

MODEL OF ADMINISTRATIVE-TERRITORIAL ORGANISATION USING THE CONCEPT OF GEOGRAPHICAL AXIS. CASE STUDY: SOMEȘUL MARE HYDROGRAPHICAL AXIS

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Citation: Tătar A. M. (2024). Model of Administrative-Territorial Organisation Using the Concept of Geographical Axis. Case Study: Someșul Mare Hydrographical Axis. *Revista Română de Geografie Politică*, 26(2), 90-96. <https://doi.org/10.30892/rrgp.262103-379>

Abstract: The social-economic need for reorganisation of Romania's territory serves as the main purpose in building a model of administrative-territorial organization based on a geographical axis, which can be very useful in understanding and managing regional resources and development more effectively. In the case of the Someșul Mare hydrographical axis, how the localities along this axis develop and interact is investigated. At the level of Bistrița-Năsăud county, the design of the UAT (administrative-territorial unit) Someșul Mare, which includes the following UATs, is analyzed Șanț, Rodna, Maieru, Anieș, Sângeorz-Băi, Iva Mică, Feldru, Nepos, Poderei, Rebrîșoara, Năsăud, Salva, Nimigea, Chiuza, Beclean. The merger of 12 UATs into a single UAT called Someșul Mare with the centre at Beclean. Due to its economic expansion and geographical position, the city has been chosen as the centre and pole of the new U.A.T within the county. National Road 17 (DN 17) and County Route 172 ensure the continuity and functionality of the UAT axis Someșul Mare.

Key words: UAT Someșul Mare, Geographical Axis, Model of administrative-territorial organisation, Bistrița-Năsăud County, Romania

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INTRODUCTION

The urban area and the rural zone are organic components of the regional system. They are interdependent, integrated, and complementary (Liu et al., 2023). The complex urban-rural relationship refers to the symbiotic interaction between urban and rural areas that affect each system. It is the most basic economic and social relationship in the development of human society, and it is

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also an important relation that must be dealt with in regional development and political organization (Liu et al., 2023).

Urban-rural interaction is manifested in the flow of material, capital, personnel, information, and technology resources between urban and rural areas (Liu et al., 2023). The geographical axis model shows Urban-rural interaction efficiently.

The development of a model of territorial reorganization based on the concept of geographical axis is being investigated. Proposed model: U.A.T. Someșul Mare. The geographical axis is defined as a "line of spatio-temporal shape, a line that allows in a temporo-spatial way, the diagnosis and geographical forecasting of a territory, a territory that can take different geometric conformations, and dimensions according to the capacity of component polarization" (Pop, 2003).

Grafting the territorial planning activity in practice, for example, within the axis, must respond to the elaboration of the main indicators in the development and geographical harmonization of the territory by (Pop, 2004): the study of natural, social and economic conditions. The geographical and social axis are concentrated and spread to and from the poles of development, the flows of population, goods, capital and information thus playing an important role in their development and dynamics (Pop, 2016).

Thus the hydrographical axis Someșul Mare is characterized as a geographical axis that meets the mentioned conditions and presents geographical continuity in the studied territorial area. Rivers are commonly used to define political boundaries, rivers can be used as a structure in territorial delimitation at the sub-national scale (Popelka and Smith, 2020).

The importance of the territorial organization along the contours of the river Someșul Mare is given by the relationship between the hydrological unit and the communities. Rivers connect people, places and other forms of life, inspiring and sustaining diverse cultural beliefs, values and ways of life. although the views emerging from socio-hydrology and the hydro-social cycle are based on different paradigms of knowledge, they are rooted in the basic idea that water systems - like rivers - and society co-evolve and emerge through continuous engagement in space and time (Anderson et al., 2019).

Ethnographic studies of common water systems and their communal water management institutions have also contributed to such understanding (Anderson et al., 2019).

The territorial reforms are based on the performance, administrative and organizational power of localities (Ebinger et al., 2019). It is important to note that this results from their organisational and resource capacity and their room for manoeuvre in terms of finance, policy, organisation, staffing, etc. On the other hand, they can solve local problems and influence social developments in the territory in the long term. This includes the ability to perform public tasks by improving quality, accessibility, legitimacy and efficiency (administrative strength) as well as to act as a strong carrier of public institutions (organizational strength) (Ebinger et al., 2019).

By outlining administrative-territorial units (UAT), the administrative performance and capacity of Someșul Mare increases.

METHODOLOGY

In the realization of the article, the geographical axis method is used, which fulfills material, energetic, informational and relational functions (Figure 1) The geographical axis method is used to investigate territorial tasks: settlements, administration, population and demography.

It outlines the model of a territorial administrative unit based on the hydrodiversity of the Someșul Mare River, which is characterized by human activities (forestry, agriculture, hydrographic planning, water supply, energy industry, fishing, recreation, etc.) carried out between settlements.

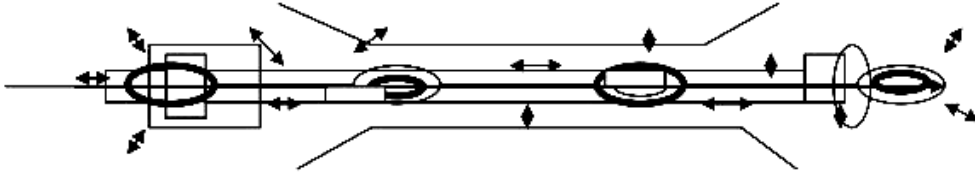


Figure 1. The composite model for spatial structures in the form of a geographic axis used in the structural realisation of the U.A.T. Someșul Mare (Pop, 2016, p. 286-287)

The geographical element where the geographical axis is built: is the river Someșul Mare.

- Urban centers: Beclean, Năsăud, Sângeorz-Băi;
- Towns and villages under the influence of urban poles;
- connecting road: DN 17, DJ 172;
- Social and economic activities between rural localities and urban centres.

Beclean central pole.

Geographical space - administrative units – social and economic trades - communication routes (road, road transportation).

RESULTS

To provide a good organization the research results are structured as follows: I. Descriptive analysis of the Someșul Mare River and the territorial units crossed by the hydrological unit; II. UAT Someșul Mare.

I. Someșul Mare River

The Someșul Mare River springs from the Rodnei Mountains at an altitude of 840 m, having the geographical coordinates of 47° 30' 31" North latitude and 24° 59' 43" East longitude travels a distance of approximately 130 km, through the towns of Sângeorz-Băi, Năsăud and Beclean until it flows into Someș (Figure 2) (Vasile et al., 2024).

The Someșului Mare hydrographic basin is a part of the Someșului hydrographic basin, with an area of 15740 km², which, in turn, is part of the Someș-Tisa hydrographic basin. For the most part, the hydrographic basin of Someșului Mare covers the area of Bistrița Năsăud County, but smaller areas are part of Cluj county, especially at the discharge into Someș (Vasile et al., 2024).



Figure 2. The hydrographic network of the Someșul Mare basin, localization of the hydrographic axis (Băca and Onofreiu, 2016, p. 48)

b. Territorial-administrative (UAT) units crossed by the hydrological unit (Table 1, Figure 3).

Table 1. Analysis of the UAT crossed by the River Someșul Mare ¹

Name UAT NO	Area km ²	% of county surface	Population		% of county population	Component localities
Șanț (1)	264,44	4,93	3.247		1,1	Șanț, Valea Mare
Rodna (2)	139,15	2,59	6.003		2,03	Rodna, Valea Vinului
Maieru (3)	149,15	2,78	7.579		2,56	Maieru, Anieș
Sângeorz-Băi (4)	144,02	2,69	10.931		3,69	Sângeorz -Băi, Cormaia, Valea Borcutului
Ilva Mică (5)	53,63	1,00	3.164		1,06	Ilva Mică
Feldru (6)	123,03	2,29	7.378		2,49	Feldru , Nepos
Rebrișoara (7)	147,86	2,76	4.209		1,42	Rebrișoara Gersa 1,Gersa 2 Poderei
Năsăud (8)	43,53	0,81	10.215		3,45	Năsăud, Liviu Rebreanu, Lupșa
Salva (9)	26,32	0,49	2.491		0,84	Salva
Nimigea (10)	99,12	1,85	5.434		1,84	Nimigea de Jos, Nimigea de Sus, Florești, Mintiu , Mititei , Mocod , Mogoșeni , Tăure
Chiuza (11)	43,91	0,81	2.067		0,69	Chiuza , Mireș , Piatra , Săsarm
Beclean (12)	58,6	1,09	11.260		3,8	Beclean,Coldău, Fig,Rusu de Jos

¹ www.recensamanromania.ro/rezultate-rpl-2021/rezultate-definitive-caracteristici-demografice/

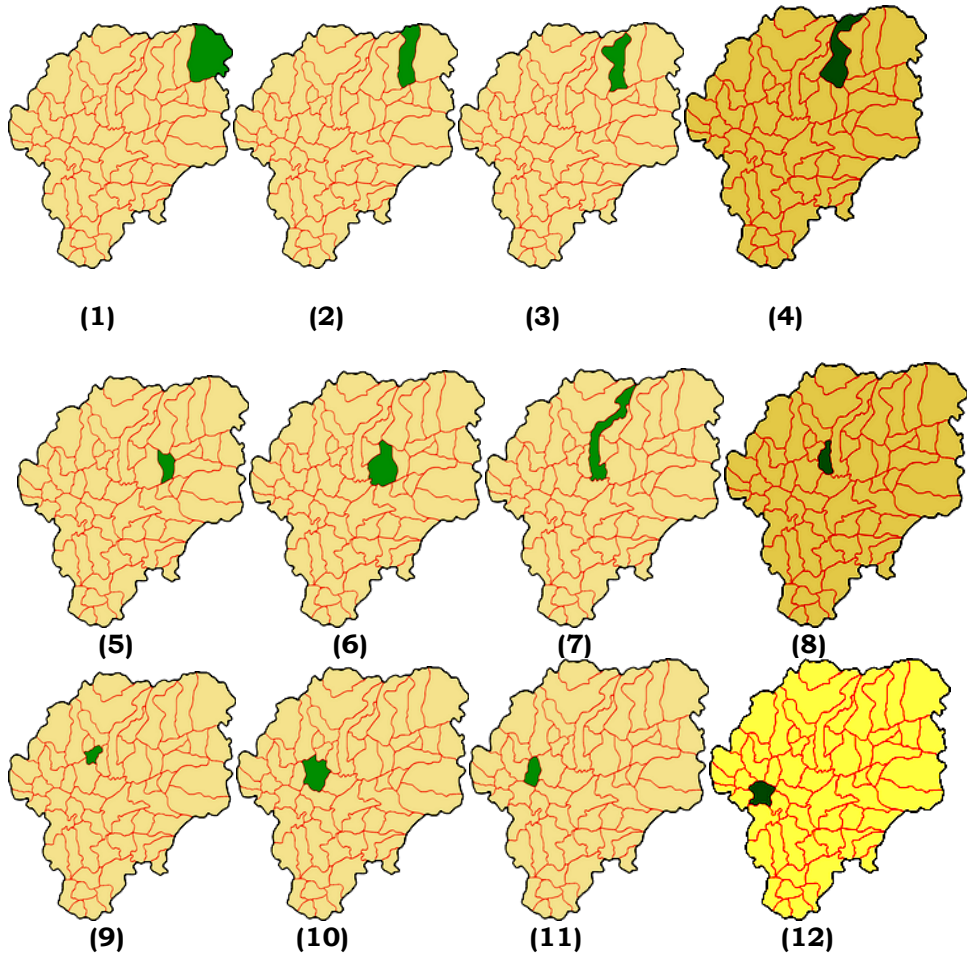


Figure 3. Situation of the administrative-territorial units before applying the axis module.

NO (4), (8) and (12) are urban poles, NO (4) is the centre for (1), (2), (3); NO (8) centre of influence for (5), (6), (7); NO (12) pole for (9), (10), (11).

NO (12) is the proposed administrative centre for the new UAT.

II. Someșul Mare Territorial Administrative Unit (U.A.T. Someșul Mare)

Someșul Mare UAT unites 12 territorial administrative units (mentioned in Table 1), the administrative unit is crossed by the river named the UAT (hydrographic axis) and it is crossed by the national road 17 and county road 172, between the component localities there is social-economic exchange, urban centres therefore it is a geographical axis (Table 2).

The administrative reorganization model is carried out at the level of Bistrița - Năsăud county, the political-administrative structure does not aim at the abolition of the county but at the economic efficiency of the administrative apparatus. The new structure respects law no. 290 of 29 November 2018 for the modification and completion of Law no. 2/1968 on the administrative

organization of the territory of Romania, Published in Official Monitor number 1052 of December 12, 2018.

Beclean becomes a municipality, the administrative centre of the Someșul Mare UAT thus creating a dynamic relationship between Bistrița the centre of the county and Beclean the centre of the new UAT, this dynamic presents economic potential that allows the county to develop.

Table 2. The characterization of the new UAT ²

Name UAT	Area km ²	% of county surface	Population	% of county population	Number of pre-school, school, pre-university, university education establishments
Someșul Mare	1.292,76	24,09	73.978	24,97-25	24 + 1 university centre in Năsăud, UBB Extension, Faculty of Psychology and Educational Sciences

UAT Someșul Mare with a total of 25 educational units and Bistrița with 40 units of which three university centres: (extensions UBB, UTCN, UMFST G.E. Palade Târgu Mureș) have the potential for academic development, a university axis (UAT Someșul Mare-Beclean - Bistrița) on which to build a HUB of Innovation and Research that realises economic value and development for the county.

CONCLUSIONS

The creation of an administrative-territorial unit, such as Someșul Mare, can bring multiple social and economic advantages for Bistrița-Năsăud County:

Regional Economic Development: strengthening resources and infrastructure can stimulate investment and economic development in the region. **Job Creation:** Infrastructure and development projects can generate new jobs, reducing local unemployment.

Access to European Funds: A larger administrative-territorial unit can have easier access to European funds for development projects. **Improved Infrastructure:** Strengthening resources can lead to the modernization of transport, energy and communications infrastructure, making it easier to access markets and attract investment.

Improved Public Services: A strengthened administration can deliver more efficient and higher quality public services such as education, health and transportation. **Social Cohesion:** Administrative consolidation can lead to better social cohesion and reduce disparities between communities.

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² <http://statistici.insse.ro/>

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Submitted:
September 20, 2024

Revised:
October 01, 2024

Accepted and published online:
October 15, 2024