

THE TERRITORY OF THE TISA CATCHMENT AREA BETWEEN NATURAL AND FUNCTIONAL ORGANIZATION

POMPEI COCEAN¹

ABSTRACT – The TICAD project is in essence a symbiosis between what natural organization of the territory through the agency of catchment areas means and its anthropogenic organization having growth poles and gravity axes as pillars. The analysis highlights the historically-exemplified difficulties in correlating the two forms of organization and the factors that caused them. An increase of the index of spatial overlapping and functional imbrication between them can be noticed with the approach of lower hydrographic taxa (collectors, 1st to 3rd rank tributaries) and regional taxa (region, county, microregion, commune), a genuine identification often appearing for the basal ones. The new geopolitical circumstances, induced by the creation and enlargement of the European Union, represent a catalyst for the organisation of the Tisa river basin in the light of the new concepts of economic, cultural or environmental cross-border collaboration.

Key-words: river basin, Tisa, natural organisation, anthropogenic organisation, “lands”

In 1757, Philippe Buache, in his study “*Le parallèle des fleuves des quatre parties du monde pour servir à déterminer la hauteur des montagnes*”, proposed the river basin as a criterion for delimiting regions, namely the territory between the surface watersheds of a more or less ample, more or less organised river network. Having the model of the human body circulatory system, consisting of major drains (veins and arteries), branched up to the level of capillaries, the river basin accomplishes, by means of centripetal gravity, an aggregation of space into a systemic unit, which, in the light of this vector, functions similarly to the respective organism. The fact that this criterion had its “limits” is proven in a revealing manner by numerous rivers in the karst regions, where the underground evolution of the watercourses generates surprising situations, often abolishing the gravitational conditionalities of morphology, imposed as law in a subaerial environment. Such examples appear even in the case of the Tisa Basin, where the watershed in the Pădurea Craiului Mountains, between the Crișul Repede and the Crișul Negru rivers, do not overlap the orographic ridge, and the basins of the Gersa and the Sălăuța have different configurations if the surface watersheds are considered in relation to the underground ones.

The question that arises is to what level of representativeness the natural organization, of hydrographic type in the present case, becomes really functional. The question can be answered by analysing the forms of systemic organization of the territory, including the political-administrative, economic or social entities grafted historically on such geographical areas.

Thus, taking the Danube as one of the upper landmarks for the natural organization of hydrographic type in Europe, together with the Volga, its considerable length (2,860 km) and the size of its catchment area (803.300 km²) have made its management in a unitary form of spatial organization practically impossible. Not even during the Roman Empire, the most extended political and administrative entity in the history of the European continent, was its catchment area totally included, the north-eastern extremity, the free Dacia (namely the largest part of the Siret, Prut, Someș and the upper Tisa) being situated outside its borders. Prerequisites for such a unitary management

¹ Professor, PhD, Babeș-Bolyai University, Faculty of Geography, 5-7 Clinicilor Street, 400006 Cluj-Napoca, Romania. E-mail: pompei@geografie.ubbcluj.ro

have emerged for the first time in the current period, when the completion of the European Union with Serbia, Croatia, Ukraine and the Republic of Moldavia will include the Danube river basin within the borders of a single entity of this kind, capable to impose a unitary development of the entire catchment area.

The most important tributary of the Danube as regards length (965 km), area of the river basin (about 156.000 km²) and flow rate (over 790 m³/s) is the Tisa river, whose territory belonged in certain historical periods either to a single state (Burebista's Kingdom in Antiquity, Hungary and the Principality of the medieval Transylvania) or to a state community (the Habsburg empire or the Austro-Hungarian Empire). What can be noticed, beyond this very general aspect, of the relation between a territory and a political vector decisively involved in the management of its own territory, is the lack of any preoccupation to identify the river basin area with a specific form of administrative, economic or social organization. We believe that, at this level also, the extension of the territory and the diversity of its physical and demographic structure have been the main restrictive factors that interposed such an initiative.

The 2nd rank tributaries of the Danube, direct tributaries of the Tisa, the Mureş and the Someş (to refer only to the most important ones) have also significant lengths and extended catchment areas. The Mureş has a total length of 768 km and a catchment area of 29,930 km² and the Someş is 388 km long and has a catchment area covering 17,840 km². Both rivers have their sources in the Romanian part of the Carpathian mountain range and widely-developed catchment areas especially in the hilly region of the Transylvanian basin. The retrospective look into the historical becoming of the territories afferent to the respective river basins justifies the finding that there was no attempt of administrative organization to fully overlap the respective natural units. Neither in the period when they belonged to the same above-mentioned state structure, nor after 1918, when the territory of both basins extended between the borders of two different countries, Romania and Hungary, and when borders played an obvious role in segmenting the natural unit.

For the Someş river basin, the most recent initiative to accomplish this desideratum seems to be the organization proposed according to the Administrative Law of 14 August 1938, which had districts (“*ținuturile*”) as a higher taxon (Figure 1), where Ținutul Someş (8) included the entire Romanian basin of the homonymous river, as well as the river basins of the Crişul Repede, Crişul Negru and Barcău, direct tributaries of the Tisa. On the contrary, Ținutul Mureş (9) had within its borders only the upper river basin and a part of the middle basin of the Mureş, not to mention, of course, the territories afferent to the neighbouring country, Hungary, not included into this “*ținut*”. The dysfunctions of this regionalization quickly came to light, a proof being its substitution, after only two years of being, with another division of the national territory, more appropriate than the previous one. However, they were not so strong as to prevent, in 1998, the drawing of the boundaries of the North-West Development Region on those belonging to the former Ținut Someş.

When increasing the scale of spatial perception by descending to a lower hydrographic taxon, the one of the 3rd rank tributaries of the Danube, the 2nd rank tributaries of the Tisa, respectively, there is a more frequent correlation between the natural and the administrative organization. Thus, on the same above-mentioned map, it can be noticed how the county of Turda was grafted exclusively on the Arieş river basin, the county of Ciuc on the upper Mureş river basin and the county of Maramureş on the closely located river basins of the Iza and the Vişeu. Currently, the county of Bistriţa-Năsăud includes within its borders the overwhelming share of the Someşul Mare river basin, its limits in relation with the neighbouring counties (Maramureş, Suceava, and on a great distance with Mureş) following faithfully the orographic watershed.

Finally, at lower level, of the 4th rank tributaries (3rd rank tributaries of the Tisa), as well as of some upper rank tributaries with lower potential, some *microregions* can be identified, generally consisting of 2-5 communes, fully overlaying “valleys” (Sălăuța, Ilișua; Mara, Cosău; Râmeț, Intregalde; Abrud, Sebeș, Strei, etc).

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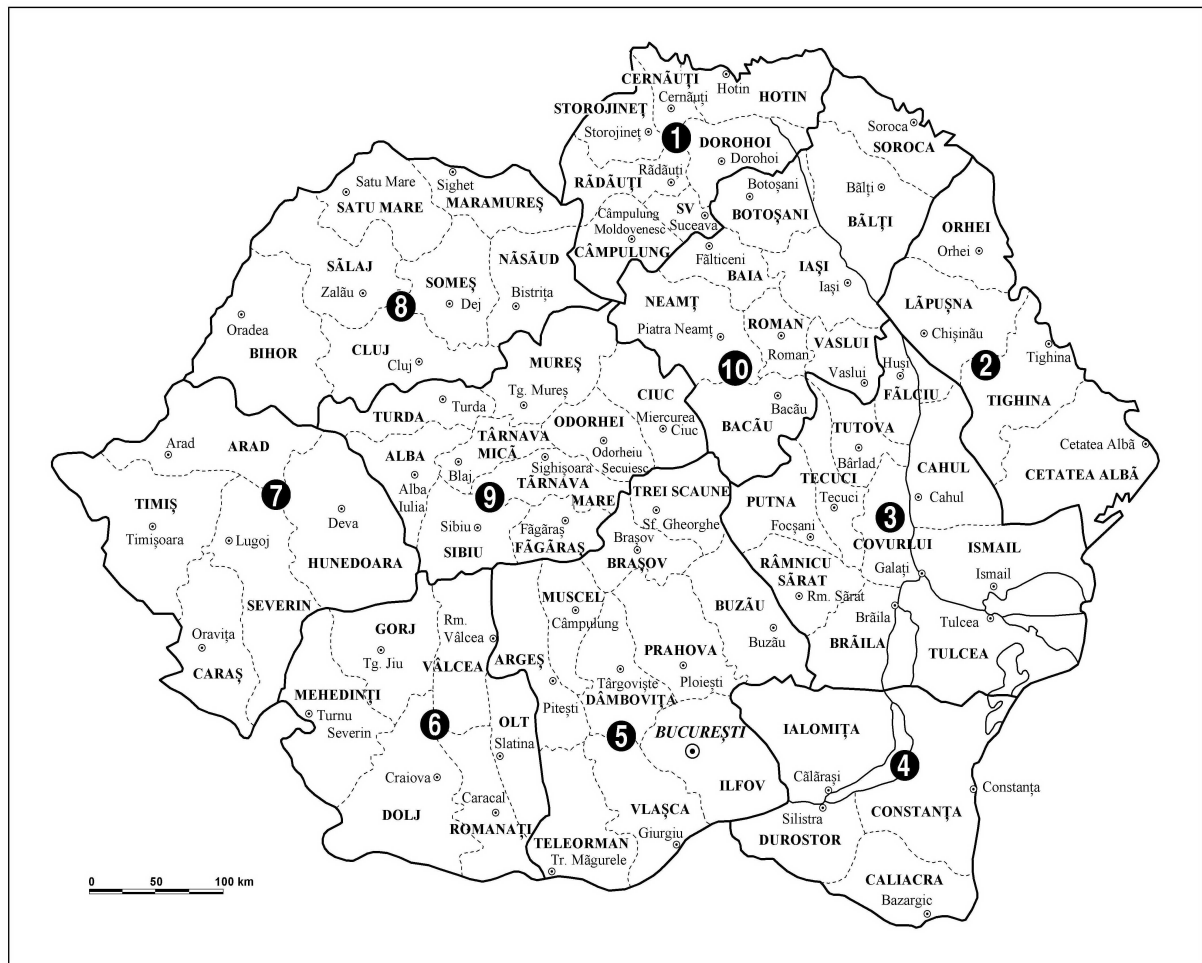


Figure 1. Map of districts (*ținut*) according to the Administrative Law of 14 August 1938: 1. Suceava; 2. Nistru; 3. Dunărea de Jos; 4. Mării; 5. Bucegi; 6. Olt; 7. Timiș; 8. Someș; 9. Mureș; 10. Prut. (Source: Enciclopedia României, II, 1938)

Another form of spatial organization, peculiar only to Romania, which sometimes overlaps the natural units configured by the river basins is the one represented by lands (“*țări*”). Within the Romanian Tisa river basin, ten such territorial units were formed in historical time (from a total of 18 existent throughout the country), namely: Maramureș, Oaș, Lăpuș, Năsăud, Chioar, Silvania, Beiuș, Zarand, of the Moți and Hațeg (Figure 2). Of these, the overwhelming majority lie within the boundaries of some 1st and 2nd rank river basins. Thus, the Land of Maramureș includes the entire territory drained by the Iza and the Vișeu; the Land of Oaș covers entirely the basin of the Tur river; the Land of Lăpuș has developed in the upper and the middle basin of the homonymous river; the Land of Năsăud extends on the right slope of the Someșul Mare; the Land of Beiuș in the upper basin of the Crișul Negru; the Land of Zarand in the upper and the middle basin of the Arieș and the Land of Hațeg in the one of the Strei. In all these cases, limits overlap watersheds, the natural gravity being followed by a human polarization towards the attraction centres located in tectonic depressions or in depressions generated by fluvial erosion, crossed axially (with the exception of the Land of Năsăud) by the above-mentioned rivers.

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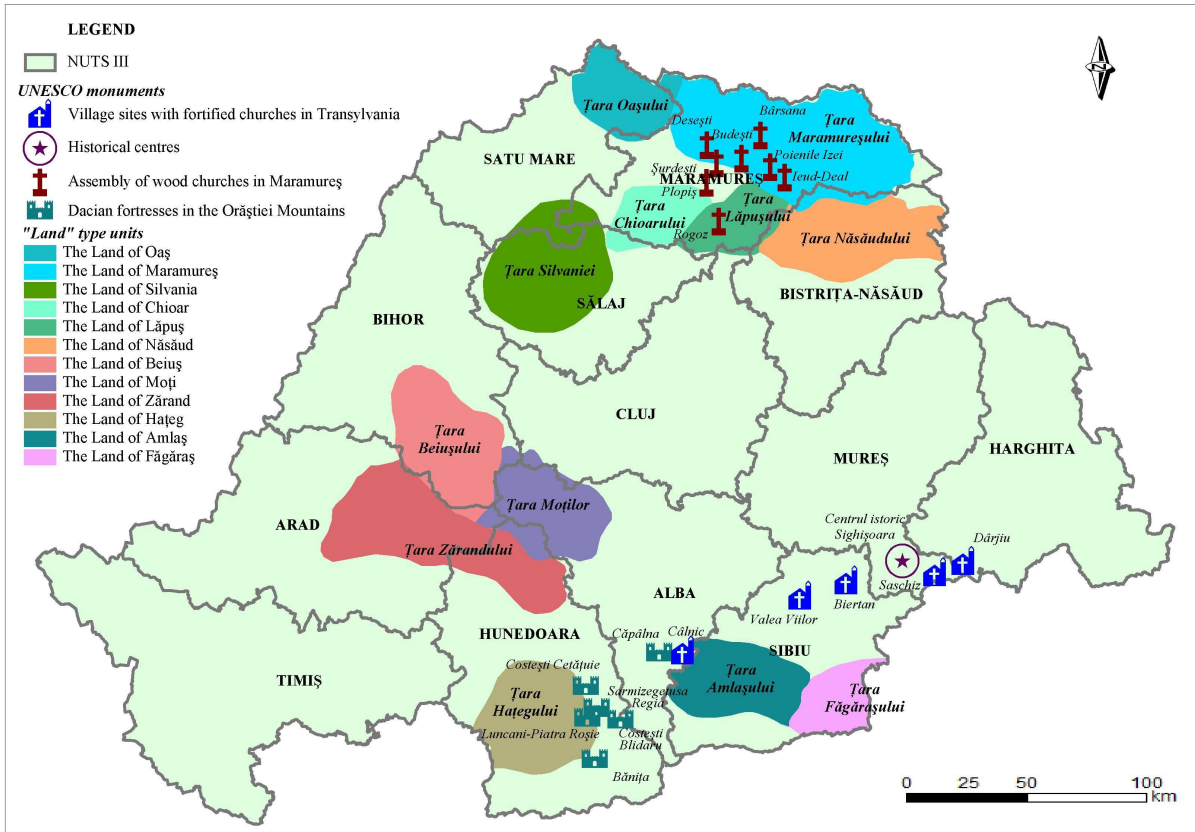


Figure 2. Lands afferent to the counties integrated into the TICAD Project (according to Oana-Ramona Ilovan)

In the case of “lands”, they are the most illustrative example of spatial integration, in which the two forms of organization, natural and anthropogenic, make a joint body, overlapping territorially and imbricating themselves at the level of all inter-conditionalities. It was consolidated in historical time, through the edification of a mental space, peculiar to each of them, where the features of place, of the natural environment were sublimated in spirit under the form of identity values (Cocean P., 2001, 2005, 2006, 2008). They can serve as models for the stepwise planning of the entire basin.

The European project entitled TICAD (2009-2012) started under the most favourable auspices, consisting in a plurality of catalysing factors such as:

- the enlargement of the European Union towards Central Europe, with the integration, in 2004 and 2007, of Hungary, Slovakia and Romania, namely of the three countries including most part of the Tisa river basin;
- the interest for EU membership of Ukraine and Serbia, namely of the countries hosting the sources and the outlet point into the Danube of the above-mentioned river network;
- the integration into EU has led to increased permeability of borders, to the removal of the barrier induced by them in the way of the interrelations and the good functioning of the afferent territorial systems;
- the positive signals generated by the launching of the new policy on cross-border collaboration within some euroregions with common economic, cultural, social or environmental interests (Carpathian Euroregion, Danube-Kris-Mures-Tisza Euroregion);

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- the need to overcome some risk phenomena propagated across borders through the agency of the hydrographic vectors (see the breaking of the settling pond dam on the Săsar and the discharge of cyanides into the Someș and the Tisa in January 2000), as well as for environmental protection and preservation;
- the need for efficient exploitation of soil and underground resources;
- the necessity to mitigate and eliminate disparities in the EU and within each country;
- financing for spatial planning and development projects supported by the EU.

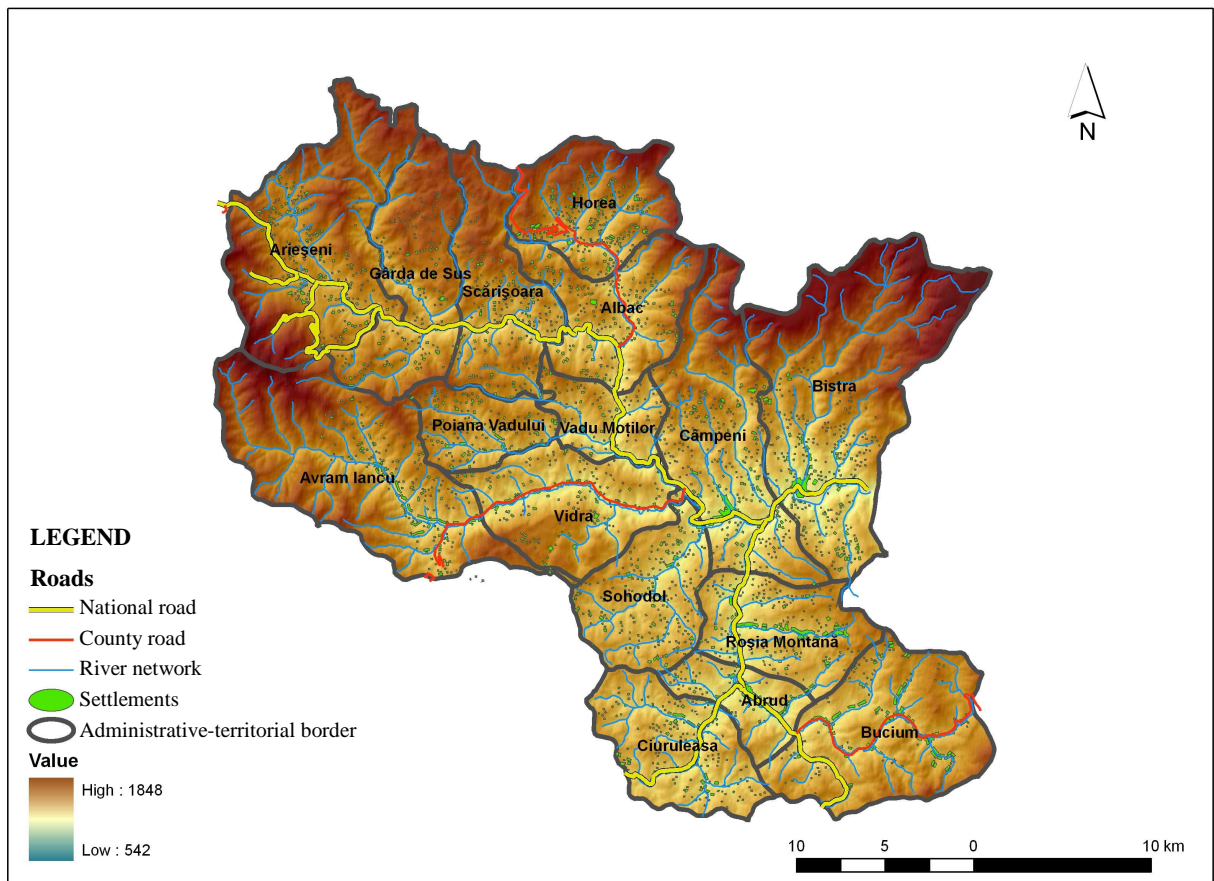


Figure 3. *The Land of the Moți grafted on the upper basin of the Arieș River*
(according to N.C. Boțan, 2010)

In this context, of positive evolutions as regards the collaboration between the five countries and their organisms specialized in spatial development, the elaboration of an integrated development strategy for the Tisa river basin appears, for the first time, as possible and feasible. It must establish, since the very beginning and through the agency of the territorial analysis (operation conducted by each country), the levels of intervention, from the upper one, **macro-regional**, of the entire river basin, found at the interface between the NUTS I – NUTS II units, which will involve all the participant countries according to their own interests and possibilities, to the medium one, of the **development regions**, peculiar for each country (NUTS III). The regional strategy will have its synapses open towards zonal, microregional or local interventions so that the features of a hierarchical and logically-structured system should not be denied by the practical reality.

The analyses made up to this stage illustrates numerous contradictory aspects, generated by the impact of some factors, different in origin and manner of action, upon the evolution of the

geographical space afferent to the Tisa river basin, as well as the existence of numerous possibilities for interrelation, for the harmonisation of the existing contradictions. Thus, starting from the natural organization of a drainage network (river basin), the strategy will foreshadow an anthropogenic organization where the potential and the inertia of the former can fit harmoniously into the regional system, understood in its entire structural and functional complexity. A system centred on growth poles and guiding axes, generally overlapping confluences and river corridors, with an adjusting role affecting the entire basin. All aimed at eliminating disparities and increasing territorial cohesion, the two fundamental goals of the European sustainable spatial development policies.

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