RESPECT FOR SPACE IN LOCAL AND REGIONAL DEVELOPMENT

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Abstract: In a complex process where the profit becomes the main target, the short- and medium-term interests are a priority and can "kill" the respect for space. The article approaches a particular concept-respect for space- and its importance in the process of local and regional development, as well as the optimal insertion of the geographers in a correct space analyses and management.

Keywords: respect for space, local development, local space organization, territorial dynamics, regional developments, regional space organization

INTRODUCTION

Local and regional developments are among the most important challenges the present-day territorial dynamics has to face in the attempt to harmonize the interests of communities at varied scales and the potential of the space associated with them. If local development was a direct and concrete goal of the communities at that level, taken individually, regional development experienced periods of relaunch and stagnation. When EU started initiating programs of spatial development so that Europe may become more coherent and dynamic versus other states or groups of states, the researchers rediscovered the valences of regional development as well and tried to improve their conceptual arsenal and analysis methods. At the same time they approached politicians, the decision-makers in development processes.

Besides technical elements – expressed by models of built local and regional structures – a better knowledge and recognition of space values seems to be necessary for a maximum efficiency in elaborating development strategies and policies. Such an attitude allows an affectionate relationship between analyst and space, between the former and the decision-makers, and between the last ones and the inhabitants, respectively. In fact, it is the very value of a space that makes that space change from a simple container into an active element in the organization process at different levels.

Only following such a diagnosis that involves a perfect match between the researchers and the analyzed territory, and between the decision-makers and the space they temporarily administrate, specific responsibilities can be established concerning the actions undertaken and the way territorial reality is understood. What about the population as the most dynamical element? Has it no responsibility at all to the concrete action? Despite the appearances, in democratic societies it is incumbent on the population to be responsible either directly, by its capacity to select the best decision-makers, or indirectly by varied forms of participative democracy. The responsibility, no matter whose, is based on a superstructure element defined by the **respect for space**. Obviously, respect for space is a generic notion but it has special connotations if the tangible sphere of the analyses and proposals made is taken into account.

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RESPECT FOR SPACE AMONG FUZZY CONCEPTS

The affective relationship between the actors of space and space itself appears in a complex context of scientific concepts and development policies. However, the ground is rather slippery considering the system of axes of interests. First, there is an axis of individual interest with the group interest that intersects a second axis of the local interest with the regional one. Against such a background, with frequent distortions, it is very important to demonstrate that respect for space benefits from a series of fuzzy concepts that make up its genetic frame. Clarifying the relations existing among these concepts might prove to be beneficial for the future understanding of the way in which the respect for space is being born.

It is important for us, geographers, to make a distinction between these concepts circulating in the field of local and regional development and those connected with similar academic terms. The geographers should not give up so easily the concepts they do not agree with, at least for achieving analytical studies and extrapolations. Such concepts individualize them and their use adds some consistency and merit to the wide palette of sciences analyzing socioeconomic phenomena from the viewpoint of their spatial extension. Differences exist first between local development and regional development, then between local development and local space organization, and in the end between regional development and regional space organization.

This interaction having development on one of the axis and organization on the other creates the framework for nurturing respect for space. In a complex process where the profit becomes the main target, the short- and medium-term interests are a priority and can "kill" the respect for space. The actors in any community – and we should remember that – have a certain dose of respect for the inherited structures. It is rather a kind of *collective common sense*. However, the dynamics of the economic-social environment might determine either the stagnation at its very low level or its total lack. Therefore a coherent analysis of the respect for space may generate articulacy in taking decisions, moderation in action, altruism, and spatial compatibility of structures. That is the reason why an analysis, even a sketchy one, of the ratios among the four categories is a must for a correct understanding of the place the respect for space holds in territorial dynamics.

The ratio between local development and regional development is biunivocal, with reverberations on both infra- and supra-scalar spaces. As a principle, development means passing from a qualitatively inferior state to a superior one; as a rule, it is measured in economic, social and living-standard terms. It is the local development that creates the premises of individual development since it is much closer to the individual and the environment of his/her insertion. One can speak of special development at higher levels but if that is not perceived at a local level, then important dysfunctions exist along the circuit of territorial relationships and a great gap separates the envisaged image of a space and reality. Therefore, the development level of any territorial entity can only be assessed correctly in the light of its local development level.

Theoretically, local development is differentiated based on the individual experiences of communities, on the way in which they adapted historically to a space having certain resources, and cooperated with other "places". If a certain generalization degree of the development level has been reached, then a developed subregional or regional space is taken into discussion. However, the fact is that regional development can only be achieved by the contribution of the local; it emerges and is generalized as a function of promoted local, interlocal, and regional policies.

The local development is undoubtedly the only one that can reduce territorial gaps at a regional scale and consequently prompt regional development. Obviously, regional development policies are the genuine ferments for differentiated local development. An enough coherent policy may lead to the development of the local that cannot surpass certain inertia by local resources only. In other words, the ratio between these two types of development is reciprocal: one type supports the other.

Local development and local space organization represent two concepts the specialists use: the former has a dominant political-administrative connotation whereas the latter should have a dominant geographical and academic connotation. So that a common language can be used, the geographers immediately appropriated the local development term and included it in their own portfolio of concepts. We think that geographers should be more cautious when they give up their concepts too easily.

I consider that of the two concepts, the local space organization is more beneficial to geographers since it allows them to detach themselves better from the politics and to make an objective analysis; they can then integrate the values discovered in the language of the decision-makers and of other specialists such as economists, sociologists, or those working in public administration.

Although voluntaristic by its very definition, the notion of local space organization allows a more objective "photography" of local reality that can be later examined to discover the long-lasting elements in an evolution, those having a temporary character, and the entirely ephemeral ones. Such processes and mechanisms can explain why a "place" has got a certain "physiognomy" whereas another has not. Individualizing the types of classes of mechanisms permits drawing up optimal evolution models of a certain local space and finding the limits from which major dysfunctions can appear among its basic components. Local space organization can successfully integrate respect for space as a performance criterion in local development.

The ratio between **regional development and regional space organization** is similar although it is considered at different scales. We have to admit that regional development is not a proper term and it has not been created by geographers. The concept was born from the need to remove macroterritorial gaps and to make use of the competition advantage of the regions to ensure economic-social equity at the level of a state or group of states (Kuklinski, 1970). The concept has been developed by economists, sociologists, geographers, planners, politicians, and others to be implemented in territorial development politics.

Therefore, it is enough to remind the evolution of the region concept, but mainly of the relation between the dynamics of certain space components and territorial development in general. Thus, if Perroux succeeded in the 1950s to reveal the importance an industrial sector had in economic regional development, in the 1960s, J. Boudeville successfully demonstrated the validity of transferring the concepts Perroux had created at the level of territorial development. At the same time, the American School of regional geography, led by W. Isard, kept developing with emphasis both on its territorial sides and on conceptual nature (for instance, applying the general theory of the systems to the way a region functions). All the concrete analyses on the process of regional development revealed the available resources and means, and decision-maker's role, as well. Although there existed some indirect respect for space in assessing resources, in analyzing the reliability of implementation means of regional development, or in individualizing the decision-maker's role, that respect had never been explicitly individualized.

Can **regional space organization** be a concept both useful and specific to geographers? Why and how? By definition, the geographers are analysts, on the one hand, and generalists, on the other. Their ability to store diversity of information, to analyze and to interpret it has been demonstrated. However, they have frequently offered goods only they could produce, without noticing that their goods had morally long expired. The analyses – most of them focused on intuitive approaches – failed to produce *the* effervescence able to initiate rethinking of the study methods and involvement in the development processes.

Why should geographers discuss on regional space organization and attach then regional development to it? Because the regional space organization can be considered the geographers' strong point provided they realize that it represents a complex analysis, with predominantly academic connotations. They should undertake a diagnosis-analysis of the way the space structuring process of the respective region developed in time and a study of the main dysfunctions generated by the incompatibility of the parties. The structuring process determined a certain spatial organization of the region, measured in its specific and in the way the territorial gaps have appeared.

Building up the model of a region present organization, keeping that region's defining elements, is essential in appreciating the future changes the differential dynamics of its components prompts; the historical trend of their evolution should be also taken into account. It is very important to correctly grasp the defining components and to identify the possible options in a controlled development.

RESPECT FOR SPACE – DEFINITION AND CATEGORIES

Respect for space might be considered a performance criterion in the development process since it inspires caution, selective interventions, and longterm efficiency of the actions undertaken. The respect for space represents individual or collective common sense for its structures, awareness of its values and their use in the organization and development processes. Basically, it is a feeling that can be translated by proper behavior towards what the Nature has created in its interaction with society as concerns space.

Analysis of the respect for space, seen as a central variable in the development process of human society by optimizing the relationship with the environment resources and structures, reveals several categories:

a) **Respect for space values,** seen under their multiple aspects. Obviously, the space local values include both the intrinsic and position ones, considering the "hub" role played sometimes by some of those "places". That role is reveled in a rather complex context equally connected with the neighboring relationships and with the space components that reach a global scale.

Among space values, mention should be made mainly of its resources. They do not include the classical subsoil mineral resources and soil resources only, but some others such as: resources of natural environment, human resources, and other types of resources as well. But for human resources, many of the others have differentiated regeneration capacity. Therefore, some are regenerable over geological time, others over historical time, and some others over short intervals (the agricultural ones mainly). The respect for them should be differentiated, i.e. some of the resources have to be protected so that the future generations may benefit from them as well. Therefore, the connection between respect for space and sustainable development concept is rather close and turns to good account the moral aspects of both of them. In fact, a genuine sustainable development can only exist if respect for space becomes a central variable.

Respect for regional resources is relatively different from that at the local level: the resources are multiple and they exist in variable quantities that are distributed differently at an intra-regional level. The new attitude towards regional resources is dictated by the same approach, in which regional sustainable development has become a priority goal.

The human resources should be considered from the viewpoint of their quality, measured by the instruction level, by their capacity to generate knowledge, by innovation force, by the behavior that creates a performing economic, social, and cultural environment.

b) Respect for space also involves a certain **behavior towards the general configuration (structure) of the natural components,** meaning interest for the conservation of natural landscapes – born as a result of the numerous adaptation processes to the environment restrictions. Increase in demographic and economic pressures, but also in the exigencies of the communities (mainly urban) have aggressed the natural components and the natural landscape conserved in parks or grounds having varied uses outside the urban spaces proper. This general phenomenon is mainly obvious in metropolitan areas, where residence-, industrial-, or service-type investments keep increasing.

Lack of coherent policies of metropolitan or urban development favors the extension of the built spaces of the "oil spot" type. This type of organization of the local is rejected today by the countries that experienced early and very rapid urbanization (Germany, Great Britain). The most recommended development of the "big Local" is the polycentric one that enhances the quality of the land between the metropolis, for instance, and the new centers (poles) for a sustainable development.

In order to preserve the values of the natural landscape or of its components, the communities have adopted restrictive legislations that also impose certain respect for the values inherent in natural parks, reservations, or natural monuments.

c) The respect for configuration of the cultural landscape is the result of successive transformation of the natural environment, under the pressure of demographic growth and of extensive industrial development. The space built all along history frequently includes elements of high architectural, spiritual, and historical value so that their cultural valences can be productively turned to good account. Such values that bear the hallmark of the historical period they had been built in, take in more than their physiognomy can express. That is the reason why treating such spaces with due respect by all the local and regional actors is a must. Cultural values are sometimes acknowledged by law and numerous objectives and built areas have been declared spaces of great cultural-historical value.

d) **Respect for reality diversity.** Keeping and increasing diversity of reality is one of the sustainable development desiderata. Even if the diversity aspect is rather exaggerated, the militant geographers have to be fervent supporters of diversity of the local or regional territorial systems. Whereas local diversity might be disputable, it is extremely important to support it at a regional level since it can be a source of development.

e) Respect for the future of "local" and "regional". Space actors at all levels have to support permanently the sustainable development in the respective territorial entities, i.e. they must protect the resources able to serve future development and the administration models that can improve the next stage.

BUILDING RESPECT FOR SPACE

The main elements having a decisive contribution to fashioning respect for space could be represented by education, passing along values and good practices from one generation to another, the feeling of belonging to a "place", overlapping individual interests with the local and regional ones, awareness of the identity effort and of the ability to imitate and to borrow values.

Education is one of the main components of fashioning respect for space. Education offered to population both in schooldays and along their lives, and also media should emphasize the importance of building and developing respect for space as an important element of civics. Therefore, the geography, history and other classes in the curricula of secondary and high schools should enable the teachers to instill into their pupils a feeling of attachment to the values of space, to the inherited natural and built structures.

It is only then that the young people are able to realize that everything that surrounds them is the result of thousands and tens of thousands years of interaction between nature and society, the result of an adaptation process that has experienced numerous syncopes. When those pupils become actors with territorial force, they will be much more careful with what they have received and will try to fashion more rationally the space they live in. Such a behavior at an individual level can generate a collective attitude, able to temper permanently the territorial actors prone to follow their interest only and to neglect the collective and global one.

Besides the general education, above presented we need to add the education received in the process of professional/vocational training. The acquisition of knowledge strictly related to the training as a specialist needs to be underpinned by a general package of knowledge among which the one related to the attitude towards the space should weigh very little.

An important aspect of the education concerns the study syllabus about the specialists' training in the field of the local and regional administration. A territorial manager is not entirely as such should he not be overloaded with a minimal knowledge concerning the respect for the space which he manages. Any manager ensures a space management on a an infinitesimal time line and realizes that the initial inherited structures are the result of a stream of continuities and discontinuities in its dynamics. Overall, the inherited configuration is historically validated and, therefore any further intervention needs to be done with caution. Practically, a space's manager should know it thoroughly and be able to forecast the future dynamics of the interactions to the benefit of the communities on a long term and extremely cautious in their actions. It will not only make him/her to evaluate everything through the angle of momentary financial balances but also to define and apply a coherent vision concerning the sustainable development of the respective space.

The passing on of values from generation to generation represents another equally important aspect. This passing on materializes in the common sense towards the space values. Furthermore, the good practices in terms of space planning/management represent components with proven effects in the respect making for space. These values are the result of the validation of solutions found in time to the various problems emerged in the process of the human society development.

It is obvious that very frequently the relativity of the notion of value is submitted to many debates. Which values are perennial, if they exist and which are short-lived. The perennial values can be found in the basic elements of the local regional or national space planning. Theoretically they disappear along with the people which has generated them. Opposite to these values, the short-lived ones can't be included in the category of values representing only spatial configurations temporarily imposed and fostering certain territorial processes but without ennobling the respective space.

The respect for space means to raise the population's awareness about the complex benefits, including the moral ones, the preservation of the spatial planning diversity as a historical adjustment means to the other values of the environment.

The feeling of appurtenance to a place or a region can constitute another generating element of the respect for space. This feeling is defined by a certain amount of affection and resides in an individual's attachment relation to the place, land and region where he/she lives. The attachment is the outcome of integrated multitude of lived experiences as a result of the real relations with well-defined spaces, of the mental representations of places and people, of their positive prevalence. The positive prevalence is essential in the creation of the attachment towards the space indicating the individual's and communities' perfect integration in the environment as well as the moral and material satisfaction concerning this integration.

The overwhelmingly pleasant remembrance-loaded places enhance the individual's and communities' caution related to potential intervention in space. Sometimes the spatial organization and even spatial planning projects protect certain places, expressed in the toponimy and local landscape.

The optimal intersection of the individual interests with the local or regional ones represents another coordinate with impacts on the respect-making for space. There aren't any interests, regardless of the scale to which we debate, with no spatial projections. A convergence of these interests at different levels is the safe road to a space's rational management/planning and to turn to good account its resources. When there is a great clash between these interests, surely the intervention actions are chaotic and its spatial effects disastrous.

The interests' convergence implies a mutual correction of the actions on space. It is often known that personal interests to not take into consideration fully the collective ones and sometimes the latter affect the former. Nonetheless mutual corrections which take place from the projects' definition up to their implementation are reflected in an as correctly attitude as possible towards the space.

The demands of the local and regional communities toward their own existence bring to the attention the importance of resources, mainly the ones difficult to regenerate as well as the real values of the space. In the process of the historical evolution the communities' demands have multiplied and the standards imposed by the social-economic processes have changed permanently. The demands' diversification was accompanied by a re-assessment of the space resources, including the ones which seemed unlimited.

The local and regional communities' sustainable development including the respect for space can be considered a target as well as a demand. In other words we refer to a self-imposing of restriction in order to maintain the space's inestimable values unaltered: from the natural to the man-made ones. The competition and cooperation among the communities of different levels implies a more or less conscious effort to maintain and consolidate their identity. This effort consolidates the respect for space as it, besides the population's creation ability, represents authentic identity values.

The identity preservation and its consolidation in a globalizing world constitute important resistance strengths of the communities and the identification of niches meant to help an efficient insertion into these global-directed flows.

It is obvious that in the genesis of the respect for space the behavioral imitation can be a central variable. The very good results obtained by other communities in the development process, reasonably modeling space prompt to caution, rationality and even affective elements. Such practices and compatibility procedures of the community with the space where they live are examples which will be copied by imitation by other communities found on the lower scale of development.

THE RESPECT FOR SPACE AND THE LOCAL AND REGIONAL DEVELOPMENT POLICIES

The advantages of the distinction between the local and regional space is concretized in the correct understanding of the importance of this attitude for a decent valorization of the two space types. Thus, the respect for the local space values is found in: maintaining its diversity, which leads to complementary resources and a functional integration of the local at upper scales; the force of development and mobilizing the local resources by stating the place identity; stating the local as a source of creation and innovation. Meanwhile, the respect for the regional space values can occur by: imposing the regional values in globalizating context; explaining the regional values as a result of the integrativeselective reunion of the local values; defending the local values, as a result of the global resonance that regional values must have.

The respect for the space and its values can be found in all phases of elaboration and implementation of the local and regional development policies. Supposing that this aspect was considered when defining the development strategy at the level of various territorial entities, its role increases and becomes more evident during the next phases of establishment and implementation of territorial policies.

Implementation of the local and regional development policies is facilitated by a policy based on respect for space. Due to this, defining policies at these levels must consider elements of territorial projection development philosophy, but also elements of pragmatic nature, meaning a profound diagnosis of territorial structure, behaviour of human communities and dynamics of insertion environment of a certain type of development.

Policies of local and regional development, based on the respect for space, must consider the positive aspects of such a manner of development projection and implementation. Among these effects, we mention:

-detection and implementation of perennial values in future development; a perennial value is that imposed in historical development, demonstrating its identitary and creative force

- optimal adjustment of the space components to new demands; society dynamics and insertion environment of a territorial structure does not imply isolation, but on the contrary, a permanent adjustment to the new interaction types imposed by such an environment. Communities' creative capacity must be reflected in a structural and functional permanent adaptation to "noises" caused by neighboring territorial entities or by the larger territorial entity to which it belongs; - effective use of production processes, due to structure regulation and intensity of the input and output flows at the level of constituting structures of each local and regional entity; economic effects result, capable of sustaining more complex processes for future development;

- proper demographic dynamics and development of human capital quality; respect for the space implies avoiding depopulation, as well as the process of demographic saturation, through an evolution of the demographic indicators following the general development. More than that, the respect for the space implies a special attention regarding the quality of territorial actors, of decisionmaking factors and population, but from this point of view the programs of education and vocational training, including life-long learning type are permanently correlated to the development demands;

- improvement of the territorial image of local and regional by the of implementation proper policies of urban development and regional planning. Based on the respect for space, these policies change the local and the regional in attractive spaces, with visible effects in investments attraction in efficient sectors. Funds raising for various economic-social and cultural sectors must concretize in rational space planning;

- stimulation of technical and managerial innovation can be stressed by the existence of respect towards space values. It is enough to prospect the impact this respect can have upon the local and regional territorial management, upon the creative processes in the field;

- sustaining the export of territorial image, through the good practice diffusion and local and regional management.

When implementing the policies of local and regional development policies, must consider the great vulnerability of the respect for space. This vulnerability results from a multitude of congruent elements for the diminishing and even disappearance of the respect for space. The vulnerable character of this feeling is given by the fact that its importance is little known in the policies of sustainable development of communities. Therefore, the lack of knowledge of the real space values and mainly the means through which it can become an ally in the development projects represent the main danger of destroying or reducing the dimension of the respect for the space.

Another element constitutes the managerial incapacity along with the decision factors ignorance towards space and its values. The decision makers, territorial mangers, represented by the people in administration, judging frequently the territorial processes through typical economic components, do not lay value on space and on its huge potential. It is about the direct, material resources it has but also the indirect resources, defined by position, structure and affective relation between community and space.

The respect for space can be deleted by the destructive effect of minor group interest, that aim at the achievement of huge profits in a short time. A relevant element constitutes the destruction of forests in large areas in Romania, by chaotic forestry exploitation, but at a large scale. The lack of respect for the space, in these cases is obvious and against the sustainable development of the respective communities. These couldn't make the distinction between group interests and the real interests of communities, and the consequences are and will be disastrous.

As a conclusion, this first point of view regarding the importance of the respect for the space in the process of local and regional development, must be understood as a reflection-message, in a more complicated process of optimal

insertion of geographers' preoccupations in correct space analyses and management. The respect for the existent structures of each space occurss in cautious interventions, stimulation of effects determined by hypothetical actions, as well as a succession of repairing interventions in case of high unbalances between the natural and man-made components of space.

BIBLIOGRAPHY

- ARTOBOLEVSKIY, S., (1997), *Regional Policy in Europe*, Regional Policy and Development Series 11, Jessica Kingsley Publishers, London and Bristol, Pennsylvania, 182 p.;
- BAILLY, A.S., GUESNER, B, PAELINCK, J.H.P., SALLEZ, A., (1988), Comprendre et maitriser l'espace ou la science régionale et l'aménagement du territoire, G.I.P. RECLUS, Montpellier;
- BERQUE, A., (1989), Espace, milieu, paysage, environnement, în Bailly A., Ferras, R. și Pumain (ed.), Encyclopedie de geographie, Economica, Paris;
- BOUDEVILLE, J. R., (1965), Les espaces économiques, P.U.F., Paris;
- BRUNET, R., (1967), Les phénomènes de discontinuité en géographie, CNRS, Paris;

BRUNET, R., (1990), Les territoires dans les turbulence, RECLUS, Montpellier;

- COCEAN, P., (2002-2005), Organizarea timpului geografic, Terra, an XXXII-XXXIV (LII-LIV), p.78-80;
- DAUPHINE, A., (1979), Espace, région et système, Collection Géographia, Economica, Paris;
- FRANCOIS, J.C., (1998), Discontinuités territoriales et mise en évidence de systèmes spatiaux, L'Espace Géographique, 1;
- HIRSCHMANN, A.D., (1985), The Strategy of Economic Development, New Haven, London.
- HUBERT, J.P., (1993), La discontinuité critique. Essai sur les principes a priori de la géographie humaine, Publications de la Sorbonne, Paris, p.11;
- IANOŞ, I., (1987), Orașele și organizarea spațiului geografic. Studiu de geografie economică asupra teritoriului României, Ed. Academiei, București;
- IANOŞ, I., (2000), Sisteme teritoriale. O abordare geografică, Editura tehnică, București;
- IANOŞ, I., (2003), *Territorial Image and European Spatial Cohesion*, in "Europe between Milleniums. Political Geography Studies (eds. Al. Ilieş şi J.Wendt), Editura Universității din Oradea, p.11-20;
- IANOS, I., HELLER, W., (2006), Spațiu, economie și sisteme de așezări, Editura tehnică, București, 331 p.;
- KUKLINSKI, A. R., (1970), Regional Development, Regional Policies and Regional Planning, Problems and Issues, Regional Science, 4, p.269-278.;
- LAJUGIE, J., DELFAUD, P., LACOUR, Cl., (1979), Espace Regional et Amenagement du territoire, Dalloz, Paris;
- LLOYD, P.E., (1976), Cognition, preference and behaviour in space: An examination of the structural linkage, Economic Geography, 52, p.241-253;
- MAC, I. (2003), Stiința mediului, Europontic, Cluj-Napoca;
- PERROUX, Fr., (1950), "Les espaces économiques", Economie Appliquée, nr.1, p.224-244;
- PERROUX, Fr., (1955), Economie et espace, essai d'integration du facteur spatial dans l'analyse économique, SEDES, Paris;
- PORTER, M., (1990), The competitive advantage of nations, Macmillan, London;
- SACK, R., (1985), *Human territoriality: a theory*, Annals of the Association of American Geographers, 73, 1, p.55-74;
- STOREY, D., (2001), Territory, Prentice Hall, Harlow, 2001;
- STORPER, M., (1997), The Regional World. Territorial Development in a Global Economy, Guilford Press, New York, p. 261;
- UNGUREANU, Irina, (2003-2004), *Sur quelques repères de la qualité de l'environment*, An. şt. ale Univ. "A. I. Cuza" Iaşi, t XLIX-L, p.116-125;
- WALTER, Isard, (1960), *Methods of regional analysis, an introduction to regional science*, J. Viley, New York.