

WAYS OF OPTIMISING REGIONAL PLANNING: SETTLEMENT TYPOLOGY. CASE STUDY: THE BAIJA MARE DEPRESSION

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ABSTRACT. In a relatively uniform natural environment, the settlements in the Baia Mare Depression have very diverse forms. According to an oriented complex typology, we have identified the features and the problems characteristic of these settlements, according to the following criteria: the infrastructure already, demographic features, education, health, and tourism. By synthesising these criteria, we identified the following settlement types: polarising urban centres, under-pressure urban settlements, important rural settlements, under-pressure rural settlements, and declining rural settlements. Each of these types shows that it is necessary to differentiate our intervention, i.e. territorial planning activities must respond accordingly to local and regional needs.

Key words: typology, criterion, territorial planning.

Typology has often been used in geography and it has got more and more characteristic nuances according to practical necessities. After a long time, the typologies from settlement research focused on the geographical position, the number of inhabitants, and the structure of the inhabited area. Lately a trend based on the necessity of giving pragmatic answers to territorial planning has appeared. Typology is also widely used in regional planning in the European Union and it is a useful method for regional development policy. Typology relies on the following criteria: household building strategy, environmental capacity and sensitivity, social and demographical features, etc. Taking all these into account we consider that a complex typology is beneficial for the settlements situated in a well defined physical-geographical space, with a clear functional polarisation, strong attraction vectors towards a dynamic urban centre in the last 50 years. On the other hand, we consider that such a typology is a useful means to improve territorial management both at the local and the regional level.

We have also thought that *an oriented typology* has to focus on a territorial priority and benefit from a high degree of flexibility that allows adjustments under the local conditions. That is why a correlation is necessary between the *scale* of the approach, the *typology criteria*, and *the way* to use the typology.

GEOGRAPHICAL FEATURES

The territory we researched was the Baia Mare Depression (750 km²). Its landforms have an altitude varying between 150 and 570 m, with a spatial structure depending on the three main rivers: the Someş, the Lăpuş, and the Săsar. In this area, lie five towns: Baia Mare, Baia Sprie, Tăuții Măgherauș, Ulmeni, and Șomcuta Mare. The first two are rank II and rank III municipiums respectively, according to national evaluations (Law 351/2001). The other settlements are organised into 11 communes: Șisești, Dumbrăvița, Groși, Recea, Ardușat, Fărcașa, Satulung, Remetea Chioarului, Săcălășeni, Mireșu Mare, and Sălsig. Communication infrastructure consists of national and local roads, the railway connecting Baia Mare with western and central Romania and a domestic airport.

According to their location, the typology of settlements typology is quite varied:

a. *Settlements situated in river meadows and on their inferior terraces* and highly vulnerable to hydrological risk phenomena (floods, high waters, and emerging marshes). Still this location is considered favourable due to its low inclination on most of the surface, thus favouring private and industrial constructions. In this category we have included the following rural settlements: Țicău, Mânău, Ulmeni, Tohat, Sălsig, Mireșu Mare, Lucăcești, Gărdani, Dăneștii Chioarului, Pribilești, Tămaia, Colțirea, Mogoșești, Arieșu de Câmp, Bușag, Bozânta Mică, Bozânta Mare, Lăpușel, Cătălina, Săcălășeni, Culcea, Remetea Chioarului, Chechiș, and Tăuții de Sus.

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b. *Settlements situated on river terraces* benefiting from their morphological favouring features whereas the surface with medium slopes increases: Buzeşti, Sârbi, Fărcaşa, Săsar, Recea, Mocira, Coruia, Coaş, Remecioara, Hideaga, Satulung, Finteuşu Mic, Finteuş Mare, Şomcuta Mare, Cheliņa, and Arduzel.

c. *Settlements situated on the interfluvies, slopes and in erosion basins* are characterized by complex restricting and favourable factors. These have influenced household distribution, land use, the appearance of dangerous geomorphological phenomena, etc. In this category, we have included the following settlements: Iadăra, Vălenii Şomcutei, Arieşu de Pădure, Satu Nou de Jos, Groşi, Satu Nou de Sus, Şişeşti, Unguraş, Dăneşti, Bontăieni, Cetăţele, Şindreşti, and Berchez.

In several cases, the inhabited area location reveals complex and mixed conditions. This is the case of the urban stripe in the north of the region (the Baia Sprie-Baia Mare-Tăuţii Magherăuş) where the spatial distribution of the settlements benefits from the favourable elements of the Săsar terraces and also extends to areas where the morphological and the hydrological risk phenomena are the restrictive factors.

TYPOLOGY CRITERIA

We selected the typology criteria starting from the necessity of an analysis that allowed us to

Table 1. *Settlement Typology Criteria*

No.	Criterion	Indicators
1.	Infrastructure already built	Length of the drinking water supply network
		Length of the sewage network
		Length of the gas distribution network
		Number of households
		Habitable surface
2.	Population	Total number
		Arrivals
		Departures
		Total number of employees
		Total number of employees in agriculture
		Total number of employees in industry and services
3.	Education	Total number of schools
		Kindergartens
		Total number of primary and secondary schools
4.	Health	Doctors
		Chemists' shops
5.	Agriculture	Agricultural land surface
		Arable land surface
		Vineyards and fruit tree surface
		Grass land and pastures
6.	Tourism	Accommodation

appropriately identify the local and regional resources and problems. Out of the numerous theoretical possibilities we chose seven criteria that ensured, beside the above-mentioned aspects, an increased comparability of the results and the premises for the compulsory access to structural funds, accessing opportunities as well as maximum attractivity for national funds in regional and local development. These seven criteria relate to aspects that either directly or indirectly appeared in territorial planning activities and policies. These criteria also rely on state indicators of these anthropic systems.

Firstly the typology has to answer the following question: Do we need a typology of the settlements in

the Baia Mare Depression? Our affirmative answer took into account the dimensional, structural, and functional variety, geographical conditions variety, demographical differences, built infrastructure disparities, etc.

During the second stage we analysed the main indicators of the selected typology criteria. We analysed each administrative unit, both quantitatively and qualitatively, according to the statistical data for the years 1992, 2001, and 2002. In addition, we took into account several supplementary aspects such as: land degradation, risk morphological phenomena, and the state of the roads. Besides the distinction between the urban and the rural settlements, we identified certain interesting aspects during our research. For instance, beside the Baia Mare polarising centre and the town of Baia Sprie, the urban features were not dominant in the other urban settlements of the depression. Unfortunately, this was true for many of the chosen indicators. Moreover, the urban aspects of the new towns (Ulmeni, Şomcuta Mare, and Tăuţii Magherăuş) were dominated by a high degree of ruralism. This is true for the agricultural land use in the inhabited area which looked like a mosaic because of the mixture of the building area (households) and agricultural land. This led

to an uncertain zonation of the urban territory, and low quality transport infrastructure. As far as the infrastructure already was concerned, these new towns had very low values for some of the indicators, such as: the length of the drinking water supply network, and the length of the sewage and gas distribution networks. These were such as in communes.

The values of the indicators for the rural areas were extremely varied. If we considered agricultural indicators to be directly influenced by natural conditions (the fragmentation of the respective landforms, slopes, absolute altitude), the other indicators revealed the diversity of these communes. For instance, the length of the drinking water supply network varied from 4.1 km (Recea) up to 76.5 km (Dumbrăvița), while the values of the gas distribution network varied from 0 km (Mireșu Mare) to 58.7 km (Dumbrăvița).

We registered significant variations between the number of arrivals and definitive departures. The highest values were characteristic of the commune of Săcălășeni (100) and of the town of Tăuții Magherăuș (84), whereas the lowest values (we excluded Baia Mare from this comparison) were characteristic of Șisești (-29). This last case revealed the strong influence of the Baia Mare – Baia Sprie urban system. There were smaller differences in other indicators, such as education, health, and tourism, as many communes inherited strong features of the respective systems before 1990.

SETTLEMENT TYPOLOGY

After synthesising the indicators and the criteria for the analysis of the settlements in the Baia Mare Depression, we identified five major settlement categories.

1. *Polarising urban centres.* This was the case of the Baia Mare Municipium. First we noticed its increased capacity to recover after the crisis induced by the mining and metallurgical industry reorganisation, as well as its capacity to radically rectify its environmental quality. Moreover, we could notice *an ascendant dynamics* induced by coherent actions for local economy revival, which influenced several indicators (number of households, length of the built infrastructure network, number of employees, etc.). We also noticed the relatively balanced distribution of the functional area, the good exchanges between different areas and lack of functional interferences able to generate dysfunctions (such as the mixture of the residential and the industrial areas), except for several areas still bearing the blueprint of urban planning actions before 1990.

2. *Under-pressure urban settlements.* This was the case of the towns with uncertain urban evolution. Such situations were caused by the industrial decline which had considerable impact on the other components of the respective system (Baia Sprie). The absence of any actions to support the local economy led to insufficient finances both for inhabitants and the local administration. Under these conditions, urban stagnation appeared and no signs for modern evolution were visible but for the germs of urban degradation. Socially, the underprivileged and the marginalised were visible.

The other situation was the recent transformation of small towns into urban settlements (Ulmeni, Tăuții Măgherăuș, and Șomcuta Mare). Some of their characteristic features were: the insufficient development of the infrastructure networks already build, the low functional zonation, and the aleatory development of different areas (the residential and the industrial areas). Agriculture still dominated the economy, together with local industry for the primary processing of agricultural products. One might also notice the high dependency on subsistence agriculture and the low capacity for attracting new investors that could diversify and reorganise their economic profile.

The peculiarities of their social component are the large numbers of daily commuters, and the low number of employees in agriculture despite the agricultural character of these settlements.

3. *Important rural settlements* whose rural character is the result of intrinsic structural and functional features. This is the case of the villages whose viability was influenced by the capitalisation of certain local resources and their specialising and orientation towards a certain agricultural branch. Moreover, these settlements benefited from medium to high accessibility to the means of communications and infrastructure that significantly increased people's living standards. This is the case of the following settlements: Rus, Dumbrăvița, Sindrești, Cărbunari, Mireșu Mare, Sălșig, Gărdani, Fărcașa, Sârbi, Buzești, and Săcălășeni.

Table 2. Settlements indicators

No.	Administrative unit	Built infrastructure					Population						Education			Health		Agriculture				Tourism
		Households	Habitable esurface	Length of drinking water supply network	Length of t sewerage network	Length of gas distribution network	population	Arrivals	Departures	Employees	Employees in agriculture	Employees in industry and other branches	Units for education	Kindergartens	Schools	Doctors	Chemist's shops	Agricultural land surface	Arable land surface	Vineyards and fruit trees surface	Grass lands and hay fields surface	Accommodation
1.	Baia Mare	52,626	1,973,029	287	185	232.1	142,858	1,484	1,788	52,265	367	24,058	73	30	22	351	30	3,208	512	459	2,237	1,630
2.	Groși	1,160	42,189	6.9	*	35.8	2,354	76	14	281	21	155	3	*	3	2		2,115	565	155	1,395	*
3.	Recea	1,892	87,466	4.1	*	37.7	5,247	109	36	432	15	388	5	*	5	3	*	3,508	1,770	127	1,611	*
4.	Tăuții Măgherauș	2,396	93,398	10.6	*	31	6,635	161	77	510	10	504	7		7	5	1	2,630	790	47	1,793	6
5.	Ardusat	791	32,479	5			2,575	60	24	251	2	147	4	1	3	1	1	2,243	1,525	50	668	
6.	Dumbrăvița	1,829	65,998	76.5		58.7	4,431	64	32	196	*	295	6		6	2	*	4,303	1,620	313	2,370	14
7.	Mireșu Mare	1,794	76,942	33	*	*	5,174	75	71	155	9	123	5	*	5	3	1	4,996	2,695	224	2,077	*
8.	Remetea Chioarului	1,105	41,487	16.8	0,2	27.6	2,875	65	46	83	*	68	4	*	4	2	*	3,166	1,194	351	774	*
9.	Satulung	1,687	71,568	*	*	34.2	5,373	88	69	1,015	*	991	7	*	7	4	*	4,765	2,760	186	1,819	*
10.	Săcălășeni	1,933	73,394	8.8	0,5	46.6	5,811	144	44	176	*	149	4	*	4	4	1	4,616	2,136	59	2,421	12
11.	Șișești	1,872	65,887	38.7	0,3	*	5,594	29	58	136	*	113	7	*	7	3	*	4,610	870	63	3,677	*
12.	Șomcuta Mare	3,181	122,633	41	3,0	59.3	7,892	78	67	854	47	630	11	2	8	14	1	7,949	2,800	710	4,439	6
13.	Ulmeni	826	18,420	16.2	6,3	42	7,169	62	53	798	12	359	8	2	7	5	1	8,623	4,256	986	3,381	4
14.	Fărcașa	1,497	68,423	15.3	0,9	24	3,776	43	36	564	3	341	3	*	3	1	*	4,750	2,563	1,295	712	*
15.	Sălsig	1,624	76,124	16.7	1,2	19	3,156	57	46	529	6	425	4	1	3	1	*	4,865	2,736	1,462	667	*
16.	Baia Sprie	5,423	18,642	48.6	34.2	56.3	16,594	168	143	3,211	16	2,643	7	2	5	16	3	8,282	2,618	2,231	3,433	142

Source: Institutul Național de Statistică, Fișele localităților (National Institute for Statistics, Sheet of localities), 2001

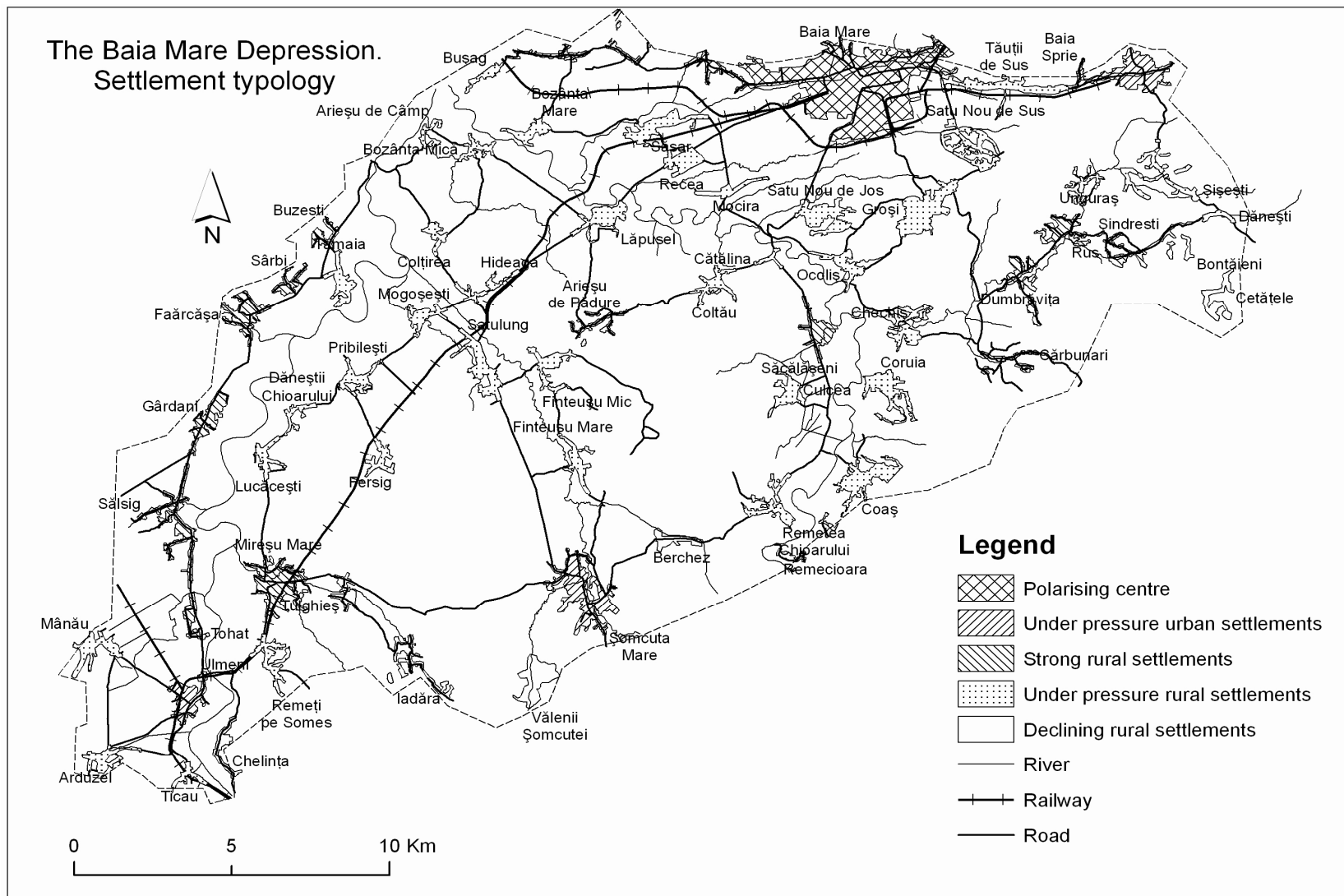


Figure 1. The Baia Mare Depression. Settlement Typology

4. *Unde-pressure rural settlements.* The characteristic feature of this group is an economic life depending on the urban centres under whose influence they are. Much of the active population depended on jobs in the urban area; in addition, agricultural activities responded to urban needs. These rural settlements were: Bozânta Mare, Bozânta Mică, Buşag, Arieşu de Câmp, Groşi, Ocoliş, Satu Nou de Jos, Satu Nou de Sus, Şişeşti, Unguraş, Coltău, Cătălina, Săsar, Recea, Mocira, Hideaga, Colţirea, Finteuşu Mic, Finteuşu Mare, Lucăceşti, Dăneştii Chioarului, Pribileşti, Culcea, Coruia, and Coaş.

5. *Declining rural settlements.* The causes of their decline were: reduced accessibility to efficient transport lines and means, an “isolated” geographical position, negative demographic dynamics, insufficient infrastructure, and subsistence agricultural economy. These declining rural settlements were: Cheliţa, Iadăra, Vălenii Şomcutei, Berchez, Remecioara, Arieşu de Pădure, and Curtuiuşu Mic.

The typological differences of the settlements in the Baia Mare Depression revealed, beside their geographical features, a certain functionality of the settlement system as a result of some spatial relations influenced by numerous factors. On one hand, the result was a hierarchy and a differentiated role of these settlements, and on the other hand, the result consisted of revealing the different necessities these settlements had as far territorial policies, programmes, and actions were concerned.

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