

# FUNCTIONALITY IN THE LIMITS OF NEW ADMINISTRATIVE-TERRITORIAL UNITS IN ROMANIA

**Vlad LOGHIN**

PhD Student, University of Bucharest – Research Center for Integrated Analysis and Territorial Management, e-mail: loghin\_vlad88@yahoo.com

**Grigore Vasile HERMAN**

Lecturer, PhD, University of Oradea, Department of Geography, Tourism and Territorial Planning, e-mail: grigoreherman@yahoo.com

**Karina Andreea GRUIA**

Master Student, University of Bucharest – Research Center for Integrated Analysis and Territorial Management, e-mail: karina.gruia@yahoo.com

**Ana-Maria CIOBOTARU**

PhD Student, Assistant Researcher University of Bucharest – Research Center for Integrated Analysis and Territorial Management, e-mail: ciobotaruanamaria@inbox.lv

**Alexandra GRECU**

Master Student, University of Bucharest – Research Center for Integrated Analysis and Territorial Management, e-mail: alexandragrecu28@gmail.com

**Octavian PERPELEA**

PhD Student, University of Craiova – Facultatea de Economie si Administrare a Afacerilor, e-mail: taviperpelea@gmail.com

**Mihaela GIURGIA**

PhD Student, University of Bucharest – Research Center for Integrated Analysis and Territorial Management, e-mail: mihaela.c.giurgia@gmail.com

**Abstract.** The study aims to examine the applicability of national legal provisions regarding the establishment of new administrative units such as the commune type in the context of ensuring accessibility and superior functionality territory. The research was conducted at the level of 3181 administrative units in Romania, based on the indicators of Law 100/2007 such as: the farthest distance from the commune, the average distance between the communes and their center, its population, the population divided by the population of the village Tier 1, population of villages located at a distance of more than 5 kilometers from the commune of residence along with the population under 5 kilometers from the residence. The analysis captures the restrictive nature of the criteria of the national legislation in relation to the current territorial reality, with the certainty that public authorities discourage splitting municipalities. However the results indicate the need to update legislative principles for the establishment of communes and their alignment to the regional development strategies.

**Key words:** accessibility, functionality planning, territorial management, governance.

## 1. Introduction

Availability as a geographical concept holds a significant presence within the territorial strategies, both at European level and in Romania. Whether they are laid directly, implied in context, or tinted with related concepts such as distance, the accessibility criteria represent the base for administrative and political decisions.

In many specialized studies the importance of the functionality of administrative units is being evaluated, on which the proper functioning of health services, education, quality of infrastructure, etc. depend (Marković and Dunković, 2009).

The functionality of the administrative-territorial system is seen in numerous studies closely related to decentralization, considered a key element of governance.

In this context the concept of spatial decentralization arises as a cornerstone of local and regional development strategies (Cohen and Peterson, 1996; Bakarić, 2012; Draghici *et al.*, 2015).

The impact of local and regional development strategies is influenced by the quality of the transfer of administrative functions from the central authority to lower tiers (Oates, 2008; Hammond and Tosun, 2011).

The quality of administrative-territorial structure determines the efficiency of resource allocation and sustainable economic competitiveness (Bird, 1993; Kim, 2006; Mascareño, 2008; Faridi, 2011).

Effectiveness of administrative-territorial division is a defining element of economic

and social cohesion, aspect considered a major dimension of sustainable development of a territory (Tumpel-Gugerell and Mooslechner, 2003; Salvati *et al.*, 2016). To this it is added the grid integration of administrative units in hierarchical administrative levels to the central level (Zhang and Zou, 1998; Cartier, 2016). The quality of their integration into networks is considered essential in implementing public policies and, not least in the governance of a territory (Pierre and Peters, 2000; van Kersbergen and van Waarden, 2004; Sørensen and Torfing, 2005; Klijn, 2008).

The European Union puts great emphasis on regional development as a tool for reducing economic and social disparities (Ivan and Iov, 2010; Peptenatu *et al.*, 2012; Masteikiene and Venckuviene, 2015; Ciobanu, 2015; Pintilii *et al.*, 2016). Meanwhile orientation emerges attention into tackling local problems, which could not be resolved at higher levels (Bassoli, 2010; Donolo, 2012).

## 2. Work methodology

**Legal bases.** Territory of a country is divided, in order to ensure better management of space, territorial administrative units forming the territorial cut. It differs in morphology, granularity and hierarchy depending on the local site, often being held in the fundamental laws of the state. Over time this cutout is disrupted by economic, demographic and local policies. Establishment of communes criteria are set out in the National Spatial Plan, enacted by the Law 351/2001 and Law no. 100/2007 (Table 1) amending and supplementing Law no. 351/2001 on the approval of the National Spatial Plan - Section IV - Settlement network.

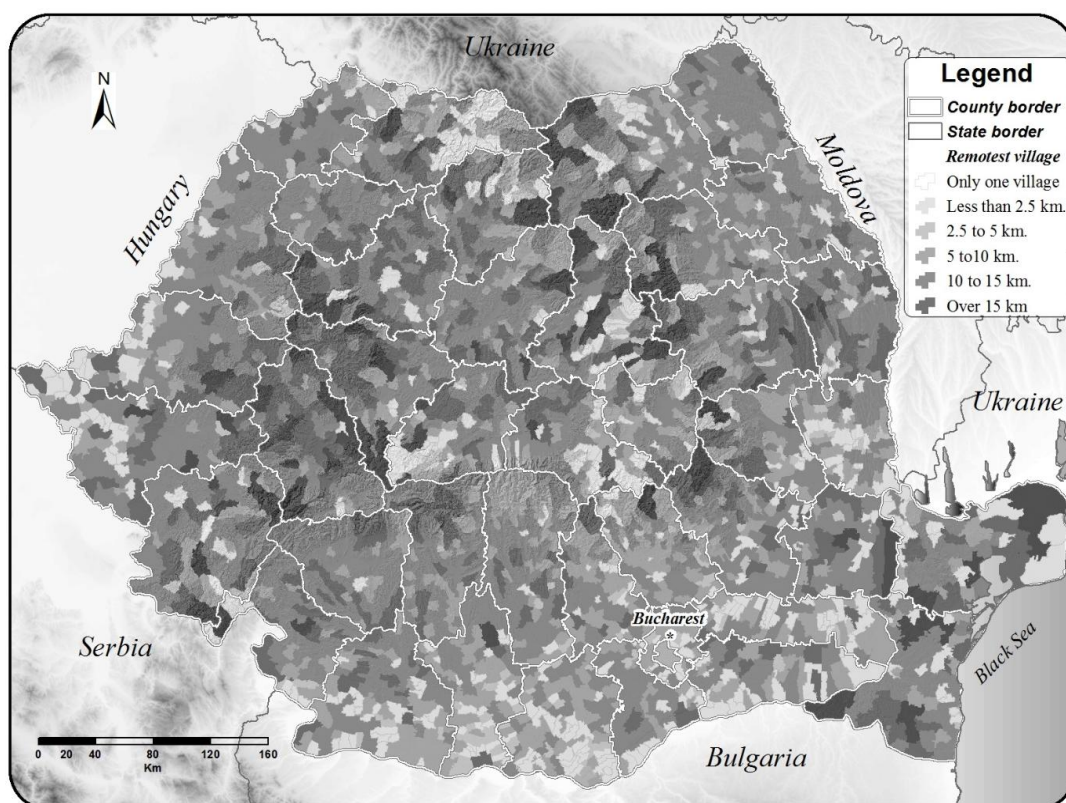


Fig. 1. The spatial distribution of the distance between the village center and the farthest village

Table 1. Criteria for the establishment of communes under Law 100/2007

1	Number of residents - minimum 1,500
2	The population employed in non-agricultural activities (% of total employment) minimum 25%
3	Homes built after 1960 (% of total dwellings) less than 45%
4	Economic potential to ensure budgetary balance of the commune
5	Links between the village-commune residence and other villages on public roads upgraded / with light pavement (% of total roads)
6	Placing each of the villages of the remote village proposed for setting up more than 5 km from the current village-commune residence
7	Reducing the total distance between the villages of the commune to be set up and the current village-residence, in relation to the total distance between them and the residence of the village commune-established - at least 15 km
8	Spaces built for institutions and facilities such as: city hall, primary school and secondary education, human dispensary, pharmacy or pharmacy point, police station, station / railway halt or automobiles station

According to the same law the above-mentioned criteria must also be met by the commune that remains after detaching a new commune. The way the criteria is set and the context in which the law text is drafted indicates that the emergence of a new commune is achieved by splitting an existing one, our study being based on this assumption.

The hypothesis is confirmed by the analysis of the major initiatives of this kind, establishing communes steps being initiated by the local council decisions and the acceptance is completed by the Government’s institution. Such analysis reveals a case of both existent cleavage stages to ensure the legality of this approach and actors involved in this type of administrative and political decision.

The first question that arose after analyzing legislative provisions was generated by the role of this law: Are

there in Romania situations where the establishment of a new commune would be necessary? The answer is not simple and should be based on multiple economic, territorial and cultural criteria stated in the law providing a range of indicators analyzed. Starting from these points, there has been developed a methodology of analysis that aims to measure the degree of applicability, by identifying the territorial administrative units which are potential candidates.

Information regarding vectorial limits of territorial administrative units were downloaded from the geoportal of the National Agency for Cadastre and Land Registration being processed for subsequent analyzes performed in the study.

Data on territorial hierarchy and types of territorial units were derived from the nomenclature S.I.R.U.T.A. provided by the National Institute of Statistics. From the same supplier data on population at the commune level was obtained through the EDEMOS portal. This information was supplemented by information obtained from the local level in the 2011 Census.

To calculate distances routing G.I.S. instruments have been used and as a source of data on transport infrastructure datasets derived from OpenStreetMap and completed by vectorization from other sources (topographic maps) have been used. The distances were calculated in a similar manner to that used to determine road distances kilometers, the spread between two locations actually being the spread between the points representing the center of those localities.

**Indicators.** Accessibility and demographic indicators used in the study were deducted from the formulated

criteria for establishing municipalities of the Law 100/2007:

- The distance to the farthest village;
- Average distance between the villages and the village center;
- The commune population;
- The population of the village population reported in Tier 1;
- Population of villages at a distance of more than 5 kilometers from the commune of residence located on the cumulative population under 5 kilometers from the residence.

The application of these indicators was meant to filter data on communes using an analytical set through classical visual and mapping methods carried out in each territorial unit.

### 3. Results and discussions

**Preliminary analysis.** One of the criteria stated in the law refers to the gap between villages and the village center.

We can deduce from this provision an indicator highlighting cases where, in certain territorial units the farthest distance between the village and the residence component is extremely well-marked. Thus we can analyze the need to establish territorial units through accessibility calculated at intra-communal level. Results of the analysis capture a diverse mosaic of the territorial distribution of this indicator (Fig. 1).

By analyzing national distribution it is easy to understand how topography, climate and vegetation influences the concentration of similar values. Most territorial units hold one locality and therefore have the indicator value 0 regarding the proposed indicator are concentrated either in plains and southern Romanian Plain or in depression areas (Fagaras, Brasov, Maramures).

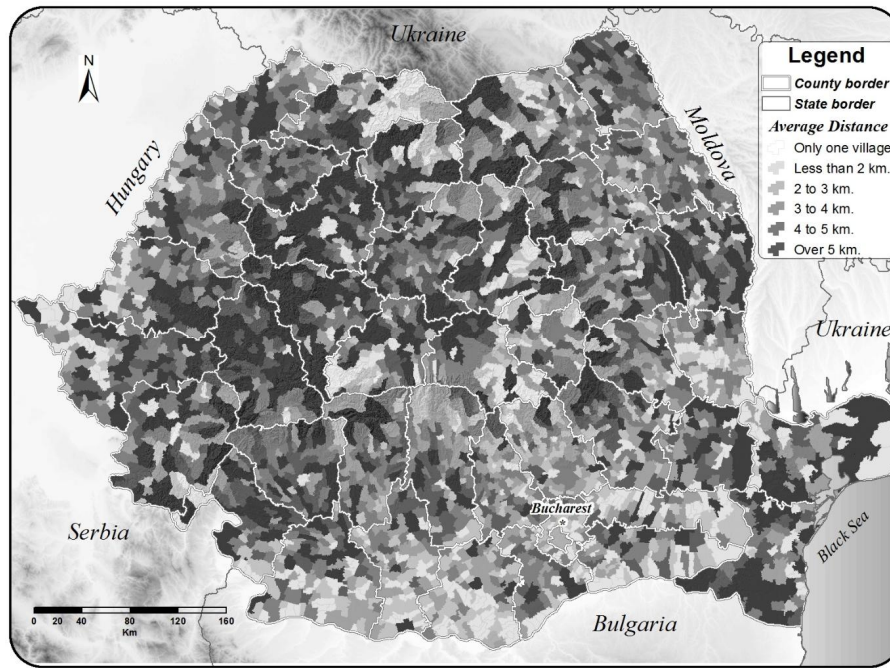


Fig. 3. The spatial distribution of the mean distance between the villages and the place of residence.

The next class is the one in which the indicator value is below the value of 2.5 km. It is represented by a sum of 114 territorial units, where the villages are located along a major road transport route. The number of locations considered as a part of this class is low, they hold only 92 of the two villages.

The values of interest for the current analysis are in excess of 5 kilometers (Fig. 2). Among these the class of between 5 and 10 kilometers is the most representative as number of entries from all classes with a total of 1276 units. The next two classes result in a total of 403, respectively 90 statistical values. Basically it is easy to understand that the number of territorial units in the farthest village is at a distance of over 5 km is highly represented, 58.7% of all municipalities in Romania being in this situation. Due to this indicator, the appearance of a significant potential of the applicability of the law rigorously arises to analyze the administrative recess (Fig. 3).

**Distance criteria.** Out of the eight criteria defined in the law, three directly refer to the

transport infrastructure, and out of these, criteria 6 and 7 make direct reference to accessibility. Their presence in this context indicates quite clearly that accessibility plays an important role in the cut of the administrative territorial coherence.

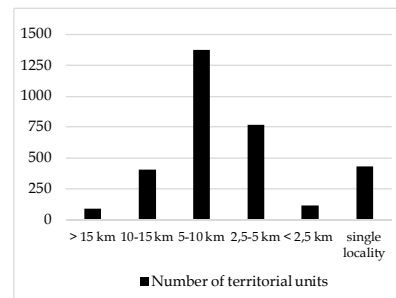
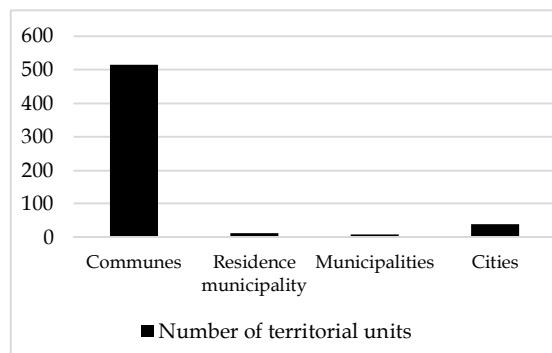


Fig. 2. Distribution of values for the distance between the farthest village and commune center (number of units)

To ascertain whether the existing administrative units in the criterion no. 7 we had to determine the distance between villages and town of residence.

Out of the 3181 administrative units (cities, towns, villages) only 574 have an

average distance between villages and administrative center, more than 5 kilometers (Fig. 4).



**Fig. 4.** Territorial units in which the distance between villages / localities and administrative center exceeds 5 km

From the 574 territorial units that meet the average distance, 59 urban units are thus differentiated:

- 12 county capitals (Craiova, Resita, Brasov, Miercurea Ciuc, Zalau, Bistrita, Drobeta-Turnu Severin, Satu Mare, Ramnicu Valcea, Constanta, Deva and Baia Mare);
- 8 Municipalities (Calafat, Sighisoara, Aiud, Gheorghieni, Marghita, Dorohoi, Hunedoara, Dej);
- 39 Cities.

The highest value for this indicator was obtained, to our surprise, by none other than Baia Mare, where the average distance between localities and residence was 12.74 kilometers, the farthest village, Blidari, being located at 19.53 km away.

The following two values are recorded in Neamt county, to be more precise Bicaz city with 9.98 km and Cugir Town with 8.96 km. For the city Cugir it is essential to mention that 6 of the 7 localities are at a greater distance of 7 km, and out of these only Mugesti town manages to have a population of over 100 inhabitants, as in the 2011 census 118 inhabitants were recorded.

From the 515 communes in which the analyzed indicator has values over 5 kilometers, Mehedinti county stands in through Dubova with a value of 13.32 km, followed by the commune Damuc in Neamt County with 12.63 kilometers. and Cerbal in Hunedoara with 12.42 km.

**Population criteria.** The demographic potential also joins in as a criteria for setting up a new commune; both the newly created and the commune that remains after the establishment must hold more than 1,500 inhabitants. So to establish a new commune it is necessary that the one resulted out off the new commune to hold at least 3,000 people in all villages. This value is located near the national average, which in the case of rural administrative units in 2011 census was 3368 inhabitants per commune.

Applying this criterion it reduces the number of potential candidates to 340, of which 281 are communes.

Actually, the demographic criteria set out in the law text is not sufficiently qualified, meaning that it is not sufficient that the territorial unit's total population to be 3,000 inhabitants. The correct value would be over 1500 inhabitants in all the villages that make up both the original unit and the newly created villages, not allowing the splitting of villages. That foregoing distinction complicates both logic analysis and practical application of the criteria. Basically it is necessary that at the original commune level besides the village of residence to harness another potential village with a sufficient mass population to polarize the newly created territory (Fig. 5).

In order to validate this potential, an analysis over the demographic potential at village-level was realized using the ranking method.

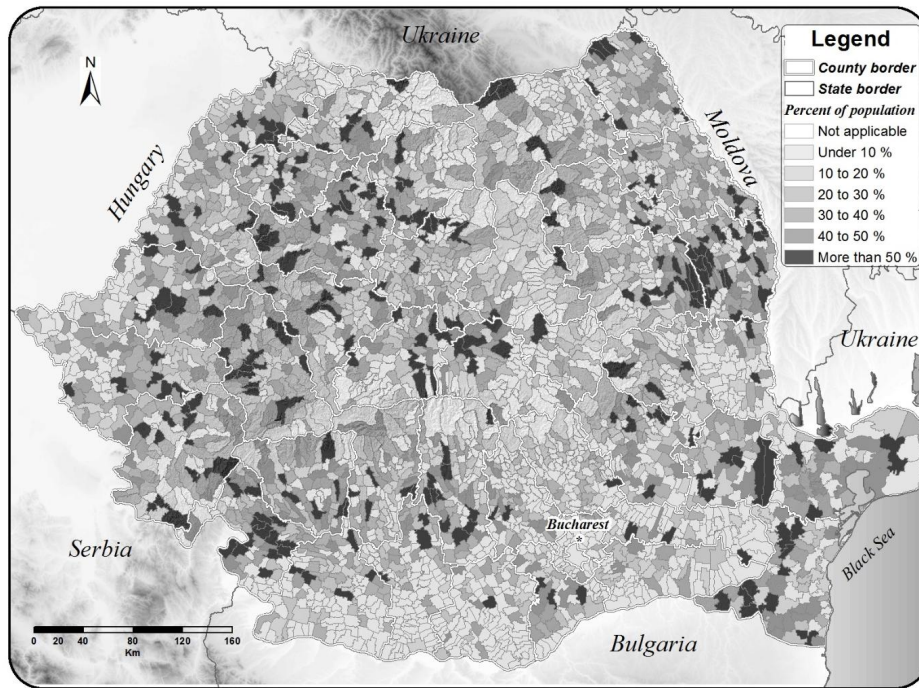


Fig. 5. Percentage of residents of villages located less than 5 kilometers from the village center.

Practically every locality within a municipality was awarded a rank, based on the number of registered inhabitants. In a commune with five villages the first having the highest number of population received the rank one, whereas the last in the rankings received the rank. The first verification conducted through these ranks was meant to validate the potential of a commune having 1,500 inhabitants after the failure of the village:

$$\sum Pop Village 1 \dots N - Pop Village Rank 1 \geq 1500$$

The result of this calculation reduced the number of potential candidates from 236 territorial units.

The following calculation is derived from the test for the new location of each village of a commune at a distance greater than 5 km from the current residence. Basically, the demographic potential of the new establishment is generated strictly by the population in villages that meet the mentioned criteria.

Applying this reasoning, it is revealed the following situation at national level: out of the total of 13755 villages having both a

population of 20,121,641 inhabitants, 4711 of them, totaling 1,931,714 inhabitants are located more than 5 kilometers from the place of residence.

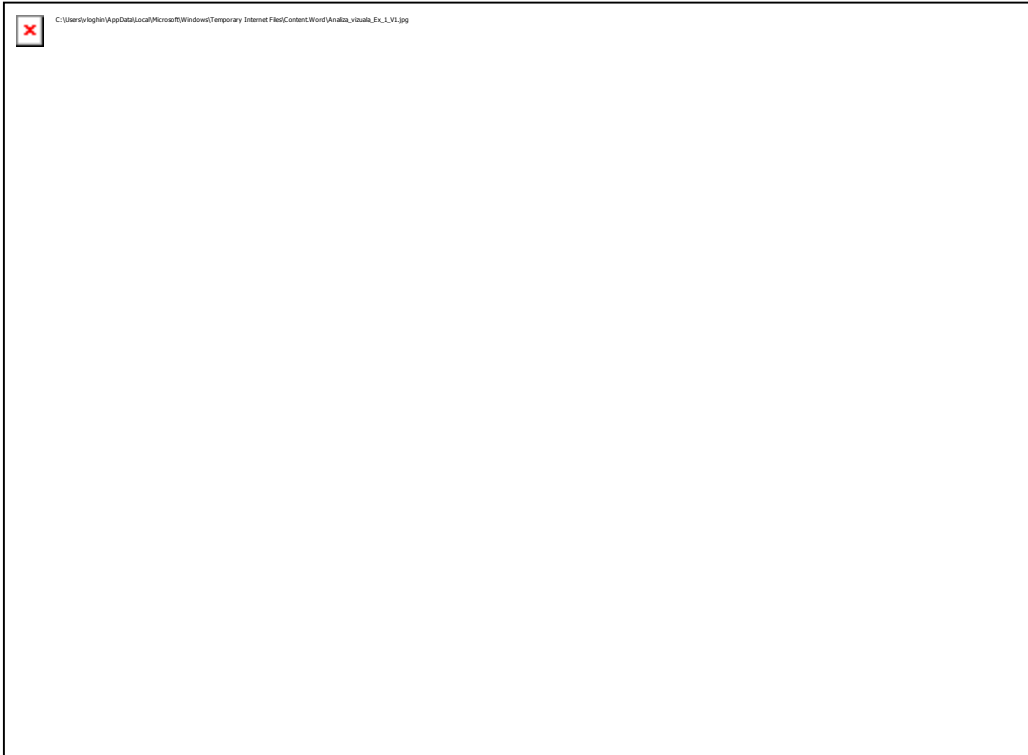
These are grouped under the 1869 administrative units from which 423 villages build a demographic potential at more than 5 km away from the residence of over 1,500 inhabitants. Practically, it is necessary that a candidate commune to meet the following two criteria:

$$\sum Pop \text{ of Villages at more than 5 km from the residence } \geq 1500$$

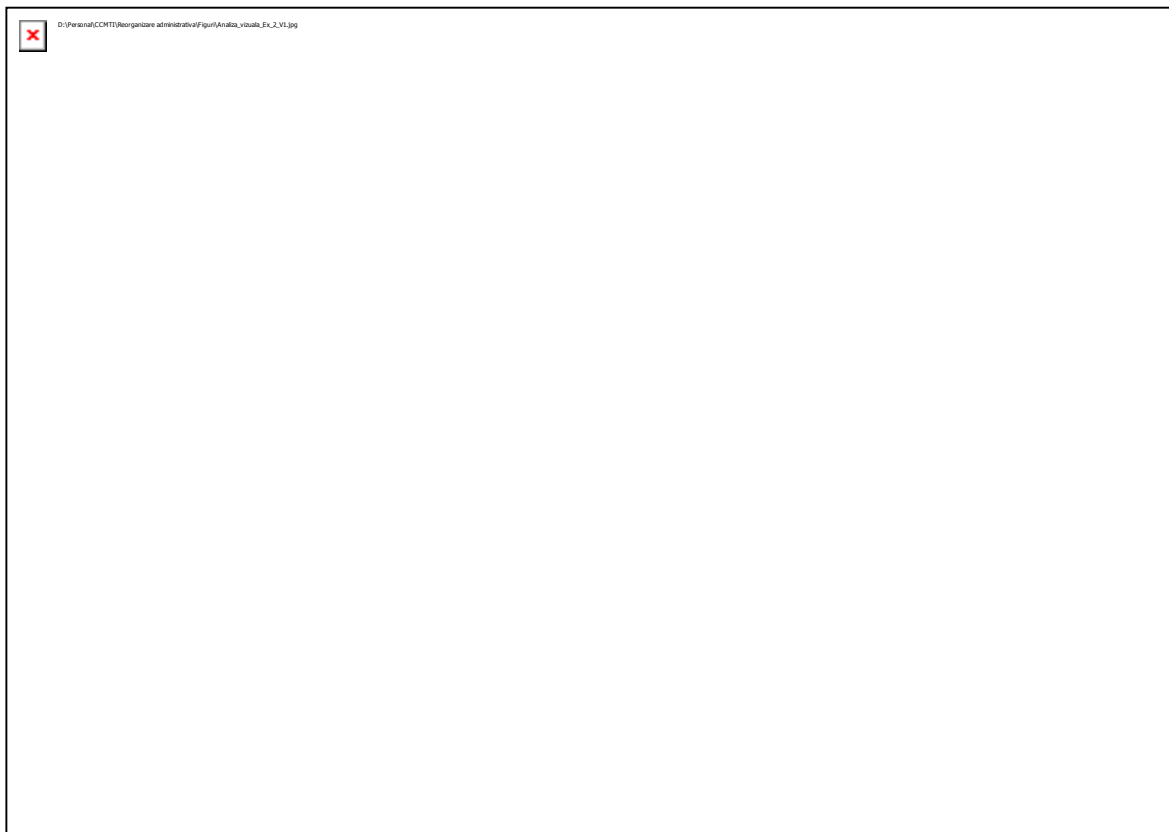
$$\sum Pop \text{ of Villages} - \sum Pop \text{ of Villages at more than 5 km from the residence } \geq 1500$$

The result of this analysis indicates that the number of units that meet the criteria is 336 U.A.T. sites out of which 20 municipalities, 45 cities and 271 communes. So applying the cumulative demographic and accessibility criteria the potential candidates are reduced to 271.

By combining this with the criterion on the demographic potential calculated on the basis of ranks, the number of candidate communes reached 116.



**Fig. 6.** Examples of constraints in creating territorial units. Bahna and Pestera communes



**Fig. 7.** Examples of constraints in creating territorial units. Galda de Jos and Horgești

Furthermore, by applying the criterion relating to the cumulative reduction of more than 15 km further, from the

calculation 15 territorial units that have only one or 2 villages over five kilometers of residence are removed, remaining 101

UAT potentially candidates. Thus, this is the sample of potential candidates resulting from the application of quantitative analysis methods of data.

On this filtered set of territorial units a single cartographic analysis was conducted by browsing and visualising the map of each community, the analysis revealing that there are no matching units in the division because:

1. town of residence has a central location and the U.A.T. site division would not be achieved while preserving territorial coherence (Pestera Commune, Constanta district);
2. the road links between localities are absent, the current settlement of residence being a central hub. This is oftenly due the parallel positioning valleys of componing villages (Bahnea commune, Mures district) (Fig. 6);
3. none of the villages over five kilometers has a demographic potential necessary to take on new residence status (Galda de Jos commune, Alba district);
4. the resident village and the tier 2 settlement are located in proximity, the distance between them being reduced (Horgești commune, Bacau district) (Fig. 7).

Once all these territorial units have been revised and cases falling within any of the four previous occasions have been eliminated, the number of territorial units ideal within the criteria defined in the law and exemplified by indicators from this study is limited to 20 municipalities.

This number indicates the authorities' intention to limit the municipalities split initiatives. Meanwhile, analyzed demographic indicators suggest rather the need for legislative mechanisms by which the territorial units should be

associated in order to have a more effective management of the territory.

#### 4. Conclusions

And in terms of the analysis based on these indicators, the results open the clear prospect of a new study detailing the aspects that determine the viability of a regional structure. We must not forget, however, that the average population of a village in Romania is significantly lower than the European average.

The results show the restrictive nature of the criteria, which may establish new communes set into national legislation in relation to a territorial context in permanent change. These restrictions discourage initiatives in this direction, thus helping to reduce adaptive capacity at this level. The research highlights the need for greater flexibility of the legislative framework, establishing communes and aligning them to the regional development strategies.

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