THE EXTERNAL WESTERN BALKAN BORDER OF THE EUROPEAN UNION AND ITS BORDERLAND: PREMISES FOR BUILDING FUNCTIONAL TRANSBORDER TERRITORIAL SYSTEMS

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ABSTRACT

The continual change of the role of borders within the European zone in the extension process of the European Union (EU) has resulted in the continuous reshaping of border systems from the structural and functional point of view with the purpose of identifying the best elements and mechanisms generating border territorial systems with a high level of functionality. The application of a methodology centered on analytical and synthetic indicators (Dependency border ratio; Border asymmetry index), determined by the morphometric, morpho-structural and morpho-graphic features of border sectors and of determined border areas greatly contributes to the political and geographic definition of the Balkan border system determined by the external border of the EU. The five states "inside the EU" (Slovenia, Hungary, Romania, Bulgaria and Greece) face to face with the four contiguous states "outside the EU" (Croatia, Serbia, Macedonia and Albania) have determined a Balkan trans-boundary territorial system centred on the external land border of the EU (about 2.620 km), a structurally and functionally complex and heterogeneous system, a situation derived also from the resulted indicators.

Key words: External border of EU, Balkan sector, non-EU area, border systems, trans-boundary territorial systems

IL CONFINE ESTERNO DELL'UNIONE EUROPEA NEI BALCANI OCCIDENTALI E LA RELATIVA ZONA FRONTALIERA: PREMESSE PER LA COSTRUZIONE DI SISTEMI TERRITORIALI TRANSFRONTALIERI FUNZIONALI

SINTESI

Il continuo cambio di ruolo del confine all'interno della zona europea nel processo di allargamento dell'Unione europea (UE) ha comportato un'altrettanto continua revisione dei sistemi di frontiera, dal punto di vista strutturale e funzionale, con lo scopo di identificare gli elementi e i meccanismi migliori atti a formare sistemi territoriali di frontiera ad alto livello di funzionalità. L'applicazione di una metodologia concentrata su indicatori analitici e sintetici (indice di dipendenza di frontiera; indice di asimmetria di frontiera), determinati da caratteristiche morfometriche, morfostrutturali e morfografiche dei settori confinari e di determinate aree frontaliere, ha contribuito considerevolmente alla definizione politica e geografica del sistema dei confini balcanici stabilito dai confini esterni dell'UE. I cinque stati "dentro all'UE" (Slovenia, Ungheria, Romania, Bulgaria e Grecia), contigui a quattro stati "fuori dall'UE" (Croazia, Serbia, Macedonia e Albania), delineano nei Balcani un sistema territoriale trasfrontaliero centrato sulle frontiere terrestri esterne dell'UE (circa 2.620 km), un sistema strutturalmente e funzionalmente complesso ed eterogeneo, una situazione derivata anche dagli indicatori menzionati.

Parole chiave: confine esterno dell'UE, settore dei Balcani, area non UE, sistemi di confine, sistemi territoriali transfrontalieri

INTRODUCTION

The dynamics of the current political areas of the European Union from the pre-existing nucleus (The European Community of Coal and Steel generated by the 1957 Treaty of Rome) and up to the present (2009), which includes more than half the geographical area of Europe, has as a main aim the creation of a territorial and political system with a high degree of functionality based on sub-systems of different levels inserted in the pre-existing regional and local structures. If the inclusion of the political zone of a territorial system such as the state in the EU *"body"* presupposes concerted efforts from the EU and from the new state included in terms of elements' compatibility to establishing their functionality, the situation becomes more complex within the border areas, and especially of those constituting the border area of the EU itself. The intricacy derives from the degree of compatibility and the number of elements (common historical past, communication systems, border crossing points, common projects, the compatibility of an ethnic and denominational nature etc.) which supports the trans-boundary cooperation mechanisms between the EU and the non-EU contiguous areas.

A brief retrospective view in the extension process of the EU illustrates more and more complex situations as we come closer to the last two integration waves (Ilieş, Grama, 2006). These situations are the following:

The nucleus founded in 1957 brought forth direct contact between the ECCS and the most "rebellious" state of the socialist zone – Yugoslavia, and together with it with Slovenia – demonstrating nowadays that this early contacy was of great advantage for this little, yet functional state. Thus, we can evoke the territorial system Gorica/Nova Gorica (Bufon, Minghi, 2000, 124) as an example of efficient trans-boundary cooperation between Italy and Yugoslavia.

- By the inclusion of Greece in 1968, the common border of the EEC (Economic European Community) with that of the socialist system was extended through the south of Yugoslavia, Albania and Bulgaria, generating trans-boundary cooperation forms such as the EC/socialist system.

- The 1990 unification of Germany produced a new trans-boundary system – the EC/socialist zone – through the common border between Germany and Poland and Czechoslovakia (Czech Republic since 1993), with specific trans-boundary cooperation forms.

- The 1995 inclusion of Austria in the EU in the continental area itself and of Finland in Scandinavia determined the shaping of some trans-boundary territorial systems with a high degree of intricacy through the extension of direct contact of EU/ex-socialist space (Slovakia, Hungary and Slovenia), and for the first time saw direct contact between the EU and the former USSR, more specifically the EU/Russia through Finland. Simultaneously, the external land border of the EU with the European Free Trade Association (EFTA) space expands in the sectors of Norway and Switzerland.

- 2004 was marked by the largest extension wave of the EU with the inclusion of 10 new states of the ex-socialist system (Balkan countries being components of the USSR). From the point of view of generated trans-boundary systems this engendered a more complex situation than the previous one through trans-boundary systems in the interior of the former-socialist zone which are different from one state to another. All the same, if up until 2004 the EU extension was made up of a field with economic support based on a prosperous market economy; after 2004 the economic field of the extension is made up of the centralised ex-socialist economies which generated poverty on the background of limiting the liberty of movement of its citizens.

In this case too, we can distinguish three different situations. The former Soviet area characterised by an economic and unitary political system, the area of independent former Soviet countries, and the ex-Yugoslavian countries marked by ethnic and denominational conflicts and inferentially, economic regression.

Therefore, from the point of view of the positioning of the EU/non-EU trans-boundary systems we can distinguish the following: Trans-boundary systems in the area of the former USSR (Estonia, Latvia and Lithuania/Russia and Belarus), the extension of direct contact of the EU/Russia through Poland, Lithuania/Kaliningrad (Russia) systems. Trans-boundary systems at the point of contact with ex-socialist countries/the USSR through Poland, Slovakia, Hungary with Belarus and Ukraine. Trans-boundary systems between former socialist countries Hungary/Romania. Trans-boundary systems between the EU and the ex-Yugoslavian zone through Hungary with Serbia and Croatia, trans-boundary systems in the ex-Yugoslavian zone: Slovenia/Croatia. Maritime trans-boundary systems generated by Cyprus and Turkey etc.

- The 2007 integration of Romania and Bulgaria in the EU was decided from the point of view of the trans-boundary systems: the extension of contact of the EU/former USSR in the ex-socialist area, superposing the EU's external border upon the separating line of the USSR with the socialist countries through the trans-boundary systems of Romania/Ukraine and the Republic of Moldova. The extension of the contact of the EU with the ex-Yugoslavian zone through Romania and Bulgaria/Serbia, and Macedonia. The extension of the contact of the EU/Turkey through Bulgaria.

An important geostrategic aspect derived from the last extension wave is represented by the fact that for the first time the EU borders the Black Sea through the territorial waters of Romania and Bulgaria.

METHODOLOGY

Generally, at the level of each European state there are impellent rules cumulating into a considerable share the economic power and political force of the politically defined and internationally acknowledged territorial system. Depending on the state's degree of decentralisation, these regions can be characterised through centrifugal tendencies towards the centre. In the case of the so-called border-states – methodologically set forth at the level of Austria (Lichtenberger, 2000, 406) and Slovenia (Bufon, 2002; 2004, 23) – these types of tendencies become especially profound in the case of state structures with an extremely complex *relative position* (Sanguin, 1992) and derived from the peripheral insertion of those countries in the EU. The status of a member state of the EU – according to the state's relative position – in a territorial combination with other states (Sanguin, 1992) does not change the status of the border state. This position is lost only when the EU's external border will be transmuted towards the exterior on a new support through the inclusion of new states and when the Balkan area presents a European outlook (Sivignon, 2009).

Entertaining the hope of being included into the European Union are the former Soviet Union, ex-Yugoslavia, Albania (Fuschi, 2008, 234) and the EFTA states. Each extension wave – as in previous cases, according to the "recent history" of the territory to be integrated – will engender trans-boundary systems with specific features. In the face of new challenges, the most difficult challenge to be overcome is to be adjusted to the "edge of abundance" position (Lichtenberger, 2000, 406) in contiguity with trans-boundary systems marked by a line beyond which the trans-boundary cooperation barely conforms to already experienced patterns.

Sometimes, the systemic intricacy is amplified by generating unpredictable situations through structural changes, as was the case in the Republic of Moldova which administratively reorganised its territory (Ilieş, Grama, Sainsus, 2009, 143). In most cases, in the area of these trans-boundary territorial systems at the edge of the EU, the opening of borders and emphasising people's international mobility are characterised by inconsequence (crossing with/without a visa), all of these being reflected in the economic development and standard of living of the people in these zones.

This aspect is also reflected in the attitude of the population residing in the border zones external to the EU and where, due to general as well as special security measures, the population situated on both sides of the border shapes diametrically opposed conceptions from the point of view of social status and of comprehension of the trans-boundary cooperation concept. For example, from the EU citizen's perspective there is an optimistic perception: *"I go when I want and buy cheap goods from you"*, whereas from the perspective of the citizen outside EU there is a pessimistic one: *"I go when I can and sell cheap and sometimes illegally to you"*.

Another aspect of the methodological reporting frame is represented by the width of the border zone from 25 km to 30 or even 40-50 km. For this analysis, centred on the Balkan sector of the external border of the EU and due also to the dimension of large (Romania), middle-sized (Bulgaria and Greece) and small (Hungary, Serbia, Croatia, Albania, Macedonia and Slovenia) countries – we will take into consideration the border zones of 25 km in width, zones that generate concentric internal zones of the same width (fig. 2). Other relevant indicators in analysing the trans-boundary zones are the following: the proportion between the width of the border and the surface area of the state (Bufon, 2004), the density of border crossing points (Ilieş, Grama, Wendt, Bodocan, 2009), support for the routing of the state's border (Ilieş, Ilieş, Grama, 2007), the density of NUTS 3, 4 and 5 in these zones, the average distance to the capital and decision-making centres of inferior rank, the number of inhabitants and its demographic characteristics (Pelc, 2005), and the ethnic and denominational element (Kocsis, 2007) etc.

The typology of trans-boundary systems in relation to the external border of the EU plays an important role in defining the functionality of the established trans-boundary zones.

Actors and institutions

Human resources and institutions of the state have an important role both in the stage of a state's pre--adherence and in that of post-adherence, especially from the point of view of shaping some of the functional trans-boundary territorial systems. The administrative and territorial method of organising and the human resources – quantitatively and qualitatively – combined with an efficient system of communication and methods of transport represent fundamental pillars in shaping systems whose functionality directly derive from a geographical management (Ilieş, Grama, Wendt, Bodocan, 2009, 168) that has been efficiently applied.

The analysis of these elements represent the foundation for drawing up the planning and territorial improvement strategies according to a trans-boundary system starting from the national level to the local one. Each element composing a territorial system can be analysed, interpreted and applied within the level of existing administrative and territorial structures with the amendment that an application of the general criteria of a zone's regional division (Cocean, 2005), and the identification of mechanisms ensuring the territorial systems' determination and functionality (Ianoş, 2000) could divide the identified structures into territorial units with a high degree of functionality that generates economic development.

Fig. 1: Territorial political systems in the Balkan area and the EU/Balkan external border (2009).
Sl. 1: Politični sistemi na Balkanu glede na teritorij in zunanja meja EU/Balkan (2009).

Considering that the mechanisms of applying the strategies, determined at the level of institutions and actors hierarchically and horizontally arranged (actors and institutions of the same rank), would work by applying the principle of complementarity which generates mutual advantages. This strategy, within these territorial and political implementation systems (NUTS system), could be successfully applied. Therefore, we suggest that in the steps concerning the planning and improvement of the territory and under the aspect of trans-boundary territorial systems as part of an integrated-type improvement, increased attention should be paid to the actors and institutions present in the decision making network, arranging them hierarchically and in the same area.

Given the context, questions arise: Which is the best width of a border sub-system? What is the distance from the border towards the interior? Up to what point are its effects felt socially and economically? Up to what distance from the border can the inclusion of decision makers directly influence the shaping of trans-boundary territorial systems?

The territorial sub-systems identifiable with NUTS 3-5 play an important role in defining the trans-boundary systems as functional systems on one hand, and on the other hand the relationship between the border and internal systems induce the prevalent character of the state: border state, mixed or internalised.

According to the number of administrative and territorial units with a frontline characteristic, corroborated by the decentralisation degree of the respective status, there results a varying number of decision-making centres of different ranks, with major implications in defining the elements and mechanisms composing the trans-boundary territorial systems with a different degree of functionality.

THE BALKAN TRANS-BOUNDARY TERRITORIAL SYSTEM GENERATED BY THE EXTERNAL BORDER OF THE EU

Applied to territorial and political systems which compose the EU / Balkan zone as of 2009, such an
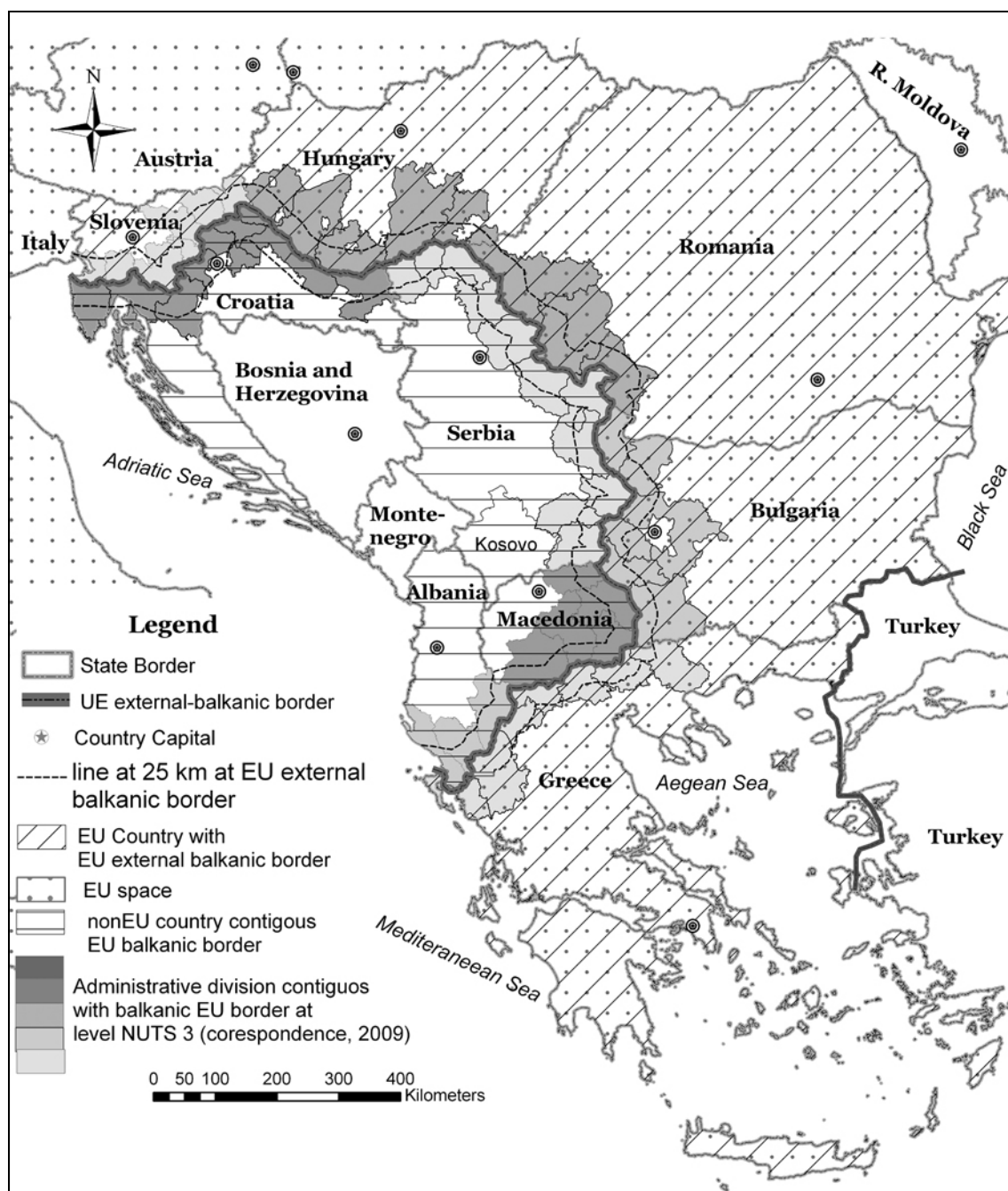
Fig.: 2. NUTS 3 Border systems in Balkan Area determined by the western Balkan external border of the EU (2009).
Sl. 2: Obmejni sistemi NUTS 3 na Balkanu, določeni z zunanjo mejo EU na zahodnem Balkanu (2009).

analysis suggests to us a complexity of situations as a result of the contiguity with the ex-Yugoslavian zone (without Slovenia) to which Albania adheres. In other words, the external border of the EU begins and ends at the Adriatic Sea after a structurally, typologically and functionally intricate route. Practically, the border states of the EU are Slovenia, Hungary, Romania, Bulgaria and Greece to which can be added – within the maritime sector – Italy. For the ex-Soviet zone we can state that they are situated *"outside the EU"*, and for those in the Balkan zone – due to the absolute geographic position – we can discuss a relative one *"inside the EU"* because of the enclavisation within the EU, the only exit being by the international waters of the Strait of Otranto linking the Adriatic to the Mediterranean Sea. The non-EU border system contiguous with the aforementioned EU bor-

der system is formed by Croatia, Serbia, Macedonia and Albania to which can be added, without however, any direct contact with an EU land border, Montenegro and Bosnia-Herzegovina in the maritime zone (fig. 1). Re-building the existing political zone as in 1990, on a physical-geographical, demographic and socio-economic basis of a territory compartmentalized into no less than six independent states to which can be added Kosovo (as a region of Serbia, acknowledged as an independent state by a considerable number of European states), results in an area superposed on the former Socialist Federal Republic of Yugoslavia (fig. 1) coordinated for seventy years by a common administrative and political system. It was a period during which a system of relations was straightened out even if the human element was a heterogeneous one, ethnically and denominationally speaking. Paralleling the two existing situations between 1990 and 2010, it can be noticed in the present non-EU zone (2009) a compartmentalised field from two territorial and political systems (1990): Yugoslavia and Albania, to six territorial and political systems (2009) and one – Slovenia – *"transferred"* in 2004 to within the EU. Likewise, around this non-EU area (2009), in 1990 existed in contiguity a capitalist system at the extremities (Italy, Austria and Greece) and a central socialist one (Hungary, Romania and Bulgaria). In other words, from six external structures and two internal ones, nowadays we have five in the exterior and seven in the interior (fig. 1).

The EU/non-EU cross-border systems in the Balkans – structural and functional features

Starting from the geographic position of the nine states situated *"in the interior"* (five) and *"in the exterior"* (four) of the EU and their contiguous characteristics, there results no less than eight trans-boundary areas in the continental zone: two in the sectors with continental waters (twelve nautical miles) and four in the maritime sector crossed by the international waters of the Adriatic Sea. The eight land sectors whose complexity derives from the dry/water ratio/proportion of the route's support (Ilieş, Ilieş, Grama, 2007) are: the Slovenian-Croatian, Hungarian-Croatian, Hungarian-Serbian, Romanian-Serbian, Bulgarian-Serbian, Bulgarian-Macedonian, Greek-Macedonian and Greek-Albanian borders (table 1 and fig. 2), each with its distinctive physical-geographic, demographic, socio-economic and functional features. Thus, each of the eight sectors can represent a trans-boundary territorial system characterised by a certain degree of functionality reflected in the degree of connection through trans-boundary cooperation of the contiguous states to which they belong. There are regional territorial systems of inferior rank to the states but which, through composing elements and mechanisms, can ge-

nerate stability/instability and economic progress/regress in the peripheral area of the states to which they belong and implicitly differentiated levels of trans-boundary cooperation. Both adjacent and perpendicular to the sector of the external border of the EU, there are the interstate border sectors with the secondary role between EU member states (Slovenian-Hungarian, Hungarian-Romanian, Romanian-Bulgarian and Bulgarian-Greek) and non-EU states (Croatian-Serbian, Serbian-Macedonian, Macedonian-Albanian to which are added those in the maritime sector – Albanian-Montenegrin, Montenegrin-Croatian and Croatian-Bosnian (fig. 1).

The complexity of territorial and political systems from this Balkan area derives also from the trans-boundary systems between non-EU states and which are not contiguous with the external border of the EU: Croatian-Bosnian, Serbian-Bosnian, Montenegrin-Bosnian, Serbian-Kosovan, Macedonian-Kosovan, and Bosnian-Kosovan).

Morpho-dimensional features generating analytical and synthetic indicators

The nine countries involved in shaping the border areas are characterized by heterogeneity in terms of size, with a deviation expanded from the 20,253 km^2 of Slovenia, to the 93,030 km^2 of Hungary. Included in the category of small states, to 110,912 km^2 Bulgaria (medium sized states) to 238,391 km^2 Romania (large states; Sanguin, 1992). For the purposes of this study the territorial extension of the state correlated to the EU border area length expresses the dependence rank and the role of the border and trans-boundary area resulting in its territorial structure on the one hand and the degree of influence of the concerned state in shaping the determined trans-boundary systems.

The total length of the external EU Balkan border is 2.620 kilometres (table 1) including seventeen inter-state sectors and as many border areas. The longest interstate border area is the Slovenian-Croatian (670 km, land and sea area) generating a border area (25 km in width) of about 16.750 km^2, an area that represents 82,7% of the total area of Slovenia as a state, hence its status of border-state (Bufon, 2004). Reporting the border area to the total area of the state, it results some large parts of border areas within the state system in Slovenia (82,7%), Croatia (45,3%) and Macedonia (38,3%), while Romania is at the bottom (5,0%), with Bulgaria, Hungary and Greece somewhere in the middle (10,5–12,9%). These values express the dependency ratio of the border area of state structure to which it belongs but also the degree of dependence of the concerned state of the peripheral border area, the need for trans-boundary cooperation, the relative position *"within the EU"* and *"outside the EU"* and the border-state status.

Table 1: Borders, borderland and trans-borderland areas contiguous with the western Balkan external border of the EU. Peculiarities by countries (data source: National Institute of Statistics of each country, 2009):
Tabela 1: Meje, obmejna in čezmejna območja ob zunanji meji EU na zahodnem Balkanu. Posebnosti po posamičnih državah (vir podatkov: državni statistični uradi, 2009):

COUNTRY	AREA (KM^2)	TOTAL LENGTH OF THE BORDER (KM)	COMPA-CTITY RATE (B/C); (KM^2/KM)	EU BORDER			BORDERLAND (EU BORDER) AREA BY COUNTRY (25 KM IN WIDTH)			NO. OF SEG-MENTS
				Length (km)	from total country border (e/c*100); (%)	UE country sector from total UE border (%)	(c*25) Area (km^2)	% from total country area (h/b100; km^2)	% from cross-border EU/nonEU area (km^2)	
a	b	c	d	e	f	g	h	i	j	k
Albania	28.748	720	39,9	282	39,1	5,26	7.050	24,5	5,1	1
Macedonia	25.713	766	33,5	394	51,4	7,35	9.850	38,3	7,2	2
Serbia	88.361	2027	43,6	945	46,6	17,62	23.625	26,7	17,3	3
Croatia	56.538	2197	25,7	1026,1	46,7	19,14	25.652	45,3	18,8	2
Slovenia	20.253	1382	14,6	670	48,4	12,50	16.750	82,7	12,2	1
Hungary	93.030	2171	42,8	480	22,1	8,95	14.400	15,5	10,5	2
Romania	238.391	2508	95,0	476	19,0	8,88	12.000	5,0	8,8	1
Bulgaria	110.928	1808	61,3	466	25,8	8,69	11.650	10,5	8,7	2
Greece	131.940	1228	107,4	595	48,4	11,10	14.875	11,3	10,9	2
Italy				27,1		0,50	677,5		0,5	1
TOTAL	804.789	14.807	54,3	5.361,2	36,21	100,00	136.529,5	16,9	100	17

With regards to the establishment of border areas the situation becomes even more complex for states with small surface. Depending on the width of the border area (25 km), it may be less than that included in the inter-state border area. The complexity increases if these border areas (relative to the whole state) have a large number of people, decision-making centres, territorial-administrative units of lower rank, ethnic/religious heterogeneity/homogeneity, different monetary systems, diplomatic tensions; low/high density of roads and railway infrastructure, the density of border crossing points, visa regimes, differences in economic development (GDP) generator of small border traffic, natural limits and the type of support of the state border (such as the unsettled problems regarding the border trajectory, land and maritime border between Slovenia and Croatia (Klemenčič, Gosar, 2000) etc.). The situation is complicated if the capital is in a peripheral position (Sofia, Zagreb, Skopje). Correlating the border's surface areas generated by the EU's external border (25 km in width) with great extension are the Romanian-Serbian (23.800 km^2) and Slovenian-Croatian sectors (33.500 km^2), over the value of the states of Albania and Macedonia and the lowest values are that of the Bulgarian-Macedonian (7.400 km^2) and the Hungarian-Serbian (7.550 km^2) (table 2). Similarly, 25,6% of the EU/non EU border area is a Slovenian/Croatian problem and 18,2% Romanian/

Serbian, the other values were between 12,5% Croatian/Hungarian and 5,6% Macedonian/Bulgarian (table 2). Thus, at the level of the state sector of the EU's external border is dominantly managed by Croatia 19.4%, Serbia 17.62% of the non-EU space, Slovenia 12,5% and Greece 11,1% of the EU, while Romania, Bulgaria and Hungary manage about 8,5% each (table 1).

The complexity of a territorial trans-boundary system increases proportionally with the number of decision–making centres, the general situation of territorial-administrative systems of contiguous states and the number of units with border characteristics: the border strip itself is composed of units the limits of which coincides with a segment of the state border; the internal strip included in the determined border area (25 km in width).

With regards to the Balkan sector of the EU's external border, we will consider three elements: NUTS 3, 4 and 5 appropriate units and the number of these units included in the specified border areas within about 25 km wide. These three elements, individually analyzed or integrated can highlight the complexity of a trans-boundary system in terms of decision-making centres of polarization, depending on the area they control, the hierarchical level, human potential etc. relative to the state system to which it belongs. Not to be neglected in this case is the size of the states as when these are more

Table 2: Borderland (25 km in width) and trans-borderland areas (25 km in width) contiguous with the EU/ western Balkan external border (data source: National Institute of Statistics of each country, 2009):
Tabela 2: Obmejna (v širini 25 km) in čezmejna območja (v širini 25 km) ob zunanji meji EU na zahodnem Balkanu (vir podatkov:državni statistični uradi, 2009):

	BORDER SECTOR	TOTAL LENGTH OF THE BORDER (KM)	BORDERLAND (EU BORDER) AREA BY COUNTRY (25 KM IN WIDTH) (B*25; km^2)	TRANS-BORDERLAND (EU BORDER) AREA BY CONTIGUOS COUNTRY (25 KM IN WIDTH) (C*2; km^2)	% FOM TOTAL TRANSBORDER LAND AREA
	a	b	c	d	e
1	Slovenia/Croatia	670	16.750	33.500	25,6
2	Hungary/Croatia	329	8.225	16.450	12,5
3	Hungary/Serbia	151	3.775	7.550	5,7
4	Romania/Serbia	476	11.900	23.800	18,2
5	Bulgaria/Serbia	318	7.950	15.900	12,2
6	Bulgaria/Macedonia	148	3.700	7.400	5,6
7	Greece/Macedonia	246	6.150	12.300	9,4
8	Greece/Albania	282	7.050	14.100	10,8
9	TOTAL	2.620	65.500	131.000	100,0

extensive the lower the border-state characteristics will be (Lichtenberger, 2000; Bufon, 2004). Also, in terms of connection potential reflected by the infrastructure project level generated by the existence of contiguity, the length and number of contiguous sectors in conjunction with infrastructure elements plays an important role.

The nine states (table 3) groups 61 NUTS 3 equivalent units and an equal decision centres (their residences) of which thirty-two outside of the EU and twenty-nine inside of the EU, the greatest number being in Serbia (eleven) and the smallest in Romania (three).

By reporting the total number of units within a state we obtain values that reflect the importance of the border area in the state structure and where we can identify three categories: high-state (75–100%), high-regional (50–75%), low-regional (25–50%) and small-local (less than 25%). This scale applies to the entire border system resulting in a trans-boundary system profile generated by the insertion of the border system into the state system itself and that results in trans-boundary cooperation strategy with more or less profound consequences for the state.

We can state that the size (territorial extension and population number), shape (elongated or compact) and position (outside / inside the EU) of the state in relation to the external border of the EU plays an important role in this type of analysis, these features generating advantages/disadvantages in terms of trans-boundary cooperation at the level of corresponding trans-boundary systems.

Dependency border ratio of territorial-administrative units derived from the ratio between the surface of adjacent border area (or the territorial-administrative unit considered) and length of the border sector (presented in table 3) shows the level of trans-boundary systems the symmetry/asymmetry of their area in terms of contiguous territorial border systems generating trans-boundary systems. As the asymmetry is higher, the number of other factors taken into account may lead to imbalances in terms of potential components of trans-boundary connections located on both sides of the border. An example may be the number of existing decision-making centres of low-ranking analysis (NUTS 4 and 5) border crossing points density, ethnic/religious homogeneity/ heterogeneity, GDP, currency, human resources etc. The lower the unit rank, the more efficient the determined trans-boundary systems are in terms of trans-boundary linkage; the efficiency is inversely proportional to the length axis of perpendicular unit to the border line. A territorial system acquires a border character as the indicator value is lower. Specifically, Slovenia with a value of 17,8 km^2/km is an administrative area with a border character higher than in Bulgaria 57.9 km^2/km situation determined by the size of units of the same rank and position and shape of their border. Each determinate indicator can contribute effectively to the development of strategies for determining the functionality of some trans-boundary territorial systems. For the Balkan sector, this is extremely evident by comparing territorial subsystems of the EU, more homogeneous as statistical functional aspect (homogeneity caused by the implementation of the NUTS system) and of the non EU space characterized by high heterogeneity derived from the particularities of national territorial-administrative systems.

Table 3: Borderland (NUTS 3 in width) and trans-borderland areas (NUTS 3 in width) contiguous with the western Balkan external border of the EU (data source: National Institute of Statistics of each country, 2009):
Tabela 3: Obmejna (v širini NUTS 3) in čezmejna območja (v širini NUTS 3) ob zunanji meji EU na zahodnem Balkanu (vir podatkov:državni statistični uradi, 2009):

COUNTRY	NUTS III UNITS BORDER AREA	% FROM TOTAL COUNTRY-AREA	NUTS 3 BORDERLAND AREA BY LENGTH OF COMMON EU BORDER SECTOR						TOTAL DEPEN-DENCY BORDER RATIO* (km²/KM)	BORDER ASYMMETRY INDEX** (F/G)
			Area (km²)		Specific dependency border ratio* (km²/km)		Area (km²)			
	(km²)	(%)	NUTS III		NUTS III			NUTS III	NUTS III	NUTS III
a	b	c	d	e	f	g	h	i	J	k
Slovenia	11.929	58,9	11.926	Slovenia/ Croatia	17,8	27,1	Croatia/ Slovenia	18.157	17,8	0,65
Hungary	26.979	29,0	14.246	Hungary/ Croatia	43,3	26,3	Croatia/ Hungary	8.653	56,1	1,64
			12.699	Hungary/ Serbia	84,1	42,0	Serbia/ Hungary	958		2,00
Romania	22.170,3	9,3	22.134	Romania/ Serbia	46,5	31,8	Serbia/ Romania	15.137	46,5	1,46
Bulgaria	25.846,2	23,3	19.334	Bulgaria/ Serbia	60,8	42,9	Serbia/ Bulgaria	13.642	57,9	1,42
			9.502	Bulgaria/ Macedonia	64,2	62,3	Macedonia/ Bulgaria	9.220		1,03
Greece	25.464,4	19,3	12.939	Greece/ Macedonia	52,6	44,1	Macedonia/ Greece	10.848	48,4	1,19
			14.636	Greece/ Albania	51,9	33,0	Albania/ Greece	9.306		1,57
Croatia	12.664,5	22,4							26,1	
Serbia	32.075	36,3							29,6	
Macedonia	17.330,5	67,4							44,0	
Albania	9.285,6	32,3							33,0	
TOTAL			117.416					85.921		1,37

Dependency border ratio - indicator resulting from the reporting of the border unit surface to the corresponding border sector - as the value is closer to 1 it means that the relative unit has a high degree of involvement in the determined border system. The specific report highlights the value on segments determined by the length of the common border sector (Example: Croatia/Slovenia = 27,1 and Croatia/ Hungary = 26,3); the total report refers to the total border sector of the state concerned without taking into account the number of neighbouring states (Example: Croatia/Slovenia + Hungary = 26,1).

**Border asymmetry index*, derived from the indices report of border contiguous dependency (Administrative Unit surface/border specific sector) highlights a pronounced asymmetry in favour of the EU border area (medium value 1,37), except the Slovenian/Croatian sector with a favourable indicator of the EU/nonEU space. Also in the case of this indicator we specify that: *the values lower than 1 means a favourable asymmetry; over 1 means unfavourable asymmetry; and 1 means border symmetry*. Thus, in the Balkan sector in terms of the border area of the EU states, the border asymmetry at NUTS 3 level is evident in the Hungarian/Serbian (2,0) and Hungarian/Croatian (1,64) segment at the opposite pole being the Slovenian/Croatian sector (0,65). The nearest sector to a symmetric border area is the Bulgarian/Macedonian (1,03). This kind of analysis can be achieved also at the level of the administrative/territorial units of upper/lower rank to the NUTS 3 level (fig. 3).

***Cross-border compatibilization indicator* results from reporting the administratively determined border areas (on corresponding administrative-territorial units) to the border areas determined with a unitary extension (each 25 km in width; can be more/less 25 km in width) on specific sectors. In the case of the units which are characterized by symmetry, the resulting values are substantially equal, differences appear only if the asymmetry index has subunitary values or over 1.
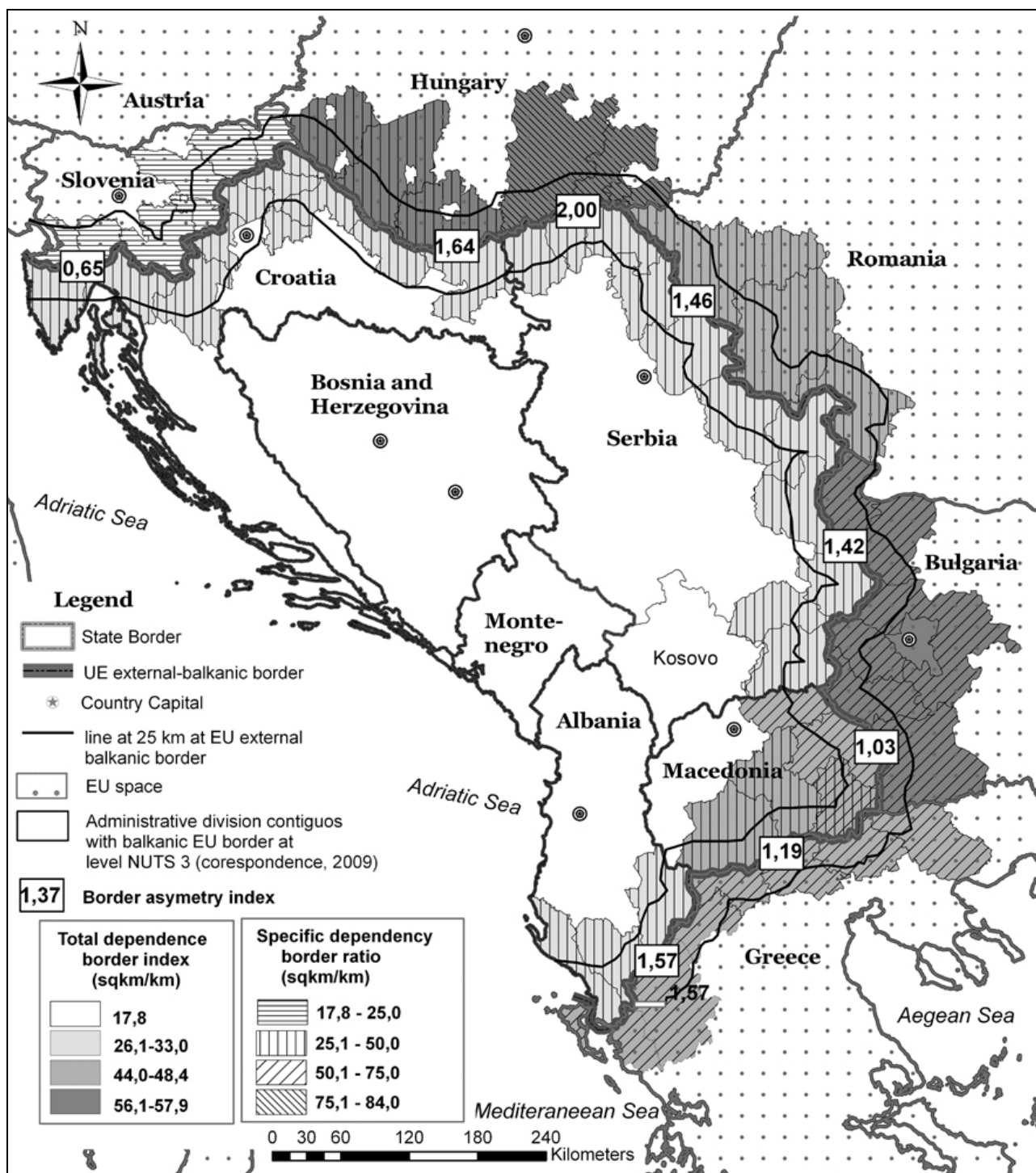
Fig.: 3. Peculiarities of borderland systems in the Balkan Area (according with NUTS 3 extension) determined by the western Balkan external border of the EU (2009).
Slika 3: Posebnosti obmjenih sistemov na Balkanu (po širini NUTS 3), določenih z zunanjo mejo EU na zahodnem Balkanu (2009).

CONCLUSION

EU area dynamics generated heterogeneous systems and subsystems from the structural, functional and morphological point of view. Between them, the border systems with peripheral positions in the whole EU (contiguous with those of non EU space) were made with each phase of expansion in the face of challenges, including which the major problem remains the identification of elements and mechanisms that comprise these border systems and the generating of new strategies based on them to (re) shape trans-boundary systems with the highest degree of compatibility and functionality. Also, in the Balkan system, the structural heterogeneity remains a barrier to this kind of practical and absolutely necessary approach. The demarcation of border areas and the definition of the main elements of measurable factors such as extension, territorial-administrative division, the length of the border sectors, the support of the state border route, the number of decision-making/ polarizing centres, ethnic and religious, heterogeneity/ homogeneity, demographic potential, the permeability of the border through density of number of crossing points and visa regime, level of economic development, diversity or currency are the defining features of this scientific approach focused on the EU's Balkan external border. Quantification of elements in the relationship between the border sector and border area adjacent determinate administration; determining the status of the border-state; the involvement rank of each state within the defined border areas management etc. are indicators needed in creating strategies for the systemic functionality of some territorial trans-boundary systems. We appreciate that the specified border systems play an important role in terms of social and economic integration and the elimination of the traditional functions of political border generating territorial juxtaposed structures.

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POVZETEK

Po padcu socialističnega sistema v evropskem prostoru se vloga meja nenehno spreminja, kar zelo vpliva na že začrtana obmejna in čezmejna območja. Takšna divergentna območja s pretežno vojaško in obrambno funkcijo so prešla v konvergentna območja, ki se zavzemajo za čezmejno sodelovanje. Vzdolž zunanje meje EU na Balkanu, dolge okoli 2620 km, so nastali kompleksni sistemi tako s strukturnega kot funkcionalnega zornega kota. Z obdelavo obsežnih podatkovnih baz smo razvili analitične in sintetične kazalnike, ki opredeljujejo čezmejne teritorialne sisteme ob zunanji meji EU na zahodnem Balkanu in upoštevajo relativni položaj Slovenije, Madžarske, Romunije, Bolgarije in Grčije "znotraj EU" ter Hrvaške, Srbije, Makedonije in Albanije "zunaj EU". Upoštevajoč morfometrične značilnosti določenega sektorja zunanje meje v posamični državi in teritorialnoupravnih sistemov obmejnega značaja v vsaki državi članici EU (nivoji NUTS 3-5 in podobni) ter njihovih kombinacij, smo opredelili kazalnike za določitev sektorske funkcionalnosti vsakega že začrtanega čezmejnega podsistema. Političnogeografske in morfofunkcionalne posebnosti osmih definiranih čezmejnih sektorjev lahko služijo kot osnova za pripravo razvojnih strategij za obrobna območja znotraj EU.

Ključne besede: zunanja meja EU, balkanski sektor, območje zunaj EU, obmejni sistemi, čezmejni teritorialni sistemi

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