The agro-forestry structure, which includes forests, pastures, cultivated fields, their management systems, and rural buildings.

Another essential element is represented by structural invariants (*Article 5 of Regional Law 65/2014*), which refer to specific characteristics, generative principles, and rules that ensure the protection and enhancement of identity-defining structures of territorial heritage. These include:

- Morphotypological and landscape aspects of the territorial heritage.
- Relationships between the constituent elements of the territorial heritage.
- Generative, usage, maintenance, and transformation rules that ensure the persistence of the territorial heritage.

The Intermunicipal Structural Plans (PSI) also identify sustainable development strategies, outlining strategic choices and defining land use and sustainable development forecasts across the different UTOEs (*Elementary Organic Territorial Units*). These wide-area policies and strategies are contained in Regional Law 56/2014 and, in alignment with the PIT (Territorial Address Plan), focus on:

Rationalization of infrastructure and mobility systems to improve and ensure accessibility levels in affected territories, including the promotion of intermodality.

Activating synergies for the recovery and redevelopment of settlement systems and the enhancement of rural areas.

Rationalization and redevelopment of the artisanal and industrial system.

The implementation of territorial equalization measures.

For each UTOE, the structural plans establish maximum thresholds for new settlements, the functions associated with urban transformation projects, and the public services and territorial facilities necessary to comply with the standards set by Ministerial Decree 144/1968.

4. Results

The delineation of optimal areas for intermunicipal planning is currently an ongoing experimentation. As highlighted in this study, such delineation is based on various criteria—demographic, administrative, morphological, and functionalist—with the aim of proposing increasingly innovative approaches capable of responding to socioeconomic transformations, governance needs, and sustainability objectives.

The comparative analysis of intermunicipal planning experiences in Emilia-Romagna and Tuscany has revealed significant differences in the criteria used for territorial delineation. In particular, the two regions have adopted distinct approaches, which, although not explicitly inspired by OECD theoretical categories, present similarities with Functional Urban Areas (FUA) and Metropolitan Urban Areas (MUA). In Emilia-Romagna, territorial aggregation through Optimal Territorial Areas (ATO) reflects a functionalist and administrative approach, reminiscent of FUA logic, where delineation is based on functional flows and shared services. In contrast, Tuscany, through the adoption of Elementary Organic Territorial Units (UTOE), applies a more morphological and qualitative criterion, aligning with the MUA concept, which emphasizes structural coherence and territorial continuity.

A fundamental semantic distinction also emerges between Optimal Territorial Areas (ATO) and Elementary Organic Territorial Units (UTOE). ATO refers to territorial units delineated according to specific criteria, particularly their coincidence with socio-health districts. Moreover, the term “optimal” suggests that the delineation responds to efficiency, effectiveness, and rationality in managing public services or functions. Conversely, UTOEs represent the minimum units for urban and territorial planning. The term “organic” implies a coherent structure where constituent elements interact systemically.

The key differences, therefore, relate to the more functionalist approach of ATO, which is defined based on the optimal organization and management of services, monitored through 19 indicators. UTOE, on the other hand, follows a more morphological approach, based on territorial invariants, representing the elementary subdivision level for territorial planning.

Another fundamental difference concerns territorial governance and the methodological approach adopted by territorial government bodies in defining these boundaries. In Emilia-Romagna, the definition of ATO is directly assigned to the Region, which, by aligning them in advance with socio-health districts, applies a top-down, quantitative, and standardized approach, centralizing territorial monitoring and control data in the Atlas. In Tuscany, however, the approach is bottom-up and qualitative, where the predominantly morphological criteria are defined by the Region, but the task of identifying UTOE is delegated to Municipalities and Municipal Unions, allowing for adaptation to local specificities.

Additionally, it is noteworthy that while Emilia-Romagna has a comprehensive and unified knowledge framework, explicitly defining optimal areas across the entire region (*Atlas of ATO*), such a framework does not exist for Tuscany.

5. Conclusions

In conclusion, the definition of optimal territorial areas represents a crucial issue for intermunicipal planning, where, based on functional and morphological characteristics, strategies can be developed to promote sustainable territorial development, especially in a context characterized by increasing spatial and administrative complexity.

The analysis has highlighted some critical issues, particularly the absence of indicators and criteria for monitoring services within the optimal areas in the Tuscany Region. This limitation restricts the ability to assess the effectiveness of implemented strategies and to adapt them in response to emerging needs. In contrast, the Emilia-Romagna Region defines in advance the 19 monitoring indicators included in the Atlas of ATOs, ensuring greater consistency in the management of cooperation areas.

More generally, the analysis of the experiences in Emilia-Romagna and Tuscany demonstrates how different models can respond to varying needs, highlighting the advantages and challenges of both top-down and bottom-up approaches. The comparison between Italian regional models provides useful insights for designing intermunicipal cooperation strategies applicable in other national contexts, where a combination of functional and morphological criteria, supported by data-driven tools and local participatory processes, can represent an effective and innovative strategy to address the specific needs of intermunicipal planning.

Furthermore, the heterogeneity or absence of approaches to territorial delineation adopted by Italian regions demonstrates how the lack of shared criteria risks compromising the effectiveness of territorial governance. In this context, while the Delrio Law has played a significant role in redefining territorial organization, the mandatory associated exercise based solely on the quantitative criterion of population size has highlighted the need to develop methodologies that are more attentive to territorial specificities and ongoing socio-economic transformations. The objective should be to strengthen the role of Municipal Unions to ensure greater efficiency in the management of territorial resources.

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