ROMANIAN RESEARCH IN HUMAN AND REGIONAL GEOGRAPHY. AN OVERVIEW OF THE POST-COMMUNIST PERIOD

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Abstract. Post-1990, with the establishment of faculties or departments with a geographical profile, against the background of the development of new specializations, there was a tendency to place higher emphasis on the fields of Human Geography – Population Geography, Urban and Rural Geography, Geography of Industry, Agricultural Geography, Geography of Services, Social Geography. Currently, there is an ongoing integration of Romanian Human Geography into the flow of world geographical research. The research issues analized under the Human Geography umbrella are important from the perspective of providing advice and expertise in the management of human and socio-economic aspects at various territorial and temporal scales. There is an increasing emphasis on the premises of an increasingly efficient collaboration with stakeholders at different levels, given the importance of topics of general interest, favored by the manifestation of permanent changes in trends or the emergence of specific circumstances. This study provides an overview of the specific research directions and of the main university and research institutions dealing with the fields of Human Geography and Regional Geography throughout the post-communist period.

1. INTRODUCTION

After 1990, when Romanian geography came into closer and permanent contact with international geography and had access to a specialized bibliography, Human Geography developed considerably and began to address a series of previously unbroachable issues.

In this context, Human Geography had a hands-on approach to the main issues related to the transition and post-transition period, that is, aspects related to demographic transition, population mobility, deindustrialization, economic restructuring and reindustrialization, urban-rural relations, the development of metropolitan areas, urban renewal and gentrification, land use dynamics and future land use/cover changes flows, to the interconnectivity of different modes of transport, labour force and unemployment, aspects of medical geography, quality of urban life, different regional territorial outlines. Contemporary concerns about regional geography became based on systemic approaches. The border between physical and economic geography, strongly outlined during the period of Soviet influence, has considerably blurred, as physical-geographical phenomena were approached from the perspective of their anthropic impact, and the socio-human ones in close correlation with their natural background.

New university centres were re-established and appeared, focusing on the field of Human Geography. The universities had affiliated research centres specialized in the field of Human Geography, approaching different issues and topics through the new multidisciplinary perspectives.

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The opening of the Romanian geography to the international scientific arena and the complex way of approaching some topics and issues that for the Western world especially (e.g. a geography of post-communism) were new and very tender for academics offered to the Romanian geographers the opportunity to be involved in various subject-specific commissions of the International Geographical Union, such as Population Geography, Urban Commission: Re-thinking Cities and the Urban: From the Global to the Local, Sustainability of Rural Systems, Land Use and Land Cover Change, Local and Regional Development.

Things have gone from a simple geographical transposition of information, in a spatialized perspective, to the integration of specific variables in a broader context, open to new conceptual-theoretical models. The diversity of research topics in which geographers with concerns are integrated in the study of Human Geography, involves a wide range of research directions, from traditional ones that combine geo-demography with historical geography, to innovative ones, which introduce topics of cultural, social geography, land use changes or which become integrated into global concepts that take into account the European Green Deal and the Sustainable Development Goals.

2. POPULATION GEOGRAPHY

The study of the human expanse over the Romanian geographical space has long been integrated in the broader framework of Human Geography or, indirectly, in monographic works. After 1990, with the establishment of faculties or departments with a geographical profile, against the background of the development of new specializations, there was a tendency to take further this discipline. Extensive work focused on the geographical analysis of the population existed before, but now we were witnessing the emergence of specific research directions, focused on various topics of general interest and strict topicality, such as those related to population mobility, the impact of economic transition on social structures and the economic development of the population, the quality of life or the role of geo-demographic structures in sustainable development etc. Thus, it went from the simple geographical transposition of demographic information, in a spatialized perspective, to the integration of specific variables in a broader context, open to new conceptual-theoretical models. This evolution was also enabled by the increase in the number of faculties/departments with a geographical profile, previously restricted to only three university centres (Bucharest, Iași and Cluj-Napoca). Thus, there was a wider coverage of the Romanian space, profitable from the perspective of the diversity and originality of the research topics. At the same time, the increasingly democratic access to the main sources of information, especially in electronic format, and the familiarity with the possibilities of statistical and cartographic analysis proposed by the computer revolution have led to an increase in the quality of studies, as evidenced by the numerous articles published in collective volumes issued following prestigious conferences or in author monographs.

In this new context, a series of research groups coalesced in the university centres that have faculties/departments with a geographical profile or within the Institute of Geography of the Romanian Academy, dealing with the study of the population. At the University of Bucharest, the Centre for Geo-demographic Research and Territorial Analysis, stands out, coordinated by Prof. Liliana Dumitrache, PhD, who initiated in 2007 the issuing of a publication, *Human Geographies*, with a more complex profile but in which the study of the population occupies an important place. At the "Babeș-Bolyai" University of Cluj-Napoca, the study of the population is integrated in the theme of research centres oriented towards regional development, territorial identity, or sustainable development, each with its own publications. This dispersion is also generated by the existence of the Centre for Population Studies, coordinated by the faculties of History, Economic Sciences, Sociology and Geography, which also sponsor the publication *Romanian Journal of Population Studies*. At the "Alexandru Ioan Cuza" University of Iași, the informal centre of Human Geography and Spatial Planning focuses the study of

the population on the practical aspects of space organization and resilience of territorial structures. Within the West University of Timișoara, the Centre for Regional Development, Cross-Border Studies and Rational Planning stands out, which also integrates research in the field of geo-demographics, mainly from the perspective suggested by its name. At the University of Oradea, the study of the population is integrated in a broader framework, offered by the Centre for Territorial Studies and Analysis, with the same practical orientation. Concerns for integrating the study of the population in a broader, interdisciplinary scientific context also exist in the other university centres that have Geography departments (Suceava, Târgoviște, Craiova) or specializations with a geographical profile (Constanța, Sibiu). Last but not least, the Institute of Geography of the Romanian Academy includes a department of Human Geography and Regional Development, in which the study of the population takes pride of place. The smaller teams belonging to the Cluj-Napoca and Iași branches of the Romanian Academy have also geographers specialized in this field. The organization of scientific events with a geo-demographic profile remains a desideratum, as does the establishment of a professional association, as is the case in other geographical disciplines (geomorphology, pedogeography etc.). Attempts have been made in this regard, but the interdisciplinary nature of the study of the population and the integration of research activities in the more general framework of Human Geography has have generated a solution. It should be noted, however, that all the scientific events organized by the geography faculties/departments in the country have, in their curricullum, sections dedicated to the study of the population, thus motivating the exchange of ideas and collaboration between university centres. In these circumstances there are also opportunities to hear various guest figureheads, known both nationally and internationally. Along with frequent participation in scientific events abroad or the development of professional training and documentation internships, these opportunities offer the chance to become up-to-date with the latest theoretical, conceptual and methodological perspectives in the field. Thus, various analysis models were adapted, and various analysis models were implemented, serving as a support for research projects with national or external funding, materialized by the publication of numerous articles, author's books, atlases etc.

The diversity of research groups in which geographers are integrated, which tackle population studies often mixed with the study of human settlements, involves a wide range of research directions, from traditional ones that combine geo-demography with historical geography, to innovative ones, which introduce topics of cultural, social, political geography, or is integrated into concepts essential to the issue of global change, such as sustainable development or the resilience of territorial structures. Without being very clearly outlined, in each university centre, certain original tendencies manifested themselves, often triggered by the particularities of the area in which they are located. Among the frequently approached topics, worth noting are: the reconstruction of the populating process of some regions in the Romanian space during the past centuries, thus resuming an age-old theme in national geography; the evolution of the demographic transition process in Romania, both in a European and global context, and at regional or local level; the analysis of the human-geographical potential in certain regions, seen as a support for socio-economic development; pursuing current processes of the redistribution of the population, such as the depopulation of rural areas or, on the other hand, the peri-urban, metropolitan agglomeration; deciphering the mechanisms that have generated disparities in the manifestation of phenomena with a strong economic and social impact such as the accentuated aging of the population or the massive migration abroad of the young labor force from certain regions; the dynamics of the ethnic and religious structure from a geohistorical or geopolitical perspective, especially targeting the regions with a more heterogeneous population; population health, quality of life and the resilience of geo-demographic structures, in a local or national context etc. Accounting for all developed research directions is a difficult task given the complexity of many studies in which population variables are integrated into multivariate analyses aimed at identifying correlations, connections or causalities specific to certain territories, or processes and phenomena of geographical interest. In the same way, the exemplification of special results for each of the mentioned research

directions is made more difficult by the incidence of the particularities of the studied space, so that any contribution can be considered a gain for geographical knowledge.

The perspectives made available by the geographical study of the population are important from the point of view of providing advice and expertise in the management of human potential at various scales of analysis. Although awareness of its importance among public officials is limited, there are premises for an increasingly effective collaboration, given the importance of issues of general interest, favored by the manifestation of permanent changes in trends, or the emergence of specific circumstances. The instrumentalization of this expertise at the level practiced in the western states, especially from the perspective of planning and landscaping, can contribute to the establishment of good governance practices, intensely necessary for a state such as Romania, marked by a hesitant transition from the totalitarian regime to a democracy and a free market.

3. URBAN AND RURAL GEOGRAPHY

After 1989, with the collapse of the old regime, the issues addressed are much broader and unrestricted, thus leading to the resumption of associations with international geography. Because of the increase in the contacts with the urban geography schools of different countries, such as France, Germany, the USA, Poland, as well as the transformations that took place at the level of each city, new methodologies have been used, in addition to the easy access to the statistical databases, the field questionnaires and the new computer techniques. Among the issues addressed were the following: the impact on the urban system of the collapse of the totalitarian regime, the industrial impact on towns, and a characterization of each city in *Oraşele României – mică enciclopedie* [*Romanian Cities – An Abridged Encyclopaedia*].

Between 1990 and 2021, the study of the urban space also appeared in a series of books, scientific articles or chapters in volumes, as the field of research of several geographers – I. Ianoş, V. Cucu, Al. Ungureanu, S. Neguţ, P. Cocean, I. Velcea, Gh. Vlăsceanu, Veselina Urucu, D. Bugă, Sorina Voiculescu, I. Nicolae, Gr. Pop, R. Săgeată, Bianca Mitrică, C. Braghină, Violette Rey, I. Muntele, Sorina Voiculescu, D. Bugă, A. Ilieş, B. Suditu, Mirela Mazilu, M.C. Neacşu, A. Gavriş, V. Mionel.

Substantial works have been published on the topic of population and settlements as a whole, including: *Geografia economică a lumii contemporane* [*The Economic Geography of the Contemporary World*] (1993), *Sisteme teritoriale* [*Territorial Systems*] (2000), *Teoria sistemelor de aşezări umane* [*The Theory of Systems of Human Settlements*] (2000), *Atlas de la Roumanie* (2000), *Antropogeografie. Geografie umană şi economică* [*Anthropogeography. Human and Economic Geography*] (2005), *Spaţiu, economie şi sisteme de aşezări* [*Space, Economy and Settlement Systems*] (2006), *Amenajarea teritoriilor periurbane* [*The Planning of Peri-urban Territories*] (2007), *Geografia umană* [*Human Geography*] (2011).

At the end of the 20th century and the beginning of the 21st (1990-2005), aspects related to cities came up in the works related to elements of the geography of the city, urban dynamics and development, mathematical modelling, territorial systems. Some regional urban studies also took into account geographical regions such as Moldova, the Western Plain, the cities between the Carpathians and the Danube, the piedmont hills between the Motru and Gilort Rivers.

Post-2007, the cities and the urban system, as well as the urban-rural relations, were tackled in a series of works related to the planning of peri-urban spaces, one-industry towns, urban-rural relations, urban ecology, urban renewal and gentrification, urban images, strategies for urban development, urban segregation. The study also focused on various cities, such as Bucharest, Suceava, and Arad.

The study of the metropolitan areas in Romania is a new research approach. It is worth noting the works which approached Bucharest and Oradea Metropolitan Areas with aspects regarding human-environmental relations, the role of tourist attraction areas in close proximity to Bucharest

municipality in the former's integrated development, the role of industrial activities in the development of settlements within the metropolitan area of Bucharest, environmental quality assessment, agricultural geography using GIS technologies.

The new specificities of the urbanization process given the European strategies are summed up in the (bilingual) synthesis volumes *România. Spaţiu, societate, mediu* [*Romania. Space, Society, Environment*] (2005, 2006), in the chapter *Oraşele României* [*The Cities of Romania*], reprinted in 2016; *România. Natură şi societate* [*Romania. Nature and Society*], in the chapter *Dezvoltarea urbană şi ariile metropolitane* [*Urban Development and Metropolitan Areas*] (Fig. 1).

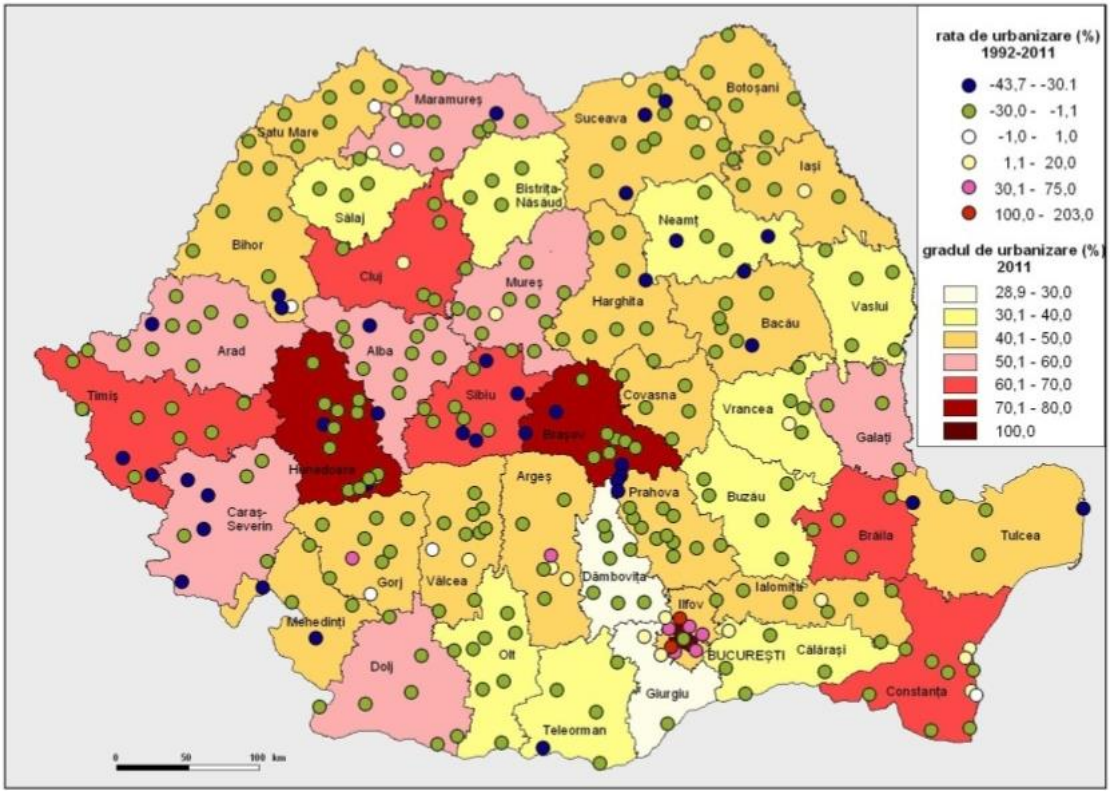

Fig. 1 – Urbanization in Romania during the 1992–2011 period.
(Source: *România. Natură şi societate* [*Romania. Nature and Society*], 2016, in the chapter *Dezvoltarea urbană şi ariile metropolitane* [*Urban Development and Metropolitan Areas*]

Interdisciplinary studies on the urbanization processes are carried out by the research centres at the following universities: the Interdisciplinary Centre for Advanced Research on Territorial Dynamics, the Centre for Environmental Research and Impact Studies, the Centre for Integrated Analysis and Territorial Management (University of Bucharest), the Centre of Human Geography and Spatial Planning (Al. I. Cuza University, Iaşi), the Geography of Rural and Urban Habitat in the Context of Sustainable Development (Valahia University, Târgovişte).

After 1990, the specificities of the ***rural area*** in Romania are tackled in (bilingual) synthesis volumes, such as: *România. Spaţiu, societate, mediu* [*Romania. Space, Society, Environment*] (2005, 2006), in the chapter *Spaţiul rural al României* [*The Rural Area of Romania*] (Daniela Nancu), reprinted in 2016 – *România. Natură şi societate* [*Romania. Nature and Society*], in the chapter *Satul – Dezvoltare teritorială şi tendinţe sociodemografice* [*The Village – Territorial Development and Socio-Demographic Trends*] (Fig. 2).

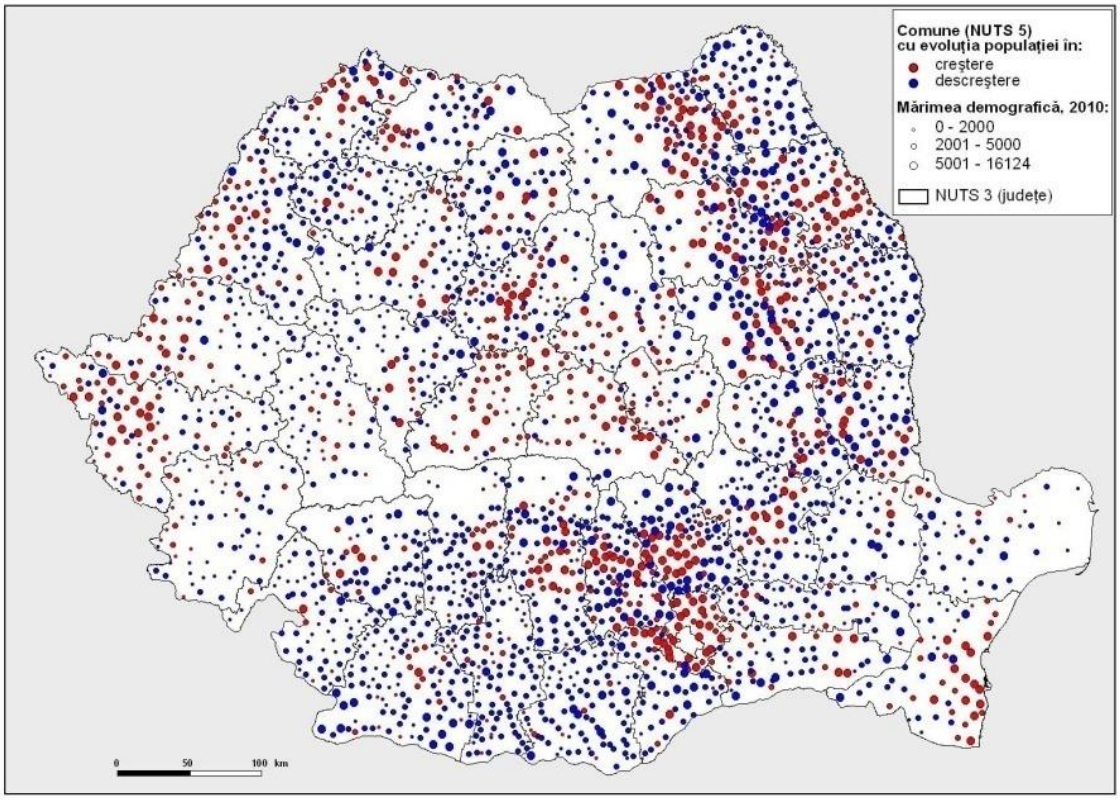

Fig. 2 – Demographic balance of rural population, 2002–2011.
(Source: *România. Natură şi societate* [*Romania. Nature and Society*], 2016, in the chapter *Satul – Dezvoltare teritorială şi tendinţe sociodemografice* [*The Village – Territorial Development and Socio-Demographic Trends*])

Between 1990 and 2021, the study of the rural space also took shape in a series of books, scientific articles, or chapters in volumes, as it was the field of research for several professors and researchers: V. Cucu, G. Erdeli, V. Surd, D. Bugă, Veselina Urucu, Floarea Bordânc, N. Popa, Melinda Cândea, Constantin Vert, Valeria Alexandrescu, Daniela Nancu, Gr. Pop, Gheorghe Vlăsceanu, Costela Iordache.

A number of works dealt with aspects of rural geography as a whole, such as: *Geografia aşezărilor rurale* [*The Geography of Rural Settlements*] (2000), *România – Populaţie, aşezări umane, economie* [*Romania – Population, Human Settlements, Economy*] (2005), *The Geography of Settlements* (2009), *Satul românesc. Tradiţie, contemporaneitate şi speranţă de viitor* [*The Romanian Village. Tradition, Contemporaneity and Hope for the Future*] (2009).

Moreover, works were published at regional level regarding the Mehedinţi Plateau, the Southern Carpathians, Burnas Plain, Haţeg Land, Banat, Mostiştea Plain, the Dobrogea Area, the Subcarpathian Depressions of Oltenia between the Jiu and Bistriţa Vâlcii Rivers.

4. GEOGRAPHY OF INDUSTRY

With the regime change of 1990 and the shift from the command to market-based economy, the geographical research of industrial activities has pursued various paths of analysis to reflect the multi faceted transformation and far-reaching consequences of industrial changes. Placed at the core of the economic restructuring, industrial sectors followed new patterns of spatial location that reshaped the economic structures, the labor redistribution, and interactions between rural and urban spaces. The

openess to the global economy and the integration with the European Union added more challenges for the proces of industrial change.

During the first decade of the transition process, i.e., the 1990s, geographical analysis focused on the entaglements of restructuring and privatizing of industrial activities, the social changes in terms of rising unemployment and the phenomenon of the emerging 'working poor', and the shift of the national economy from industrialization to tertiarization and agrarization (Andrei and Mirică, 2018; Popescu, 2000; Ianoş, 2001; Dumitrescu, 2008). The key words of the transition period, labelled as 'hesitant' (Marcinczak *et al*., 2014), were deindustrialization and privatization. Going from 'the golden age' to the 'iron scrap age' (Chivu *et al*., 2017), industry has registered massive employment loss, 65% of the labor employed in 1990 (Andrei and Mirică, 2018; Popescu, 2021). The restructuring of industry was reflected in the closure of enterprises, the rationalization and downsizing of industrial activities, large scale layoffs and a considerable decline in industry's contribution to generate national wealth. While in 1990, industry accounted for 58.1% of the gross domestic product (GDP) (Ianoş, 2001), its share dropped to 23.2% in 2019 (Popescu, 2021). This decrease has been explained as being the result of intra and inter-sectoral changes whereby the inherited industries adjusted more or less successfully to the new economic environment and to international competition. Within the process, privatization held a central role. Constrained by slow and erratic institutional change, privatization produced poorer results than expected in terms of revenues and contribution to industrial restructuring with only one fifth of all enterprises managing to survive the change in ownership (Chivu *et al*., 2017). However, the 1990s also witnessed an increase in foreign direct investments (FDI) in industrial sectors, mainly in labor intensive and resource-based manufacturing sectors (Creţan *et al*., 2005; Popescu, 1999).

Starting the 2000s, a new stage of industrial change took shape characterized by a slower decrease in employment rates, deep structural reconfigurations, and an increase in industrial output and competitiveness. Throughout the 2000s, manufacturing exports grew eight-fold mainly targeting the European market (Cristea *et al*., 2017) due to the gradual shift from low valued-added to higher technology-intensive products and growing productivity (Popescu, 2021). Cross-country comparative assessments of the CEE region pointed to new patterns of regional specialization and sectoral concentration of industrial activities (Kallioras *et al*., 2004); within this regional framework Romania appears as a combination of both an assembly platform and an intermediate producer with varying impacts on productivity, innovation, and business decision-making (Pula, 2018). The structural changes of the production system and the considerable FDI in industrial sectors (mounting to 62.9% in 2002 and stabilising to 29% in late 2010) expalin the increasing share of industrial sectors with medium-high and high technology intensity (Popescu, 2021). These changes also marked the turning point from deindustrialization to reindustrialization (Jucu, 2015).

Aside from the structural inter and intra-sectoral changes of economy with varying outcomes at spatial scales, the economic restructuring has dramatically changed the relevance of urban and rural areas in terms of migration flows. The loss of jobs and incomes as the result of deindustrialization raised the costs of urban life and, in the case of small and medium-sized towns, generated social deprivation and a decline in supportive services. Incentivized by the land reform and the higher social security available in the countryside, a significant number of former urban dwellers who have been layed off from industrial enterprises moved to villages (Popescu, 2019). The urban to rural migration has been regarded as a radical shift in population distribution patterns in the modern history of Romania (Benedek, 2006) manifested with different intensities that triggered the emergence of particular clusters in terms of net migration rate (Török, 2014). The deindustrialization and urban shrinkage are bound by cause-and-effect relationships. The industrial change is fundamentally an uneven process with different consequences on urban economies. While the large cities benefit from diversified economies and stronger endogenous potential to sustain growth, the small and medium-sized towns share structural weaknesses that prevent them from embarking on an economic development pathway (Popescu, 2014). Hence, in their case, the outmigration flows were the most

significant. The loss of labor and market functions in the case of small towns, triggered in particular the 'de-economization' of the urban economic base (Bănică *et al*., 2013) alongside the ruralization and agrarization trends (Ianoș *et al*., 1999). The cumulative effects resulted in the emergence of 'rural towns' (Sirodoev *et al*., 2015) blurring the conventional urban-rural divide. Alternatively, the 'magnet cities' (Cristea *et al*., 2017) influenced the migration and commuting flows according to their specialization in industrial and services activities. As such, Cristea *et al*. (2017) differentiated between industrial cities as strong drivers of commuting (Ploiești, Pitești) and the services cities which are mostly characterized by inmigration (Cluj-Napoca, Iași, Timișoara). Both communting and migration are proxies for territorial competitiveness.

Responding to these heterogeneities, a large body of research focused on the impact of industrial changes on urban economies. Prior to 1990, it is estimated that 95% of the industrial enterprises were located in about 200 urban centres (Ianoș, 2001). Typically large, the industrial activities have changed the overall urban structure and the relations between towns and their hinterland. After 1990, the urban centres have experienced a dramatic change in their economic roles and functions and increasing inequalities between metropolitan and non-core regions (Popescu, 2021). Studies addressed the urban centres, both large and small, from different perspectives: the socioeconomic evolution under the impact of industrial restructuring to identify the directions of development through urban regeneration actions and different economic alternatives (Cercleux *et al*., 2018); the effects of simultaneous processes of de-/reindustrialization and tertiarization in modifying the urban structure and generating new spatial patterns at local scale (Jucu, 2015); the interrelations between deindustrialization and urban planning, reconversion and economic policy in urban centres where industrial sites have been transformed into commercial areas with different patterns of urban development (Ursu *et al*., 2019); the role of industrial brownfields for urban planning in relation to the built-up area and the identification of management actions and redevelopment strategies to support sustainable patterns and quality of urban life (Filip and Cocean, 2012; Paraschiv, 2012; Jigoria-Oprea and Popa, 2017); the functional structure of monoindustrial towns and challenges for future socioeconomic redevelopment (Dumitrescu, 2008); the change of inner-city mobility flows, economic restructuring and urban planning (Bănică and Picioruș, 2012); industry as an urban developer (Săgeată, 2013) and driver of social innovation (Cercleux *et al*., 2020); the role of agglomeration economies in urban sprawl, suburbanization, and extension of metropolitan areas (Popescu, 2011; Dumitrache *et al*., 2014). Overall, the competitive cities reshaped the economic geography through their demographic and economic mass, the concentration of dynamic and growing activities, higher connectivity and investments to promote the quality of life in urban environments (Ionescu-Heroiu *et al*., 2013). In addition to the capital city of Bucharest, 20 large cities have been assigned the role of regional growth poles and urban development poles that attracted the bulk of capital investments, leading companies and highly skilled labor.

Unlike the slow and hesitant manufacturing transition, the mining industry was approached through a 'shock therapy' policy in 1997. In the next two years, a large number of mines were closed down and about 100,000 jobs were eliminated (Popescu *et al*., 2003). Based on the legislative and institutional changes (the 1998 law of mines and three governmental bodies responsible for the mining restructuring), a number of 26 mining areas were declared as 'dis-advantaged' for a 10-year period. Follow-up assessment highlighted mixed results in terms of labor and activities reconversion (Popescu *et al*., 2003a). Besides the socioeconomic impact, the environmental consequences drew attention of the geographical research. For example, Merciu *et al*. (2016) pointed to the high rehabilitation costs and the lack of involvement of the local authorities in addressing the land degradation and productivity loss as well as the negative consequences on human health. The vulnerability of mining sites and communities required new methodologies and in-depth data analyses combined with GIS tools to map development solutions and offer guidelines for the decision-making of sustainable strategies (Constantin *et al*., 2015). A special concern of geographical research was the assessment of how the local population perceives the impact of mines closures and their associated environmental and human health outcomes (Dogaru *et al*., 2009; Morar, 2011; Radu, 2016, 2018). Although placed in different spatial contexts

(Apuseni Mountains, Bihor or Maramureș mining areas) the conclusion reached by the majority of these studies was that the local population shares a strong feeling of self-identification with mining. The mining-centred perception of themselves, the environment and further job opportunities hampered largely the redevelopment strategies together with the late and inconsistent governmental response.

Industrial change is a good predictor of spatial rearrangements of economy at regional level and the subsequent widening of regional socioeconomic disparities (Popescu *et al*., 2003b). A large number of studies enhanced the understanding of inter- and intra-regional inequalities as a result of deindustrialization and reindustrialization (Bănică *et al*., 2013; Popescu, 2014; Benedek, 2015; Cristea *et al*., 2017). The divergence of regional development pathways was addressed through two main directions of research: the reconfiguration of regional economies as the result of industrial changes; and the impact of various mechanisms and strategies of regional development. The former relied on the assessment of spatial patterns of growth and decline in relation with emergent forms of social and economic inequality (Mitrică and Popescu, 2017; Popescu, 2016; 2021). The latter focused on the role of new forms of industrial organization and concentration (industrial parks, industrial clusters) as instruments of regional development policy (Popescu, 2010; Dodescu and Chirilă, 2012) aiming at strenghtening the competitiveness of productive agglomerations and the capacity to generate jobs and incomes.

The shift from the command to market-based economy stirred radical changes in industrial sectors challenging the geographical research to address the deindustrialization and reindustrialization processes in a comprehensive and systematic way. The studies aimed at relating the context-specific response to varying inherited structures and ongoing industrial change to examine the economic performance of industrial sectors. Overall, these studies captured the changing role of industry, both manufacturing and mining, in creating national wealth, attracting direct foreign investments, and influencing the evolution trajetories of employment and productive firms. During the past three decades, industrial changes have contributed to reshaping the economy of regions and urban centres.

5. AGRICULTURAL GEOGRAPHY

Agricultural Geography is a branch of Economic Geography which has developed continuously on a global and national level, especially after 1949, with the establishment of the Land Use Commission within the International Geographical Union.

In the last decades, with the development of modern graphic representation techniques (GIS) and remote sensing, the research in the field of agricultural geography and land use has grown, with an increasing emphasis on interdisciplinary research, on mapping the categories of land use based on satellite images and on the spatial analysis of changes as data sources. The particular implications that land use changes have in the context of global environmental changes have led to their study becoming a priority for several international research projects (LUCC – Land Use and Land Cover Changes; GLP – Global Land Programme etc.). The CORINE Land Cover program, coordinated by the European Environment Agency (EEA), is of special importance for the field of agriculture and land use; in this program, using satellite images, land use maps have been created, on a scale of 1:100,000, for almost the whole of Europe. These were made for the years 1990, 2000, 2006, 2012, 2018, and are useful practically for studying the dynamics of agricultural land use categories, simulating future changes, or planning the territory. For the statistical classification of land cover and land use categories, EUROSTAT has initiated two programs: CLUSTERS (Classification for Land Use Statistics) and LUCAS (Land Use/Cover Area Frame Statistical Survey), aiming to standardize statistical databases at a European level. Furthermore, the Commission for the Study of Land Use and Land Cover Change (IGU-LUCC), within the International Geographical Union, coordinates the activities regarding the changes of land use in relation to the natural and anthropogenic factors that generate said changes.

After 1990, among the endeavors of Romanian geographers, as well as those of specialists from other fields, we may recall: quantifying past changes in the agricultural land use structure, using old

cartographic documents as data sources; identifying and analyzing causal factors in different historical and geographical contexts; assessing the impact changing land use has on the environment and on society in the context of global environmental changes; modelling past and future changes in land cover/use; the impact of climate change on agriculture (agricultural production) and land use and the attempt to identify methods of having farmers adapt to these changes etc.

Within the Institute of Geography of the Romanian Academy, special attention was paid to the research of post-Communist changes occurring in the agricultural sector, carrying out numerous studies, both as part of research topics or doctoral theses, as well as part of extra-budgetary national research projects or in cooperation with foreign institutions abroad. Among the problems addressed, we may note: the analysis of the changes produced in the agricultural sector during the post-Communist period and the use of integrated models (G-EPIC) in order to set up scenarios for land use change, as well as identifying areas with different levels of suitability for agriculture given the climate change conditions (EnviroGRIDS, 2011); the development of climate services to support local policies helping farmers adapt to climate change (ECLISE, 2013, Sima *et al*., 2015); the simulation of future land use changes by applying the CLUE-S model (RO-RISK, 2016); development of sustainable and organic agriculture; multifunctional agriculture in urban and sub-urban areas etc.

The results of the research of the Romanian geographers, as well as that of the other people with preoccupations in the field of agricultural geography were published in a series of articles included in specialized journals either in the country, or abroad (I. Iordan, 1994; Floarea Bordânc, 1996, 1997; Claudia Popescu *et al*., 2003; D. Bălteanu *et al*., 2003, 2005, 2010, 2012, 2013; Elena-Ana Popovici, 2008, 2010; Elena-Ana Popovici *et al*., 2013, 2016, 2016, 2018, 2021; Petrișor A.I. *et al*., 2018, 2020; Mihaela Sima *et al*., 2015; G. Kucsicsa *et al*., 2015, 2018, 2019, 2020; G. Kucsicsa and D. Bălteanu, 2020; Ines Grigorescu *et al*., 2013, 2019, 2021; Monica Dumitraşcu *et al*., 2014, 2020; Bianca Mitrică *et al*., 2013, 2015). In addition, the results were published in several chapters in reference volumes, such as: *Calitatea solurilor şi reţeaua electrică de transport. Atlas geografic* [*Soil Quality and the Electric Transmission Network. Geographical Atlas*] (2004); *România. Spaţiu, societate, mediu* [*Romania. Space, Society, Environment*] (2005) and its English version, published in 2006; *România. Atlas istorico-geografic* [*Romania. Historical-geographical Atlas*] (2007); *România. Natură şi societate* [*Romania. Nature and Society*] (2016) etc.

Within the university departments, courses on agricultural geography or general issues of this field were also printed and dealt with in the economic geography courses.

In conclusion, we may say that agricultural geography and land use have evolved continuously, from an inventory and descriptive science to a quantitative and predictive science of crops, live stocks and land use categories, allowing us to issue estimates about their future evolution. Over time, geographers have expressed an interest in studying all aspects of agriculture, in particular the relationship with the natural environment, continuously developing its object of study with the help of modern research and analysis tools. Due to the special role that agricultural geography and land use have played in economic geography, the research on the dynamics of agricultural crops, that of agricultural production, of land use categories, on the changes occurring at their level, as well as the significant impact they have in the context of global environmental changes, they remain a priority of the national and international scientific world.

6. GEOGRAPHY OF SERVICES

After 1989, the Romanian economy went through an extensive restructuring process by closing many large industrial units. This was due to the interruption of trade relations with partners from the Middle East as well as those from North Africa, which meant a strong blow for the less competitive Romanian industry on the Western European market. The laid-off population in the industry has gradually found employment in services activities such as transport, tourism, trade. Research in the

field of economic geography has focused on the services that have become the engine of regional economic growth. The stage of functional analyses, which were then joined by quantitative analyses followed after the descriptive phase of the communist era. Most of this research was carried out in complex human geography studies, which highlighted the relationships between human settlements and the economic activities that influenced their development.

Transport Geography. Transport infrastructure plays an important role in economic growth in general, and productivity in particular. Thus, numerous geographical studies have highlighted the need to expand the main transport arteries (highways, railways), the optimization of the transport network, as well as the interconnectivity of different modes of transport.

In his work *România. Geografia circulaţiei* [*Romania. Transportation Geography*] (1984), Gr. P. Pop emphasized the role of the transport network in the development of the settlement system.

Volume II (1984), of the work *Geografia României* [*Geography of Romania*] established the dependence between the main economic activities in the Romanian urban system and the transport network. Volumes III (1987) and IV (1992) of the same work address the relationship between transport and settlement system at the regional level. Other works analyse a certain aspect of the transport network: the efficiency of the railway transport network (O. Groza, I. Muntele, 1998), or the evolution of the road transport network in Moldavia (I. Muntele, I. Cimpoescu, 2011).

The transportation on the Danube was given special attention, as it was the subject of numerous articles in journals, published by: Alexandra Ghenovici (1993); Veselina Urucu (1989); C. Tălângă (1994).

C. Tălângă (2000) performed a modern substantiation of the Romanian transport system, simultaneously evaluating the impact that major changes in the field of transport networks can have on the national, regional and local settlement systems (Fig. 3). Moreover, the variety and complementarity of the transport networks are analyzed according to the characteristics of the relief and the geographical position of the administrative units (counties).

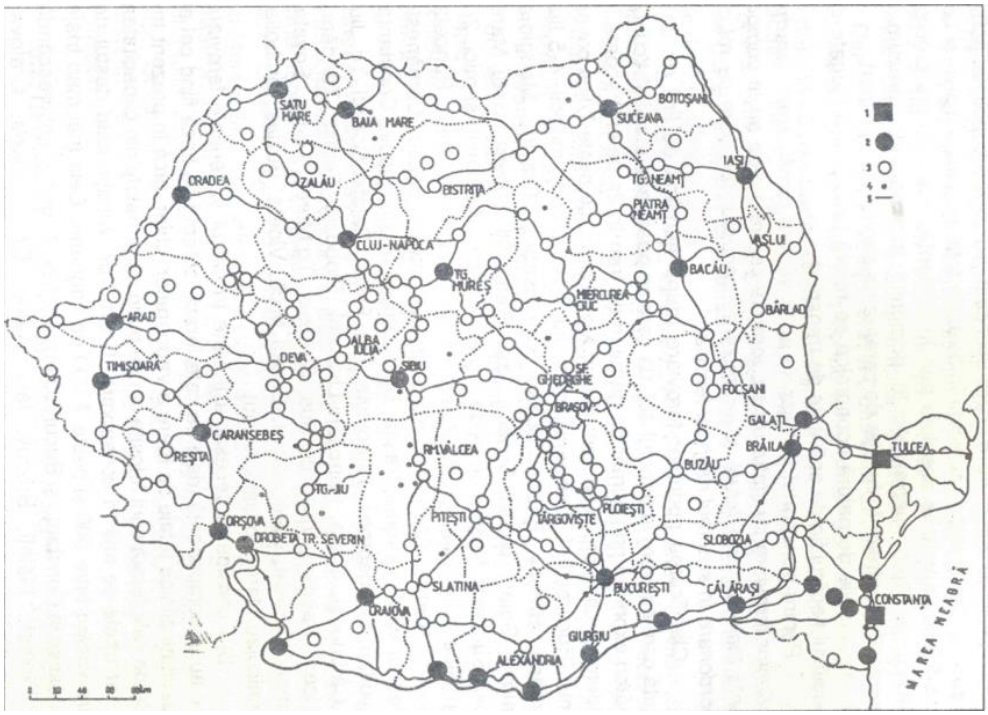

Fig. 3 – The classification of Romanian cities based on the degree of accessibility to transport systems. Category I, 2. Category II, 3. Category III, 4. Category IV, 5. The main railway network. (Source: *Tălângă C. (2000), Transporturile şi sistemele de aşezări din România*).

Another approach is in the field of geography of rural settlements where the transport infrastructure is seen as a prerequisite for the differentiation of rural areas (I. Muntele *et al*., 2010).

EU transport strategies were dealt with in the paper *România. Natură şi societate* [*Romania. Nature and Society*] (2016) in order to provide an image of the development and modernization of the transport network.

Tourism Geography. The collapse of communism in Romania offered the opportunity of private capital to invest in tourism activities. Thus, better-sized accommodation units were built in relation to tourist demand (pensions) and new forms of tourism were developed (ecological, wine routes, sports-cycling, rafting). Geographical studies on tourism increased in number after 1989, given the need to synchronize this field of study with the level of knowledge from other branches of economic geography. The research varied in terms of particular topics: tourism geography (I. Mac, 1992; S. Neguţ, 2004; N. Ciangă, 2006); research methodology (P. Cocean, S. Deszi, 2001; I. Muntele, C. Iaţu, 2003; P. Cocean, 2004, 2007; M. Ielenicz, Laura Comănescu, 2006); tourism zoning (G. Erdeli, I. Istrate, 1996; N. Ciangă, 2002; I. Muntele, 2000; S. Neguţ, 2004; N. Ciangă, S. Deszi, 2007). Additionally, there were studies on tourism geography in different natural units (Gh. Măhară *et al*., 1999; M. Ielenicz *et al*., 2003; M. Ielenicz, Laura Comănescu, 2006; Alina Poruncia-Ipate, 2012), tourism typology (Ionica Soare, 2007), cultural tourism (Camelia Teodorescu, 2009), tourism planning (M. Olaru, 2000; G. Erdeli, A. Gheorghilaş, 2006; M. Ilieş, 2007; N. Ciangă, Ş. Dezsi, 2007), as well as regarding the economic and legal aspects, in order to cover the transformations that were taking place, in these fields, during the transition period Romania was going through (Rodica Minciu *et al*., 1991; I. Istrate *et al*., 1996; E. Buciuman, 1999; N. Neacşu, 2000; O. Snak *et al*., 2001; V. Glăvan, 2005; C. Braghină, D. Zamfir, 2006; N. Neacşu *et al*., 2011). Other works tackled ecotourism (Florina Bran *et al*., 1998; V. Glăvan, 2003; Elena Matei, 2004, 2015; P. Nistoreanu, 2006; Melinda Cândea *et al*., 2007).

Over the 2020-2022 the Project *Social and innovative platform on cultural tourism and its potential towards deepening europeanisation* (SPOT) funded from the European Union's Horizon 2020 programme for research and innovation is conducted under the coordination of Mendelu University of Brno. SPOT project is focused on the study of issues related to cultural tourism, with the Institute of Geography as Romanian Partner.

Geography of Trade. Territorially speaking, economic development is uneven because raw materials, labor, and capital are not evenly distributed. Thus, the industry, often concentrated near large cities, needs raw materials at shorter or longer distances and the sale of products is also done to closer or more distant markets. Through trade, these flows of goods necessary for territorial development are distributed. Geography has developed theories of location for economic activities in order to support economic and political decision-makers.

After 1989, the concerns of geographers were focused on issues of internal trade (L. Dobraca, 1995, 2001) or international trade (P. Şerban, 2009; I. Popa, P. Şerban, 2016) from the perspective of economic macro-balances (trade balance).

Furthermore, works of economic (even worldwide) geography included chapters on trade (I. Velcea, Al. Ungureanu, 1993; V. Cucu, 1996; G. Erdeli *et al*., 2000; N. Raboca *et al*., 2001; A. Păcurar, 2001; C. Iaţu, I. Muntele, 2002; C. Braghină, I. Muntele, 2005; O. Groza, 2005).

7. SOCIAL GEOGRAPHY

Currently, two tendencies can be identified in the development of geography, specific to other sciences as well: the classicization of already clearly defined branches and the expansion of scientific investigations in the field of human geography (Cocean *et al*., 1996). Social geography is one such branch of human geography, with a high research potential and which studies the relationships between space and the social phenomena that take place within it, in relation to the natural, historical, economic and cultural inter-conditions. Thus, emphasis is placed on both the interrelations that social

geography has with other sciences (sociology, economics, history, psychology etc.), as well as on the numerous and varied connections between the socio-economic phenomena/processes and the space where they occur and evolve.

The complex relationship between social phenomena and geographical space has been debated extensively in international literature since the early 20th century, but the term *social geography* was coined by French sociologists around 1870-1880 (Dunbar, 1977).

E. Reclus used the term *social geography* to replace that of *anthropogeography*, which also occurred in Romanian geography. The latter term was enforced by Mehedinţi; however, during the inter-war period, it was replaced by *human geography*, while during the communist régime it became *economic geography*. During the time it functioned as *economic geography*, Popovici equated it to *social geography*, while Donisă believed the term *socio-geography* to be more appropriate (Nicolae, 2011).

The term *social geography* has been used for more than a century and its explicit content has been the subject of numerous debates. After the first elements of *social geography* contained by the reference works on the Romanian civilization as early as the 16th century and in the 32 geographical dictionaries of the counties, published under the aegis of the Romanian Geographical Society in the beginning of the 20th century, the first social geography study in Romania was published (Urechia, 1902). Although the term *social geography* used by Urechia in his article was not found in other geographical works in Romania until the post-war period, his contribution to the emergence and development of social geography in Romania was important, constituting a starting point for future studies (I. Nicoale, 2005). In the first decades of the 20th century, geography expanded to encompass what is now called *social geography* (Nicolae, 2005) and its topics were shaped by the main historic events such as the establishment of the Romanian national unitary state and the dangers of its dissolution once the Second World War broke out. During the Communist period, in contrast to the development of social geography worldwide, *social geography* was not recognized as a field of scientific research (Nicolae, 2005; Rostas, 2012) in Romania.

The research topic that approaches the geographical dimension of social phenomena has significantly diversified during the post-1989 Revolution era, even from that first decade. Theoretical aspects regarding social geography and social space (Tufescu, 1994; Cocean *et al*., 1996; Ipatiov, 2007; Guran, 2009) highlighted the sub-fields of social geography: behavioral geography, medical geography, the geography of religions, cultural geography (Cocean *et al*., 1996).

The territorial approach to social risk (Guran and Turnock, 2000), to the socio-territorial implications of the migration phenomenon (Ianoş and Guran-Nica, 1997; Ianoş, 1998), the study of marginal groups (Ianoş *et al*., 1996) and the geographical analysis of deviant behaviors (Dumitrache and Dumbrăveanu, 1998) were topics that aroused Romanian geographers' scientific interest. At the same time, the studies on the ethnicities in the Romanian space were reprised, as well as those dealing with the dynamics of the ethnic and confessional structure in some historical Romanian provinces, which had been topics of interest ever since the inter-war period (Iacob, 1994-1995; Costachie, 1997; Creţan, 2009; F. Ipatiov, 2003; Muntele, 2004).

Social geography continued to develop by addressing new topics, but also by detailing those previously studied. Labor force and unemployment (Iaţu, 2002; Mocanu, 2010); social risk (Popescu, 2001); disadvantaged ethnic groups (Creţan, 2009); social space; the geography of religions (Muntele and Atudorei, 2011); aspects of medical geography (Dumitrache and Nae, 2007; Dumitrache, 2007; Dumitrache and Dumbrăveanu, 2009); a series of elements of social geography included in studies on migration (I. Muntele, 2003, Mitrică *et al*, 2021); population nutrition; the quality of urban life and poor housing (Nae, 2007, 2008, 2009); regional studies on social geography; urban segregation (Mionel, 2010; Mionel and Neguţ, 2011), social disadvantage (Mitrică *et al*., 2020) (Fig. 4) are the most common topics included in the works on social geography. During past years social geography has continued its developmet through other studies focused on ethnic minorities (R. Săgeată, 2017, Șerban, 2018, Damian, Săgeată, 2018, Mocanu *et al*., 2019), the link between the ethnic, religious and cultural

dimensions of the population (Mionel, 2019, Muntele *et al*., 2019, Munteanu, Cocean, 2019, Costachie and Soare, 2012), health and life style, as well as the quality of life (Moise, 2015, Paraschiv, 2016, Taloș, 2017, Dumitrache, 2014, Berbecar *et al*., 2020). Other topics were the different issues related to human communities (their reslilience – Șerban, Tălângă, 2015; their landscape as identity – Stoiculescu and Huzui, 2011; local identity – Jucu, 2012), toponimy (Persu, Nancu, 2017), children's geography (Mocanu, 2019).

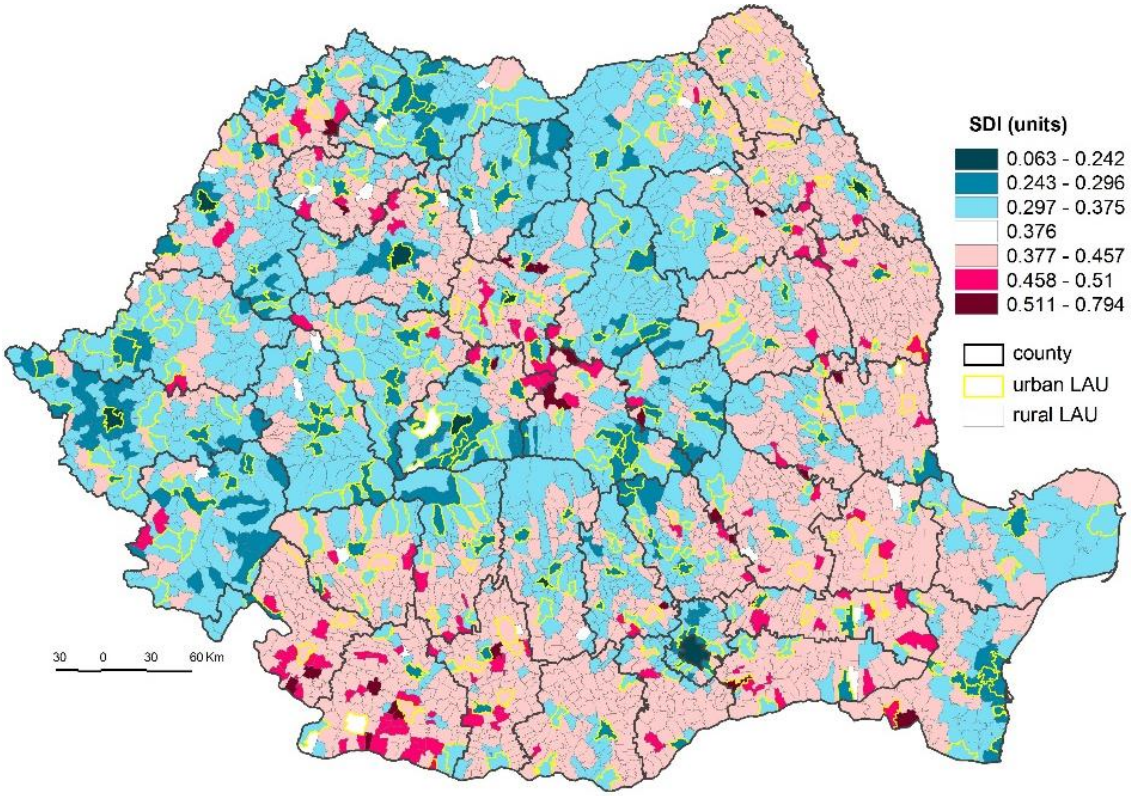

Fig. 4 – Social Disadvantage Index 2011.
(Source: Mitrică B., Șerban P., Mocanu I., Grigorescu I., Damian N., Dumitrașcu M. (2020), Social Development and Regional Disparities in the Rural Areas of Romania: Focus on the Social Disadvantaged Areas, Social Indicators Research, Social Indicators Research).

Social geography in Romania has evolved from Nestor V.A. Urechia's *project* to present times. As proof of the value of the first study on social geography in our country, many of the publications have their roots (at least those concerning the topics addressed) in structuring the social facts included in the 1902 article. Romania's current social geography is grounded on a solid foundation, but it has not benefited from an ongoing development due to of the political context that has not been auspicious for quite a few decades. In the contemporary era, social geography is well represented in Romanian university geographical education, both in traditional university centres and in those established after 1990. Many researchers and academics belonging to different generations focus their scientific interest towards social geography topics, some more *classical* in nature, others more up-to-date, stemming from the current and more dynamic social, economic, and cultural context.

8. REGIONAL GEOGRAPHY

Contemporary concerns regarding regional geography started being based on systemic approaches. The frontier between physical and economic geography, strongly outlined during the period of Soviet influence (1950–1968) blurred considerably, as physical-geographical phenomena were approached from the perspective of their anthropic impact, and the socio-human ones in close correlation with their natural background. However, even in the period when the administrative regions were outlined according to the criterion of the homogeneity of the economic potential, according to the model of the Soviet *oblasts*, Vintilă Mihăilescu made landscape an integrative regionalisation criterion, based on which he made a first regionalisation of the Romanian mountain area (1963), and later the hill and plain regions (1966). In his *Geografie teoretică* [*Theoretical Geography*] (1968), he concluded: "Critically analyzing the landscape in order to highlight the dominant characters and polarize the rest around them is the essential task of regional geography" (pp. 237–238). In this context, for him, the region represents "the reality derived from the use of the given territorial conditions (natural and anthropic)" (p. 242). The natural region is thus complemented by the anthropogeographic region, aiming at territorial functionality (regional geographical functionality).

The transition from the logic of regionalisation based on homogeneity to that based on functionality was also reflected in the administrative-territorial division implemented in 1968, when counties were conceived as functional territorial structures incorporating in their territory different relief units, with varied resources and potential, generating economic complementarity (Argeş, Dâmboviţa, Buzău, Prahova, Vrancea, Gorj, Bihor, Timiş, Maramureş, Satu Mare, etc.). Even the counties with a seemingly uniform relief, such as plain countries, induced a structure and a differentiated potential of use through the variety in microforms, through the connection between meadows and the two Danubian lakes (*Judeţele României Socialiste,* [*The Counties of Socialist Romania*], 1969).

The functional region is the one based on the established relations between the housing nuclei developed in the areas of convergence of material and human flows. This type of region usually develops at the border between the homogeneous natural regions, in the spaces of economic and social complementarity (at the border between the mountain and the sub-Carpathian border, between the plateau and the plain areas etc.). Regionalisation according to functional criteria, as a result of the multiple interconnections between homogeneous natural spaces, was set up after the Second World War, as a result of the assertion of the American geographic school and the influence it exerted in Europe, especially on the French school.

In this context, the research concerning regional geography have amplified and diversified in Romania as well. The geomorphological studies of some territorial units resulted in their geomorphological regionalisations, and much of the research of human and economic geography was geared towards geographical units precisely delimited from a territorial point of view. However, given the socio-political circumstances of the time, most Romanian geographers regarded morphological criteria as the starting point in regionalisation actions (Mihăilescu, 1957; Morariu, Velcea, 1971; Coteţ, 1976; Morariu *et al*., 1980; Posea, Badea, 1982 etc.). In this sense, H. Grumăzescu proposed, in 1968, a series of geostructural, morphostructural and morphosculptural criteria that had to be taken into account for the delimitation of geographical regions, an action that would only be materialized in 1984 through the regionalisation of Romanian relief units, issued by Gr. Posea and L. Badea. This regionalisation methodology, constantly perfected, also served as a basis for the creation of the volumes of regional geography of the treatise on the Geography of Romania (vol. III – V), as well as of an extensive monograph in eight volumes dedicated to the relief units of Romania (coordinated by L. Badea, 2001–2014), followed by a dictionary comprising the elements therein (Badea, 2014).

The region was therefore a "relatively homogeneous part of the geographical area, which has specific characteristics - relief, climate, water, economic resources, human numbers – resulting in its own geographical landscape" (Erdeli *et al*., 1999, p. 270). Consequently, the region is the result of a

mix between active and passive factors of variable importance and intensity (relief, climate, geology, human activities and history, social organization etc.), which lent a certain physiognomy, a territorial homogeneity, a personal dynamic and a certain internal evolutionary balance (functional region).

In this context, I. Ianoş (1987) proposed a regionalisation based on the areas of urban influence, conceived as functional macroterritorial geographical spaces, thus laying the foundations of systemic approaches in the regional geography of Romania. These would bring a constant enrichment in content for the concept of geographical region, conceived as a "concrete territorial system, defined by the interaction and mutual influence of the natural, social and economic elements" (Donisa, 1977), a "larger or smaller piece of land resulting from the specific association of physical, biological and human factors" (Gruescu, 1987), a "functional territorial entity" (Velcea, 1988) or "an open thermodynamic and optimal, informational system, with a dissipative structure and a very high resistance to change" (Ianoş, 1993). It is characterized by its own mass, energy and information flows, which allow it to self-organize.

Of an almost similar meaning, that of a complex integrating system, Băcănaru, Velcea (2005) opted for the concept of *area* as "a spatial individuality, structured above its basic components, in which the presence of man, operating intelligently and consciously, gives him the quality of not being the sum of its components, although in its socio-economic transition it is based on their interdependencies, in which its dynamics and self-regulatory force reside, varied, intense and more productive" (p. 27). F. Grecu (2000) showed that "at the level of each system or subsystem, regionalisation can be performed according to complex criteria, which take into account all aspects and all components of a system, or according to simple criteria, which target a single aspect or component. It turns out that the region can be simple or special" (p. 34).

The regional space is coherent (its natural and anthropic components are closely connected) and synergistic (the co-operation of the components generates a specific function) (Ianoş, 2000); These are characteristics that are identified in heterogeneous regions, while natural regions have a coherent and synergistic structure only on the vertical level (between the geological substrate, relief, hydrosphere, atmosphere and biosphere).

The mental space, as a result of the projection of the spatial element in the psychology of the inhabitants, of the communion between man and his living environment, is considered by some authors, especially by the representatives of the School of Regional Geography in Cluj-Napoca, as a decisive element in the durability of any regional structure. The mental spaces are, at the same time, functional spaces, as well as spaces of ethnic and cultural homogeneity, spaces the identity of the inhabitants can relate to, structured vertically, based on the relations between the local communities. Therefore, the regions that have reached the stage of mental spaces are deemed the most evolved and most viable to become administrative-territorial structures (Cocean, Ciangă, 1999–2000; Săgeată, 2004, 2006; Cocean, Filip, 2008; Cocean, 2011, 2012, 2013; Ilieş, Wendt, 2012). Starting from these premises, 21 "system-regions were outlined, in which the elements of the natural background and those induced by the anthropic presence make up a functional whole, which tends towards a state of dynamic balance": Northern Transylvania, Banat, Southern Oltenia, Southern Transylvania, Bucharest Metropolitan Area, the Curvature [i.e., the Curvature Carpathians], the Apuseni Mountains, North-West Muntenia, Dobrogea, Bârlad, Crişana, Bărăgan, Bistriţa-Totuş, Haţeg-Poiana Ruscă, Bucovina, North-East Muntenia, Northern Oltenia, Maramureş-Chioar, the Lower Danube, the Siret corridor and the Danube Delta (Cocean, Filip, 2008, p. 13–14). Subsequently, by integrating them, 10 "high functionality territorial systems" were designed (Cocean, 2013).

Another direction of approach, which took shape at the same time, is based on *the areas of influence of urban centres* capable of being invested with an administrative function (Săgeată, 2000, 2004, 2006, 2011, 2015), taken aside and ranked in relation to the relationships established at the level of local settlement systems (competition and subordination). On this basis, 11 regions were put

forward: Banat, Bucovina (Northern Moldova), Dobrogea, the Lower Danube, Maramureş, Moldova, Muntenia, Oltenia, Transylvania, Southern Transylvania and the Bucharest Metropolitan Area.

The criterion of economic and social functionality was the starting point for another regionalisation developed by a group of teachers from the "Hyperion" University of Bucharest, led by V. Cucu (2013), who merged counties in order to set apart 11 economic and geographical regions : the Carpathian-Danubian-Olt, the Banat-Timiş, the Crişana-Someş, the Maramureş and Bucovina, the Transylvanian, the Carpathian Braşov-Ciuc one, the Central-Northern Moldovan, the Carpathian-Danubian East-Muntenia, the Carpathian-Danubian Central-Muntenia, the Carpathian-Danubian Maritime and the Bucharest-Ilfov Metropolitan Economic Region.

The "J" Romanian regionalisation project based on territorial and historical functionality, developed by G. Jivănescu (2013), proposed a division based on four territorial-statistical levels: NUTS I represented by 3 macro-regions (Wallachia – RO1, Moldova – RO2 and Ardeal – RO3); NUTS, II consisting of 6 provinces (Banat – Crişana, Transylvania and Maramureş, Moldova and Bucovina, Oltenia, Muntenia and Dobrogea, and Bucharest); NUTS III, comprising 19 development regions (Banat, Crişana, Maramureş, Southern, Eastern, Western and Northern Transylvania, Southern, Western, Eastern and Northern Moldova, i.e., Bucovina, Sub-mountainous and Valley Oltenia, Dobrogea, Southern, Eastern, Western and Northern Muntenia and Bucharest-Ilfov) and NUTS IV, comprising the current counties.

Another regionalisation proposal, elaborated by a team led by P. Otiman (2013), also put forward 6 variants of regionalisation based on three territorial-statistical levels: NUTS I – 3 provinces (Muntenia, Moldova and Transylvania); NUTS II, consisting of 7 or 11 regions, and NUTS III corresponding to the present-day counties.

Whatever the strengths or weaknesses of these regional territorial divisions, they are based on territorial functionality, a basic criterion for the viability of any territorial structure, becoming important landmarks in the progress of regional geography in Romania. Romania has not yet implemented an administrative-regional level, remaining from this point of view one of the few large EU states characterized by a high degree of administrative-territorial fragmentation.

9. CONCLUSIONS

With the shift to market-based economy from the command one, Human Geography research has pursued various paths of analysis to reflect the multi faceted transformation and far-reaching consequences of the socio-economic changes.

Among the topics addressed under the framework of Population Geography there are: the reconstruction of the process of populating some regions in Romania during past centuries, the evolution of the demographic transition process in Romania, the analysis of the human-geographical potential in certain regions, the tracking of current population redistribution processes, deciphering the mechanisms that generated disparities in the manifestation of phenomena with a strong economic and social impact, the dynamics of the ethnic and confessional structure etc.

One of the main research issues of Urban Geography were related to the planning of peri-urban spaces, one-industry towns, urban-rural relations, urban ecology, urban renewal and gentrification, urban images, strategies for urban development, urban segregation. The study of the rural space also took shape in a series of books, scientific articles or chapters in volumes dealing with aspects of Rural Geography as a whole or published at regional level.

The changing role of industry, both manufacturing and mining, attracting foreign direct investment and influencing the trajectories of the evolution of labor and productive firms were the main areas of interest in the geography of industry. In the last three decades, an important role in reshaping the economy of regions and urban centers has been played by industrial dynamics.

The research on the dynamics of agricultural crops, that of agricultural production, of land use categories, on the changes occurring at their level, as well as the significant impact they have in the context of global environmental changes, remains a priority of the national and international scientific world of Agricultural Geography.

Geographical research on tourism varied in terms of particular topics: tourism geography, research methodology, tourism zoning, tourism typology, cultural tourism, tourism in general, as well as in terms of economic and legal aspects, in order to cover the transformations that were taking place, in these fields, during the transition period Romania was going through. Numerous geographical studies dealing with Transport Geography have highlighted the need to expand the main transport arteries, the optimization of the transport network as well as the interconnectivity of different modes of transport, while the Geography of Trade has developed theories of location for economic activities in order to support economic and political decision-makers.

Social geography continued to develop by addressing new topics, but also by detailing those previously studied, i.e., labor force and unemployment, social risk, disadvantaged ethnic groups, the geography of religions, aspects of medical geography, population nutrition, quality of urban life and poor housing, urban segregation, ethnic minorities, the link between the ethnic, religious and cultural dimensions of the population, health and life style, and children's geography etc.

Regional Geography has stood out through a series of regional territorial divisions, which are based on territorial functionality, an important criterion for the viability of any territorial structure, constituting landmarks in the progress of Regional Geography in Romania.

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SELECTED REFERENCES

Andrei, T., Mirică, A. (2018), *Industria românească după 1990*. Academica, **5–6**, 331–332, pp. 39–44.

Băcănaru, I., Velcea, I. (2005), *Zona şi mediul geografic. Implicaţii în dinamica societăţii contemporane*, "Lucian Blaga" University Publishing House, Sibiu.

Badea, L. (2014), *Dicţionarul unităţilor de relief ale României*, Universitaria Publishing House, Craiova.

Badea, L. (coord.) (2001–2014), *Unităţile de relief ale României*, I–VIII, Ars Docendi Publishing House, Bucharest (I. *Carpaţii Meridionali şi Munţii Banatului*, 2001; II. *Munţii Apuseni şi Podişul Transilvaniei*, 2006; III. *Dealurile pericarpatice*, 2008; IV. *Podişurile pericarpatice*, 2010, V. *Câmpiile pericarpatice*, 2011; VI. *Carpaţii Maramureşului şi Bucovinei*, 2012; VII. *Carpaţii Moldo-Transilvani*, 2014; VIII. *Carpaţii de la Curbură*, 2014).

Bălteanu, D., Dumitrașcu, Monica, Geacu, S., Mitrică, Bianca, Sima, Mihaela (eds.) (2016), *România. Natură şi societate*, Romanian Academy Publishing House, Bucharest, 689 p.

Bălteanu, D., Geacu S., Dumitrașcu, Monica (coord.) (2018), *Istoria geoştiinţelor în România. Ştiinţele geografice*, Romanian Academy Publishing House, Bucharest, 385 p.

Bălteanu, D., Popovici, Elena Ana (2012), *Modificările utilizării terenurilor şi ale cuverturii terestre. Consideraţii geografice*, în Spaţiu geografic, suport al comunităţii umane, Conferinţa anuală a Societăţii de Geografie din România, 31 mai – 3 iunie, Reşiţa, 2012, Edit Mirton, pp. 13–24.

Bălteanu, D., Popovici, Elena Ana (2005), *Agricultura*, în *România, Spaţiu, Societate, Mediu*, Edit. Academiei Române, Bucureşti, pp. 245–255.

Bălteanu, D., Popovici, Elena Ana (2013), *Utilizarea terenurilor agricole în România*, în *Agricultura. Domeniu strategic pentru securitatea și siguranța alimentară*, Edit. Academiei Române, București, pp. 255–271.

Bănică, A., Istrate, M., Tudora, D. (2013), *(N)ever becoming urban? The crisis of Romania's small towns*. In A. Fischer-Tahir & M. Naumann (eds.), Peripheralization (pp. 283–301). Wiesbaden: Springer VS.

Bănică, A., Piciorus, D. (2012), *Post-communist spatial restructuring in Bacău municipality (Romania)*. Scientific Annals of "Alexandru Ioan Cuza" University of Iasi – Geography series, **58**(*1*), pp. 61–78.

Benedek, J. (2015), *Spatial differentiation and core-periphery structures in Romania*. Eastern Journal of European Studies, **6**(*1*), pp. 49–61.

Bordânc, Floarea (1996), *Spatial variations in the progress of land reform in Romania*. GeoJournal, **38**(*2*), pp. 191–165.

Braghină, C., Zamfir, Daniela (2006), *Legislaţie în turism*, Edit. Universitară.

Buciuman, E. (1999), *Economia turismului rural şi a agroturismului*.
Bugă, D. (1994), *Satul românesc în viziune geografică*, Revista Geografică, nr. **1**, pp. 87–94.
Cândea, Melinda, Simon, Tamara, Tătaru, Alexandra (2007), *Spațiul Rural, Turismul rural și Agroturismul*. Edit. Transversal, Bucuresti.
Cercleux, Andreea Loreta, Merciu, Florentina Cristina, Bogan, Elena, Florea-Saghin, Irina, & Paraschiv, Mirela (2018), *Industrial restructuring in small and medium sized towns from Romania-Evolution, background and positive perspective with challenges*. Annals of the University of Oradea, Series Geography, **28**(*2*), pp. 197–209.
Chivu, L., Ciutacu, C., & Georgescu, G. (2017), *Deindustrialization and reindustrialization in Romania.* Palgrave Macmillan.
Ciangă, N. Dezsi, Șt. (2007), *Amenajare turistică*, Presa Universitară Clujeană, Cluj-Napoca.
Ciangă, N. (2006), *România. Geografia turismului*, Presa Universitară Clujeană, Cluj-Napoca.
Cocean, P. (2007), *Amenajarea teritoriilor periurbane*, Presa Universitara Clujeană, Cluj-Napoca.
Cocean, P. (2013), *Regionalizarea României între dezbaterea ştiinţifică şi voluntarismul politic*, Terra, **XLIV (LXIV)**, *1–2*, pp. 62–66.
Cocean, P. Ciangă, N. (1999–2000), *The "Lands" of Romania as mental spaces*, Révue Roumaine de Géographie, **43–44**, pp. 99–206.
Cocean, P., Filip, S. (2008), *Geografia regională a României*, Presa Universitară Clujeană Publishing House, Cluj-Napoca.
Cocean, P., Rotar, G., Ipatiov, F. (1996), *Geografia socială–ramură de bază a geografiei umane,* SC – Geogr., **XLIII**, Bucureşti.
Constantin, V., Ștefănescu, L., Kantor, C. M. (2015), *Vulnerability assessment methodology: A tool for policy makers in drafting a sustainable development strategy of rural mining settlements in the Apuseni Mountains, Romania*. Environmental Science & Policy, **52**, pp. 129–139.
Costachie, S., Soare, I. (2012), *Particular socio-economic and demographic features of the Gypsy (Rroma) minority of Romania. A case study*, Annals of Valahia University of Târgoviște, Geographical Series, vol. **12**, issue *2*.
Coteţ, P. (1976), *Câmpia Română. Studiu de geomorfologie integrată*, Ceres Publishing House, Bucharest.
Creţan, R. (2009), *From (self-)exclusion to integration: the case of Roma in Romania,* Human geographies – Journal of Studies and Research in Human Geography, **3**, *2*, Bucureşti.
Creţan, R., Guran-Nica, Liliana, Platon, D., & Turnock, D. (2005), *Foreign direct investment and social risk in Romania: progress in Less-favoured areas*. Foreign direct investment and regional development in East Central Europe and the Former Soviet Union, pp. 305–348.
Cristea, M., Mare, C., Moldovan, C., China, A., Farole, T., Vințan, A., Park, J., Garrett, K.P., Ionescu-Heroiu, M. (2017), *Magnet Cities Migration and Commuting in Romania*. World Bank Washington D.C.
Cucu, V. (2000), *Geografia aşezărilor rurale*, Edit. Domino, Târgovişte, 240 p.
Cucu, V. (2009), *Satul românesc. Tradiţie, contemporaneitate şi speranţă de viitor*, Edit. Transversal, Bucureşti.
Cucu, V. (1996), *România, geografie economică*. Edit. "Glasul Bucovinei".
Damian, Nicoleta, Mocanu, Irena, Mitrică, Bianca (2019), *Education and health care provision in the Romanian Danube Valley: Territorial disparities*, Area, **51**, pp. 360–370, https://doi.org/10.1111/area.12474.
Damian, Nicoleta, Săgeată, R. (2018), *Ethnical minorities in the Romanian sector of Dobrogea*, Rev. Roum. Géogr./Rom. Journ. Geogr., **62**, (*2*), pp. 233–248.
Dobraca, L. (2001), *Activităţile comerciale în oraşele României – Studiu Geografic*. Teza de doctorat.
Dobraca, L. (1995), *Dinamica recentă a activităților comerciale în București – considerații geografice*. Analele Universității de Vest, Timișoara.
Dodescu, A., & Chirilă, L. (2012), *Industrial parks in Romania: From success stories to emerging challenges*. International Journal of e-Education, e-Business, e-Management and e-Learning, **2**(*4*), pp. 331–335.
Dogaru, D., Zobrist, J., Bălteanu, D., Popescu, C., Sima, M., Amini, M., & Yang, H. (2009), *Community perception of water quality in a mining-affected area: A case study of the Certej catchment in the Apuseni Mountains in Romania*. Environmental Management, 43, 1131–1145. doi:10.1007/s00267-008-9245-9.
Donisă, I. (1977), *Bazele teoretice şi metodologice ale geografiei*, Didactic and Pedagogical Publishing House.
Dumitrache, Liliana (2014), *Défis, incohérences et échecs de la réforme sanitaire en Roumanie* in *Migration en blanc*, Edition L'Harmattan, Collection Global et Local, pp. 21–40, Paris, France.
Dumitrache, Liliana, Dumbrăveanu, Daniela (2009), *Geographic Distribution of Sanitary Resources in Romania and its Consequences or Individual and Public Health* in Ecology and Environment, Inkilap Kitabevi Baski Tesisleri, Turkey, ISBN: 978-975-00219-6-1.
Dumitrache, Liliana, Zamfir, Daniela, Nae, Mirela, Simion, G., & Stoica, Ilinca Valentina (2016), *The urban nexus: Contradictions and dilemmas of (post)communist (sub)urbanisation in Romania*. Human Geographies – Journal of Studies and Research in Human Geography, **10**(*1*), pp. 39–58. doi:10.5719/hgeo.2016.101.3.
Dumitraşcu, Monica, Mocanu, Irena, Mitrică, Bianca, Dragotă, Carmen, Grigorescu, Ines, Dumitrică, Cristina (2018), *The assessment of socio-economic vulnerability to drought in Southern Romania (Oltenia Plain)*, International Journal of Disaster Risk, vol. **27**, pp. 142–154 https://doi.org/10.1016/j.ijdrr.2017.09.049.
Dumitraşcu, Monica, Grigorescu, Ines, Cuculici, Roxana, Dumitraşcu, C., Năstase, Mihaela, Geacu, S. (2014), *Assessing long-term changes in forest cover in the South West Development Region. Romania*. Forum geografic, **XIII** (*1*), pp. 77–86.

Dumitraşcu, Monica, Cuculici, Roxana, Grigorescu, Ines, Dumitrică, Cristina, Vrînceanu, Alexandra (2020), *Land use/cover changes related to forest cover in the Apuseni Mountains Natural Park. Romania*. 10.18509/GBP.2020.93.

Dumitrescu, Bianca (2008), *Oraşele monoindustriale din România, între industrializare forţată şi declin economic*, Edit. Universitară, Bucureşti.

Dunbar, G. S. (1977), *Some early occurrences of the term "Social Geography"*, Scottish Geographical Magazine, **93**, no. *1*, pp. 15–20.

Erdeli, G., Cucu, V. (2005), *România – Populaţie. Aşezări umane. Economie*, Edit. Transversal, Bucureşti, 450 p.

Erdeli, G. (coord.), Cândea, M., Costachie, S., Zamfir, D. (1999), *Dicţionar de geografie umană*, Corint Publishing House, Bucharest.

Erdeli, G., Istrate, I. (1996), *Potenţialul turistic al României*. Edit. Universităţii Bucureşti.

Filip, S., Cocean, P. (2012), *Urban industrial brownfields: contraints and opportunities in Romania*. Carphatian Journal of Earth and Environmental Sciences, **7** (*4*), pp. 155–164.

Ghenovici, Alexandra (1993), *Dunărea, arteră fluvială transeuropeană*, Rev. roum. de geol., geophys, geogr., Geographie, **40**, pp. 31–42.

Glăvan, V. (2003), *Turism rural, agroturism, turism durabil, ecoturism*. Edit. Economică, Bucureşti.

Glăvan, V. (2005), *Geography of tourism*. Fundatia Română de Mâine Publishing House, Bucharest.

Grecu, F. (2000), *Repere ale gândirii în geografie*, University of Bucharest Publishing House.

Grigorescu, Ines, Kucsicsa, Gh., Popovici, Elena Ana, Mitrică, Bianca, Mocanu, Irena, Dumitraşcu, Monica (2019), *Modelling land use/cover change to assess future urban sprawl in Romania*. Geocarto International, **1–19** (IF: 2.365).

Grigorescu, Ines, Kucsicsa, Gheorghe, Mitrică, Bianca, Mocanu, Irena, Dumitraşcu, Monica (2021), *Driving Factors of Urban Sprawl in the Romanian Plain. Regional and Temporal Modelling Using Logistic Regression*. Geocarto International. 1–25. 10.1080/10106049.2021.1967465.

Groza, O. (2005), *Geografie economică mondială*, Iaşi. Univ. „Al. I. Cuza.

Groza, O., Muntele, I. (1998), *L'efficacité du réseau ferroviaire et l'accéssibilité territoriale en Roumanie*. Revue roumaine de géographie, **42**, pp. 41–53.

Gruescu, S.-I. (1987), *Bazele teoretice ale geografiei*, University of Bucharest Publishing House.

Grumăzescu, H. (1968), *The limits of geographical regions and their determination criteria*, Revue Roumaine de Géologie, Géophisique et Géographie, Géographie, **XII**, *1–2*, pp. 37–51.

Guran-Nica, Liliana (2009), *Geografie socială*, Edit. Fundaţiei *România de mâine*, Bucureşti.

Ianoş I. (2000), *Sisteme teritoriale*, Edit. Tehnică, Bucureşti, 197 p.

Ianoş I., Heller W. (2006), *Spaţiu economie şi sisteme de aşezări*, Edit. Tehnică, Bucureşti, 373 p.

Ianoş I., Humeau J.B. (2000), *Teoria sistemelor de a aşezări umane*, Edit. Tehnică, Bucureşti.

Ianoş I., Tălângă C. (edit.) (1997), *Buletin Geografic. Geografie Umană*, Institutul de Geografie, 177 p.

Ianoş, I. (1993), *Spre o nouă bază teoretică a regiunii geografice*, Studii şi Cercetări de Geografie, **XL**, pp. 167–174.

Iaţu, C., (2002), *La géographie du chômage en Roumanie post comuniste*, în vol. Moldova. Populaţia, forţa de muncă şi aşezările umane în tranziţie, Edit. Corson, Iaşi.

Iaţu, C., Muntele, I. (2002), *Geografia economică*. Edit. Economică, Bucureşti.

Ielenicz, M. coord. (2003), *România*. *Enciclopedie turistică,* Edit. Corint, Bucureşti.

Ielenicz, M., Comănescu, Laura (2006), *România. Potenţial turistic*, Edit. Universitară, Bucureşti.

Ilieş, Al., Wendt, J-A. (2012), *Territorial design optimization model at NUTS 2 level in Romania*, Romanian Review on Political Geography, **XIV**, *2*, pp. 250–259.

Ilieş, M. (2007), *Amenajare turistică*. Casa Cărţii de Ştiinţă.

Ionescu-Heroiu, M., Burduja, S.I., Sandu, D., Cojocaru, S., Blankespoor, B., Iorga, E., Moretti, E., Moldovan, C., Man, T., Rus, R. & van der Weide, R. (2013), *Romania Competitive Cities: Reshaping the Economic Geography of Romania*. World Bank Group, Washington D.C.

Iordan, I. (1994), *Utilizarea terenurilor în România*. Revista geografică, **II–III**, pp. 118–121.

Ipatiov, F. (2007), *Geografie socială,* Edit. Universităţii „Babeş-Bolyai", Cluj Napoca.

Istrate, I., Bran, Florina, & Roşu, A. G. (1996), *Economia turismului şi mediul înconjurător*. Edit. Economică.

Jigoria-Oprea, L., Popa, N. (2017), *Industrial brownfields: an unsolved problem in post-socialist cities. A comparison between two mono industrial cities: Reşiţa (Romania) and Pančevo (Serbia)*. Urban Studies, **54** (*12*), pp. 2719–2738.

Jivănescu, G. (2013), *Proiectul „J" de regionalizare a României*, (2 maps, table), mss.

Jucu, I. S. (2015), *Romanian post-socialist industrial restructuring at the local scale: Evidence of simultaneous processes of de-/reindustrialization in the Lugoj municipality of Romania*. Journal of Balkan and Near Eastern Studies, **17**(*4*), pp. 408–426.

Jucu, I. S. (2012), *Cultural heritage, local identity and urban regeneration. The case study of Lugoj Municipality, Romania*, Geographica Timisiensis, vol. **21**, nr. *1*, pp. 17–36.

Kallioras, D., Fotopoulos, G., & Petrakos, G. (2004), *Patterns of Regional Specialization and Sectoral Concentration of Industrial Activity in Bulgaria, Romania, Slovenia, Hungary and Estonia*. 44th Congress of the European Regional Science Association: "Regions and Fiscal Federalism", 25th–29th August 2004, Porto, Portugal European Regional Science Association (ERSA).

Kucsicsa, Gh., Popovici, Elena Ana, Bălteanu, D., Dumitrașcu, Monica, Grigorescu, Ines, Mitrică, Bianca (2020), *Assessing the Potential Future Forest-Cover Change in Romania, Predicted Using a Scenario-Based Modelling*. Environ Model Assess **25, pp.** 471–491, https://doi.org/10.1007/s10666-019-09686-6.

Kucsicsa, Gh., Popovici, Elena Ana, Bălteanu, D., Dumitrașcu, Monica, Grigorescu, Ines, Mitrică, Bianca (2017), *Modelling future land use/cover chnage flows in Romania (2001–2050), using CLUE-S Model and CORINE Land Cover Database*, IGU Thematic Conference on Land Use/Cover Changes, Biodiversity, Health and Environment, Local and Regional Development, Programme – Book of Abstracts – Field Guidebook, 11–15 September, Bhcharest & Tulcea. Romania, pp. 28–28.

Kucsicsa, Gh., Popovici, Elena Ana, Bălteanu, D., Grigorescu, Ines, Dumitraşcu, Monica, Mitrică, Bianca (2018), *Future land use/cover changes in Romania: regional simulations based on CLUE-S model and CORINE land cover database*, Landscape and Ecological Engineering.

Kucsicsa, Gh., Bălteanu, D. (2020), *The influence of man-induced land-use change on the upper forest limit in the Romanian Carpathians*. European Journal of Forest Research. 139. 10.1007/s10342-020-01293-5.

Mac, I. (1992), *Geografie turistică generală*. Facultatea de Geografia Turismului, Sibiu.

Măhăra, Gh. şi colab. (1999), *Potenţialul turistic al bazinului hidrografic al Crişului Repede*, Edit. Universităţii din Oradea, pp. 116–121.

Mănescu, Lucreţia (1999), *Oraşul Buzău şi zona sa de influenţă: studiu geografic*. Edit. Universităţii din Bucureşti. Bucureşti.

Marcińczak, S., Gentile, M., Rufat, S., Chelcea, L. (2014), *Urban geographies of hesitant transition: Tracing socio-economic segregation in Post-Ceausescu Bucharest*. International Journal of Urban and Regional Research, 38(4), 1399–1417. doi:10.1111/1468–2427.12073.

Matei, Elena (2015), *Ecoturism*, Edit. Universitară, Bucureşti.

Merciu, G.L., Merciu, F.C., Cercleux, A.L. (2016), *The assessment of social and economic impacts associated to an abandoned mining site case study: Ciudanoviţa (Romania)*. Procedia Environmental Sciences, **32**, pp. 420–430.

Mihăilescu, V. (1968), *Geografie teoretică*, Romanian Academy Publishing House, Bucharest.

Mihăilescu, V. (1973.), *Geografie umană (antropogeografie) – geografie socială – geografie economică*, SC – Geogr., **XX**, *1*, Bucureşti.

Minciu, Rodica, (coordonator), 1991. *Economia turismului*, Universitatea Creştină „Dimitrie Cantemir", Bucureşti

Mionel, V. (2010), *Urban Segregation: Causes and Effects*, în *ICBME'10 (Sixth International Conferance on Business, Management and Economics)*, Yaşar University, Çeşme-Izmir, Turkey, pp. 291–296, ISBN 978-975-6339-29-9.

Mionel, V., Neguț, S. (2011), *The Socio-Spatial Dimension of the Bucharest Ghettos*, Transylvanian Review of Administrative Sciences, **33** E/2011, Cluj-Napoca.

Mitrică, Bianca, Damian, Nicoleta, Mocanu, Irena, Grigorescu, Ines, Dumitrașcu, Monica, Persu, Mihaela (2021), *Out-migration and social and technological marginalization in Romania. Regional disparities*, Technological Forecasting and Social Change, vol. **175**(*C*), DOI: 10.1016/j.techfore.2021.121370.

Mitrică, Bianca, Șerban, P., Mocanu, Irena, Grigorescu, Ines, Damian, Nicoleta, Dumitrașcu, Monica (2020), *Social Development and Regional Disparities in the Rural Areas of Romania: Focus on the Social Disadvantaged Areas*, Social Indicators Research, **152**(*1*), 67–89, DOI 10.1007/s11205-020-02415-7.

Mitrică, Bianca, Săgeată, R., Mocanu, Irena, Grigorescu, Ines, Dumitrașcu, Monica (2021), *Competitiveness and cohesion in Romania's regional development: A territorial approach*, GEODETSKI VESTNIK, **65**(*3*), pp. 440–458, DOI: 10.15292/geodetski-vestnik.2021.03. pp. 40–458.

Mitrică, Bianca, Șerban, P., Mocanu, Irena, Damian, Nicoleta, Grigorescu, Ines, Dumitrașcu, Monica, Dumitrică, Cristina (2021), *Developing an indicator-based framework to measure sustainable tourism in Romania. A territorial approach*, Sustainability, **13**(*5*), 2649; https://doi.org/10.3390/su13052649.

Mitrică, Bianca, Mocanu, Irena, Grigorescu, Ines, Dumitrașcu, Monica, Pistol, Adriana, Damian, Nicoleta, Șerban, P.-R. (2021), *Population vulnerability to SARS-CoV-2 virus infection. A county-level geographical methodological approach*, GeoHealth, **5**(*11*), e2021GH000461.

Mocanu, Irena, Mitrică, Bianca, Persu, Mihaela, Damian, Nicoleta (2019), *Exploring the links between the ethnic structure and the dwellings quality in the Danube Valley*, Geograficky Casopis, Geographical Journal, **71**(*3*), pp. 227–240.

Mocanu, Irena (2008), *Şomajul din România. Dinamică şi diferenţieri geografice*, Edit. Universitară, 350 p., Bucureşti.

Mocanu, Irena (2010), *Piaţa muncii din România. Discontinuităţi temporale şi teritoriale*, Edit. Universitară, ISBN 978-606-591-073-7, 150 p., Bucureşti.

Mocanu, Irena (2019), *Exploring some topics for a potential research in the field of Children's Geographies in Romania*, Rev. Roum. Géogr./Rom. Journ. Geogr., **63**, (*2*), pp. 185–192.

Morar, C. (2011), *Several Social Impacts of Mine Closures in the Disadvantaged Areas of Bihor County, Romania*, Forum geografic, **10**(*2*).

Morariu, T., Velcea, V. (1971), *Principii şi mijloace de cercetare în geografia fizică*, Romanian Academy Publishing House.

Munteanu, G., Cocean, P. (2019), *The sacred sites of Transylvania*, Rev. Roum. Géogr./Rom. Journ. Geogr., 63, (1), pp. 41–51.

Muntele, I., Atudorei, I. (2011), *The end of a geo-demographic singularity: the catholics of Moldavia*, Analele Univ. din Oradea, seria Geografie, **1**, Oradea.

Muntele, I. (2000), *Geografia turismului*. Edit. Universităţii "Alexandru Ioan Cuza".
Muntele, I., Cimpoeșu, G. (2011), *The evolution of the road transport network in Moldavia: From geographical coherence to peripheral dependence*. Revista Română de Geografie Politică, **13**(*2*), pp. 210–228.
Muntele, I., Groza, O., & Ţurcănaşu, G. (2010), *Calitatea infrastructurii de transport ca premisă a diferenţierii spaţiilor rurale din Moldova*. Edit. Universităţii" Alexandru Ioan Cuza".
Nae, M.M. (2007), *La taille des logements, densités élevées et attachement résidentiel – facteurs limitatifs de l'habitat urbain bucarestois,* Human Geographies. Romanian Journal of Research in Human Geography, **1**, Edit. Universităţii Bucureşti.
Neacşu, N. (2000), *Turismul si dezvoltarea durabila*. Edit. Expert.
Neguţ, S. (2011), *Geografia Umană*, Edit. Academiei Române, Bucureşti, 614 p.
Neguţ, S. (2004), *Geografia turismului*, Edit. Meteor Press, Bucureşti.
Nicolae, I. (2005), *Antropogeografie. Geografie umană şi economică*, Edit. Universitară, Bucureşti, 184 p.
Nicolae, I. (2011), *Antropogeografie. O abordare diacronică*, Edit. Universitară, Bucureşti.
Nistoreanu, P. (2006), *Ecoturism și turism rural*, Edit. ASE, București.
Olaru, M. (2000), *Calea fierului banajean și hunedorean: produs turistic unicat în cadmi oferjei turistice românești*. Turism integrat: Banat și Maramures Edit. InterGraf, Recida, pp. 83–104.
Otiman, P.-I. (2013), *Împărţirea administrativ-teritorială, dezvoltarea regională în Uniunea Europeană şi România*, Romanian Academy Publishing House, Bucharest.
Păcurar, A. A. (2001), *Modele globale de dezvoltare economică*, Presa Universitară Clujeană.
Paraschiv, M. (2012), *Restructuring the industrial brownfield sites as a territorial resource for urban poverty alleviation in Bucharest, Romania*. Der Donauraum, **3–4**, pp. 525–536.
Petrișor, Al.-I., Petrișor, Liliana (2018), *Transitional Dynamics Based Trend Analysis of Land Cover and Use Changes in Romania During 1990–2012*. Present Environment and Sustainable Development. **12**. pp. 215–231. 10.2478/pesd-2018-0042.
Petrișor, Al.-I., Petrișor, Liliana (2021), *Recent land cover and use in Romania: A conservation perspective*. Present Environment and Sustainable Development. **15**. pp. 81–92. 10.15551/pesd2021151007.
Pop Grigore, P. (1984), *România. Geografia Circulaţiei*. Edit. didactică și pedagogică, Bucureşti.
Popa, I., Șerban, P.R. (2016), *Relațiile economice externe*, în România, natură și societate, Bălteanu D., Dumitrașcu M., Geacu S., Mitrică B., Sima M. (coord), pp. 429–450, Edit. Academiei Române, București.
Popa, N. (1999), *Ţara Haţegului – potenţialul de dezvoltare al aşezărilor omeneşti*, Edit. Brumar, Timişoara, 456 p.
Popescu, Claudia (2000), *Industria României în secolul XX. Analiză geografică*, Edit. Oscar Print, București.
Popescu, Claudia (2010), *Industrial clusters and regional development in Romania*. Human Geographies – Journal of Studies & Research in Human Geography, **4**(*2*).
Popescu, Claudia (2014), *Deindustrialization and urban shrinkage in Romania. What lessons for the spatial policy?*, Transylvanian Review of Administrative Sciences, **42** E, pp. 181–202.
Popescu, Claudia (2016), *After deindustrialisation: changing urban economy in the Danube valley region*. Human Geographies, **10**(*2*), pp. 99–113.
Popescu, Claudia (2021), *From command to market-driven economy: the changing role of manufacturing industries in Romania*. Human Geographies, **15**(*2*), pp. 127–146.
Popescu, Claudia, Neguţ, S., Roznovietchi, I., Suditu, B.A., Vlad, L.B. (2003a), *Zonele miniere defavorizate din Romania Abordare geografica*, Edit. ASE, București, 296 p.
Popescu, Claudia, Săgeată, R., Nancu, Daniela, Mocanu, Irena, Dumitrescu, Bianca, Simion, G., Damian, Nicoleta, Borto, Gabriela, Guran, Liliana, Persu, Mihaela, Dogaru, Diana (2003b), *Disparități regionale în dezvoltarea economico-socială a României*, Edit. Meteor Press, București, 261 p.
Popescu, M., Bălteanu, D., Popovici, Elena Ana (2003), *Dinamica utilizării fondului funciar în perioada de tranziţie la economia de piaţă,* Revista geografică, **IX**, Bucureşti, pp. 3–9.
Popovici, Elena Ana (2008), *Factorii principali ai schimbării utilizării terenurilor în România în perioada post-socialistă*, Revista geografică, **XIV–XV**, Bucureşti, pp. 123–128.
Popovici, Elena Ana (2010), *Piemontul Cotmeana. Dinamica utilizării terenurilor şi calitatea mediului*, Edit. Academiei Române, Bucureşti, 218 p.
Popovici, Elena Ana, Kucsicsa, Gh., Bălteanu, D., Grigorescu, Ines, Mitrică, Bianca, Dumitrașcu, Monica, Damian, Nicoleta (2018), *Past and Future Land Use/Cover Flows related to agricultural lands in Romania. An assessment using Clue-S Model and CORINE Land Cover Database*, Carpathian Journal of Earth and Environmental Sciences, August 2018, Vol. **13**, No. *2*, pp. 613–628.
Popovici, Elena Ana, Mitrică, Bianca, Mocanu, Irena (2018), *Land concentration and land grabbing: Implications for the socio-economic development of rural communities in south-eastern Romania*, Outlook on Agriculture, pp. 1–10.
Poruncia-Ipate, Alina (2012), *Rezervaţia Biosferei Delta Dunării. Potenţial turistic şi valorificare*, Edit. Transversal, Târgovişte.
Pula, B. (2018), *Globalization Under and After Socialism The Evolution of Transnational Capital in Central and Eastern Europe Emerging Frontiers in the Global Economy*, Stanford University Press.
Raboca, N., Ciangă, N., Păcurar, A. A. (2001), *Geografie economică*. " Vasile Goldiş" University Press.

Radu, B. (2016), *Aspects on the transformation and decline of mining communities in Romania*, Journal of Settlements and Spatial Planning, **7**(*2*), pp. 207–218.
Radu, B. (2018), *Industrial culture of former mining communities from Romania*. GeoScape, **12**(*1*).
Rey Violette et al. (2000), *Atlas de la Roumanie*, CNRS, GDR-Liberg, Reclus, Paris, 168 p.
Rostas, Z. (2012), *O istorie nefardată a reabilitării sociologiei româneşti,* Revista Transilvania, **11–12**.
Săgeată, R. (2004), *Modele de regionare politico-administrativă*, Top Form Publishing House, Bucharest.
Săgeată, R. (2006), *Deciziile politico-administrative şi organizarea teritoriului. Studiu geografic cu aplicare la România*, "Carol I" National Defense Publishing House & Top Form Publishing House, Bucharest.
Săgeată, R. (2013), *Industry-An Urban Developer. Case Study: Iron and Steel Industry in Romania*. Transylvanian Review of Administrative Sciences, **9**(*39*), pp. 160–179.
Săgeată, R. (2015), *A Proposal for Romania's Administrative Organization based on Functional Relations in the Territory*, Transylvanian Review of Administrative Sciences, **46** *E*, pp. 178–196.
Săgeată, R. (2017), *Recent changes in romania's ethnical structure. the Chinese minority – a case study*, Rev. Roum. Géogr./Rom. Journ. Geogr., **61**, (*1*), pp. 69–78.
Şerban P.-R. (2009), *Rolul agriculturii în balanţa comercială a României în perioada 2001–2005*, în revista Studii şi Cercetări de Geografie, Tom. **LIII – LV**, 2006–2008, Edit. Academiei Române, pp. 165–186, Bucureşti.
Șerban. P.-R., Tălângă, C. (2015), *Is social resilience an economic structure issue or just the ability of communities to cope with external stress?*, Journal of Urban and Regional Analysis, vol. **VII**, *1*, pp. 59–68.
Sima, Mihaela, Popovici, Elena Ana, Bălteanu, D., Micu, Dana, Kucsicsa, Gh., Dragotă, Carmen S., Grigorescu, Ines (2015), *A farmer-based analysis of climate change adaptation options of agriculture in the Bărăgan Plain, Romania*, Earth Perspectives, SpringerOpen Journal **2**:*5*.
Sirodoev, I., Schvab, A. C., Ianoş, I. L., Ion, F. (2015), *Rural towns in Romania: A reality asking for specific sustainable development policies*. Carpathian Journal of Earth and Environmental Sciences, **10**(*3*), pp. 147–156.
Snak, O., Baron, P., Neacşu, N. (2001), *Economia turismului*, Edit. Expert, Bucureşti.
Soare, Ionica (2007), *Turism: tipologii şi destinaţii*. Transversal.
Stoiculescu, R., Huzui, E. (2011), *Community's landscape identity, an instrument for development in continuity, the case of Bucharest Municipality and Sinaia Town*, Geographica Timisiensis, vol. **20**, nr. *2*, pp. 57–66.
Surd, V. (2009), *Geography of Settlements*, Presa Universitară Clujeană, Cluj-Napoca.
Tălângă, C. (1994), *Tipologia porturilor după riscul degradării potenţiale a mediului*, Conf. Reg. de geogr, pp. 296–300.
Tălângă, C. (2000), *Transporturile şi sistemele de aşezări din România*, Edit. Tehnică, Bucureşti.
Taloş, Ana-Maria (2017), *Population lifestyle and health in Ialomiţa County (Romania)*, Rev. Roum. Géogr./Rom. Journ. Geogr., **61**, (*1*), pp. 79–86, 2017.
Teodorescu, Camelia (2009), *Turism cultural*. Transversal.
Török, I. (2014), *From growth to shrinkage: The effects of economic change on the migration processes in rural Romania*. Landbauforsch Appl Agric Forestry Res **3/4** 2014(*64*)195–206 DOI:10.3220/LBF_2014_195-206.
Tufescu, V. (1994), *Momente hotărâtoare în dezvoltarea geografiei româneşti,* SC – Geogr., **XLI**, Bucureşti.
Ungureanu, A., Groza, O., Muntele, I. (coord.) (2002), *Moldova: populaţia, forţa de muncă şi aşezările omeneşti în tranziţie*, Edit. Corson, Iaşi, 243 p.
Urechia, N. V. A. (1902), *Un proect de geografie socială a Romîniei,* BSRRG, **XXIII**, *I*, Bucureşti.
Ursu, A., Chelariu, O.E., Stoleru, A.I. (2019), *From industrial to commercial, an eastern-european phenomenon. case study: Moldova, Romania*. International Multidisciplinary Scientific GeoConference: SGEM, **19**(*2.2*), PP. 847–854.
Urucu, Vaselina (1989), *Calafat. Particularităţi geografice ale dezvoltării unui oraş dunărean*, Studii şi cercetări de geologie, geofizică şi geografie, Geografie, **XXXVII**, pp. 79–85.
Velcea, I., Ungureanu, Al. (1993), *Geografia economică a lumii contemporane*, Edit. Şansa, 310 p.
Vlăsceanu, Gh., Ianoş, I. (1998), *Oraşele României*, Casa Editorială Odeon, Bucureşti, 494 p.
* * * (1969), *Judeţele României Socialiste*, Political Publishing House, Bucharest.
* * * (1983–2005), *Geografia României*, **I**–**V**, Romanian Academy Publishing House, Bucharest.
* * * (2000), *România. Mediul şi reţeau electrică de transport. Atlas geografic*, Edit. Academiei Române, Bucureşti.

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