

QUANTITATIVE DISTRIBUTION OF HUMAN SETTLEMENTS IN SOMES PLAIN

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Résumé: *La distribution quantitative des habitats humains de la Plaine de Somes.*

La réseau des habitats humaines de la Plaine de Somes est constituée de 125 emplacements desquelles 6 ont un statut urbain. Du rapport de ces emplacements humains à la surface de la Plaine de Somes (2032 km²) il a résulté une densité moyenne de 6,1 emplacements/ 100 km², un coefficient moyen de l'aréolite de 16 km²/ emplacement et une distance moyenne entre deux emplacements de 4,8 km. Il faut remarquer que ces coefficients présentent des oscillations en ce qui concerne leur valeur tant au niveau des sousunités de la plaine que au niveau des unités administratives de cet espace. L'indicateur de dispersion a été calculé au niveau des unités administratives, en obtenant une valeur entre 0 et 5. Cet indicateur reflète le groupage des foyers dans le territoire étant influencé du degré de fragmentation du relief, le réseau hydrographique, la repartition de la population dans le territoire, etc. Le dernier indicateur analysé dans la distribution quantitative des emplacements humains de la Plaine de Somes c'est le potentiel de polarisation des centres administratifs. Pour cet indicateur nous avons obtenu des valeurs entre 0 et 2,8, ce qui met en évidence la faible puissance d'attraction des centres administratives dans leur espace d'influence et la tendance toujours plus accentuée du dépeuplement enregistrée récemment.

Key words: human settlements, density settlements, administrative centre

Mots clé: emplacement humain, densité des emplacements, centre administratif

With a view to quantitative distribution analysis we used a series of indicators as follows: density settlements, the coefficient of the area of settlements, the average distance between two settlements, the index of dispersion, the potential for polarization, etc.

1. Density settlements

The density of human settlements in line with population density, level plain, his subunits and level administrative units can provide information on anthropogenic pressure on the environment.

The density of human settlements is an indicator that shows us how human settlements return a unit of area (expressed by settlements/km²).

Therefore, the main elements of this indicator are Somes Plain area (2032 km²) and the number of settlements (125 settlements).

From relatively uniform distribution of settlements in the territory Plain Somes, shows a density of 6.1 dwellings/100 km².

In the twentieth century, this indicator has seen a significant increase, from 4.5 to 6.1 settlements/100 km², following the establishment of new human settlements in this land until yesterday's floating.

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Regarding the density of settlements in the Plain Somes subunits, it presents a range between 5 and 6 settlements/100 km², except Plain Săcășeni with 12.7 settlements/100 km².

Analyzing density of human settlements level administrative units, can see that it varies between 0.1 and 0.3 dwellings/km² in the following administrative units: Satu Mare, Carei, Livada, Căpleni, Turț and Gherța Mică and over 0.8 settlements/km², the communes Dorolț, Odoreu and Păulești

The density of settlements, the coefficient of the area and the average distance between settlements

Table 1

Subunit	Area km ²	Number settlements	Density Settlements (Settlements/km ²)	Coefficient of area (km ² /establishments)	The average distance between two settlements (km)
Câmpia Crasna-Homorod	685,6	39	0,05	17,5	5
Câmpia Micula	556,9	34	0,06	16,3	4,8
Câmpia Turului	328	21	0,06	15,6	4,7
Câmpia Ecedea	273,6	17	0,06	16	4,8
Câmpia Ardudului	164,4	11	0,06	14,9	4,6
Câmpia Săcășeni	23,6	3	0,1	7,8	3,3
Câmpia Someșului	2032	125	0,06	16,2	4,8

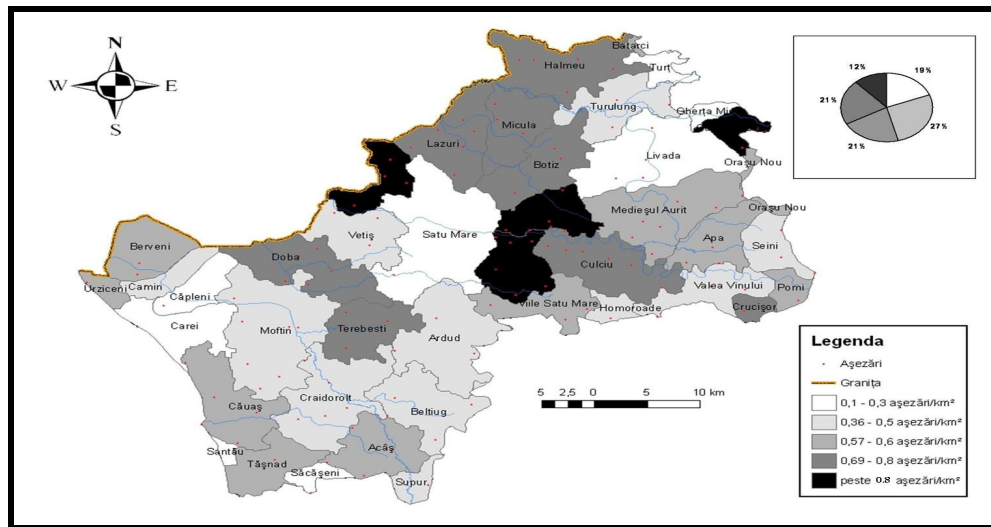


Fig. 1. Plain Someșul. The density of human settlements, level administrative units in 2002.

Source: Directorate of Statistics Satu-Mare

2. Thermal area

The coefficient of the area as a ratio between the surface and the number of settlements, recorded at the Plain Someșul 16 km²/settlement, much lower than that recorded nationally, 18.1 km²/settlement.

At the same subunit plains, the values vary between 7.6 km²/settlement in Plain Săcășeni and 17.5 km² / settlement in Plain Crasna-Homorod.

Level administrative units these values varies between 7.8 km²/settlement in the communes: Dorolț, Lazuri, Small, Botiz, Odoreu, Paulesti, Apa, Crucișor and Călinești Oaș and over 41.3 km²/settlement Satu Mare and Carei.

This indicator, along with the index of area and average distance between two settlements provides information on how the management and organization of settlements in the geographic area of Plain Someș, and information regarding anthropogenic pressure on it.

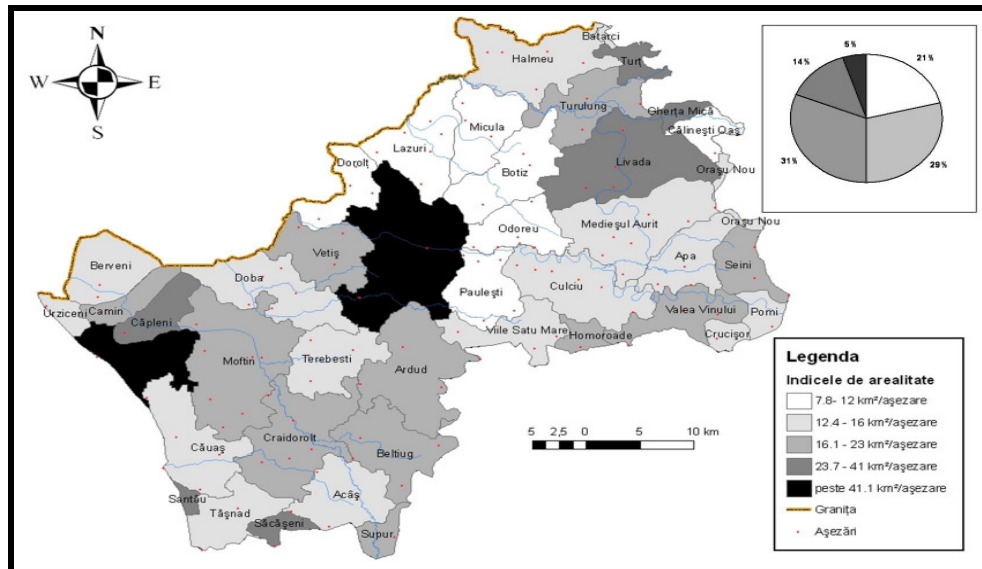


Fig. 2 Plain Someș. The index of area-level administrative units in 2002
(Source: Directorate of Statistics Satu-Mare)

3. The average distance between two settlements

Based on the coefficient area we calculated the average distance between two settlements under the formula:

$$dm = 1.2\sqrt{a}$$

where - **dm** represents the average distance;

- **a** represents a coefficient of the area.

The amount resulting from the Plain is 4.8 kilometers, so much less than the national average (5.1).

At the Plain Someș subunits are worth between 3.3 km in Plain Săcășeni and 5 km in Plain Crasna-Homorod.

This indicator is inversely proportional to the density of settlements (as the density of settlements is more than the average distance between two settlements will be lower) and commensurate with the index of area (as indicated area is high and average distance between two settlements will increase).

4. Index of dispersion

Index of dispersion reflects the grouping of fireplaces the territory. This is influenced, primarily by natural factors: energy and the degree of fragmentation of relief, hydrographic network, but also the distribution of population in the territory, property relations and the type of economy, the social-economic factors.

Plain Someș is characterized by a low degree of dispersion in the settlements, determined to a large degree part of the particular relief.

Level administrative units, it might reveal the existence of a polarizing administrative function, usually with potentially higher economic and demographic components of other settlements.

To calculate the index of dispersion formula we used A. Demangeon:

$$Id = \frac{(N - M) n}{N}$$

where: **N** - population administrative unit;

M - population center unit;

n - the number of settlements belonging.

Values fall between 0 and 3.6 generating the following types of administrative unit:

- administrative units disperse indicate very low (below 0.6): Carei, Satu-Mare, Odoreu, etc.
- administrative units disperse indicate low (between 0.6 and 1): Turulung, Botiz, Tășnad, Home, etc.
- administrative units with a dispersion medium (between 1.3 and 2): Dorolț, Vetiș, Ardud, etc.
- administrative units disperse indicate high (between 2.5 and 3): Halmeu, Doba, and Beltiug Lazuri.
- administrative units disperse indicate very high (over 3.6): Mofin, Căuaș, Păulești, etc..

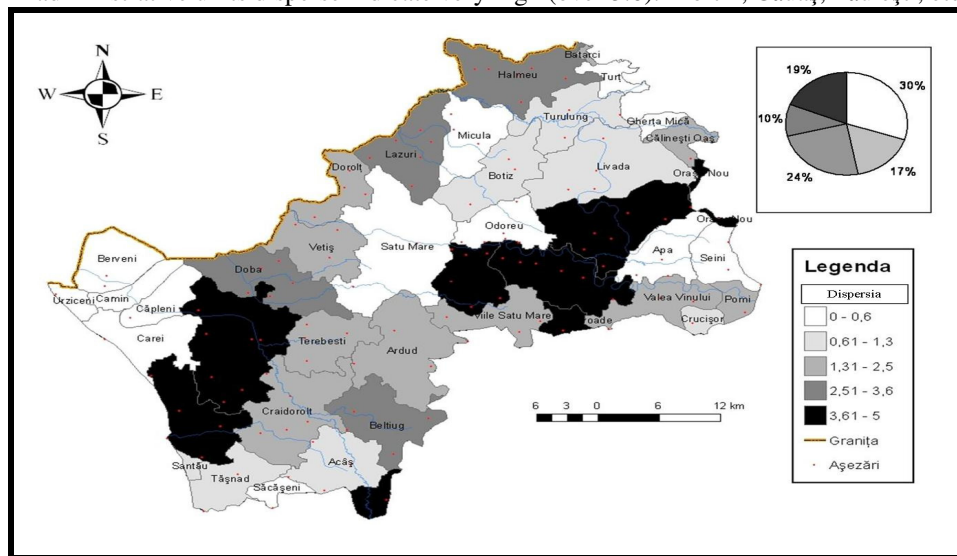


Fig. 3 Plain Someș. The index of dispersion, the level administrative units in 2002

Source: Census of the general population and the inhabitants of Romania in 2002

5. The potential for polarization of the administrative center of the field Someșul

The potential for polarization of the administrative centers is an indicator which highlights the power of attraction centers in the administrative area of their influence, and the degree of polarization of the center in terms of potential demographic.

Type of calculating the potential polarization (V. Surd, I. Raboca, 1989), is:

$$Pp = \frac{(N - M)}{Ac}$$

Where: **N** - the total population of the administrative unit;
M - population administrative center;
Ac - population settlement conventional means.

At the Plain Someș agreed settlement amount is 1715 inhabitants. In this way, the potential for polarization indicates the number of settlements that conventional gravitate to the administrative center. In the case of administrative units which extend only partially within the Plain Someș to take into account the population of all settlements belonging, so those from outside the region.

Analysis of potential polarization of the administrative center of the field resulted Someș following centers:

- Center administrative polarization potentially very large (over 2.1): Halmeu, Medieșu Aurit and Orașul Nou.
- Center administrative potentially high polarization (between 1.2 and 2): Lazuri, Vetiș, Moftin, Supur, etc.
- Center administrative potential environmental polarization (between 0.7 and 1): Arduș, Livada, Botiz, etc.
- Center administrative potentially reduced polarization (between 0.3 - 0.7): Acâș, Pomi, Berveni etc.
- Center administrative potentially polarization very low (below 0.3): Micula, Odoreu, Apa, etc.

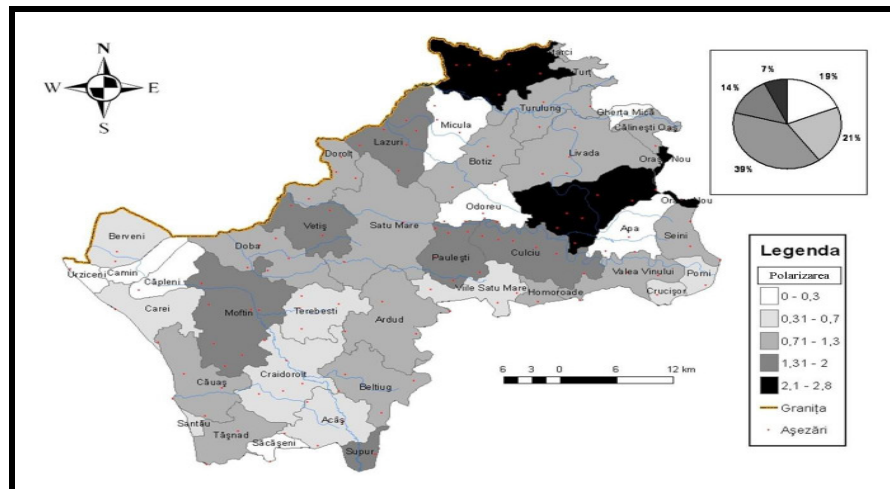


Fig. 4 Plain Someș. The index of polarization, the level administrative units in 2002

Source: Census of the general population and the inhabitants of Romania in 2002

In conclusion it is found that 79% of the administrative units of the field Someșul have a potential environmental polarization, low and very low, which highlights the growing trend of depopulation widening of the last period.

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