

BISTRIȚA ARDELEANĂ CATCHMENT AREA – COORDINATES OF STRATEGIC LAND MANAGEMENT

S. F. FONOGEA¹, V. GLIGOR¹, C. N. BOȚAN¹, I. H. PAVEL¹, CS. HORVATH¹,
CRISTINA BOLOG¹, V. PUIU¹

ABSTRACT. – *Bistrița Ardeleană Catchment Area – Coordinates of Strategic Land Management.* The approach of “creation and execution” / designing of this territorial cut-out of basin type, in the paradigmatic context of the durable development, is subordinate to an (almost)exhaustive investigation of the vocation and potentiality of this area in terms of geographical and spatial organization of the territory.

There may be multiple reasons to justify the existence of a paper which approaches this territory in an integrating and prospective manner. First of all, this area has an “identity card” type of evidence, at the level of the collective memory of the county’s inhabitants. Even if many contradictions multiplied along the years, nuances and specificities have been imposed, there is a filiation and a common territorial manifestation for the population and the settlements in this area. Secondly, the building of the settlements from Bârgău area and their later historical evolution was accomplished in a close interdependence, therefore the premise of development cannot be achieved outside the association (the access to different financing sources is easier when partnerships are built). Thirdly, the challenge of developing a study that shows the real prospects of developing a territory from the Bistrița Ardeleană catchment area was motivated by subjective arguments, and the love of nature and environment played a key role in the effort to complete this action.

Keywords: *connectivity, strategic land management, catchment area, Bistrița Ardeleană.*

1. INTRODUCTION

The land management strategy of the territory within Bistrița Ardeleană catchment area emerged onto the support of the following logical “construction” of the research approach:

- Identifying the problems;
- Identifying the dysfunctions arising from the problems;
- Proposing measures in order to fix this dysfunctions;
- Outlining clear measures arising from these proposals.

¹ Babeș-Bolyai University, Faculty of Geography, 400006, Cluj-Napoca, România,
e-mails: sfonogea@geografie.ubbcluj.ro, viorel.gligor@geografie.ubbcluj.ro, cbotan@geografie.ubbcluj.ro,
horatiu.pavel@geografie.ubbcluj.ro, csaba.horvath@geografie.ubbcluj.ro, cpatrascu@geografie.ubbcluj.ro,
viorel_puiu@geografie.ubbcluj.ro

The problems and dysfunctions prior defined as conclusions, the strategy sketch involves *the creation of a vision regarding the development (main strategic target)*, seconded by *setting sector strategic targets*, while proposing an action plan aims at identifying the area that rise problems in terms of spatial evolution, identifying the intervention areas, selecting the areas that have priority of intervention.

Paradigmatically dependent of the sustainable development, ***the vision summarizes the idea of an optimum relationship between the resources and their exploitation in order to design the investigated territory of the natural geometrical space of a balanced, harmonious and pan-European evolution.***

Achieving this goal lies with the explicit establishment of sectorial strategic objectives, while refining the proposals and measures to achieve them. In this regard, the strategic planning of the analyzed catchment area has to be based on a few clear directions (sectorial targets):

- A. *Extend and improve the territorial infrastructure (transport);*
- B. *Strengthen relations within the system of settlements;*
- C. *Supporting the tourism;*
- D. *Vary the economical activities in rural areas, focusing on harnessing the local specific;*

Some of the initiatives may be supported by the local and county authorities; as for others, the government input is needed. Partnerships of the local economical entrepreneurs and the association of the communal authorities would be required, also the founding of micro-regional associations.

2. OPERATIONALIZATION OF THE PRIORITARY SECTORIAL TARGETS

Furthermore we will discuss about three of the five targets which are considered imperative in the strategic settlement process. These three targets are considered intrinsic vectors of the durable development.

2.1. The extension and the improvement of the territorial infrastructure (transport)

The inventory of the state and quality of the road and rail infrastructure revealed functional inconsistencies (lack of functional territorial expressions). The catchment area which was investigated is longitudinally crossed by the main road axis that connects Transylvania to Bucovina.

In view of the fact that the linear arrangement of the rural settlements in the form of an axis is carried out mainly along the transport passage (communal centres except Bistrița Bârgăului), there is a high connectivity settlement system attached to the mainstream of energy and information transiting this area.

The issues which arise are related to the links within the communal and inter-communal settlements, as well as the links of the neighbouring catchment areas (e.g: The basin of Ilva). These issues may impose some restraint systems, including the transit of the settlement system by this transport road.

The solution of an alternative link as a highway that would avoid crossing the localities from Bârgău and would facilitate the access to these localities may represent a better solution than the territorial planning of transport flow between the two historical provinces.

The links within the intra and inter-communal systems are accomplished through a radial-convergent, undersized qualitative, non-connected road network.

The type of the system layout of the settlement basin system, the links between the villages belonging to different communes, is achieved mainly through the main transport axis, with a few exceptions:

- The link between Colibița and Mureșenii Bârgăului, accomplished through county road 173D;
- Dorolea - Valea Poienii - Rusu Bârgăului, through communal road 6B, really hard to be used;
- Dumbrava and Strâmba, through communal road 6A (which connects to DJ 172C);
- Dumbrava and Rusu Bârgăului, through communal road 6C.

The links to the neighbouring catchment areas are accomplished through DJ 172B - Unirea-Slătinița-Nepos; through the county road 172C - Josenii Bârgăului-Strâmba-Ilva Mică; through the county road 172G - Cușma-Satu Nou-Orhei Bistriței.

This system of links, convergent, relatively self-sufficient emphasises the dependence of the villages to the communal control centre. Strengthening this type of relationship can have positive connotations, outlining strong cohesive communal systems, but the difficulty of trans-communal relations and trans-basin relations emphasizes the degree of economical isolation of the villages within the communal settlement systems.

The local and county authorities have more than once initiated projects of rehabilitation and modernization of the roads (permanently postponed); the technical condition of the road network, except E576, is really poor, and does not meet the minimum requirement for the smooth running of car traffic. It is the same situation with the county roads that connect the villages of the catchment area under analysis: DJ 172G, 173A and 173D, totally inadequate in terms of quality of the driving surface, and the same situation with the roads that make the trans-basin connections to Nepos and Ilva Mica. The technical state of the communal roads is even more dramatic.

The railway links are accomplished also longitudinally, the last railway station being Bistrița Bârgăului. This link was heavily exploited before 1989, but it started to lose its meaning once the commuting decreased and the transport means became more comfortable and sometimes even more elegant: people's own car or the bus. Even if the train is obsolete and the railway stations are not properly maintained, we consider that the railways links should be reinforced; first of all by setting agreeable politics regarding the train ticket cost, and secondly by starting an initiative to modernize the railway infrastructure.

The links through the railway within the catchment area of the Bistrița Ardeleană date since the end of the 19th century. There is an emotional component in this aspect (not only functional) related to tradition which justifies the efforts to resuscitate this type of link. Apart from the normal gauge railway, the narrow gauge railway also existed here.

- The narrow railway Prundu Bârgăului-Dorna Helgei-Vatra Dornei (34 km long) was functional between 1914-1935, on the route: Vatra Dornei Băi, Roșu, Căndreni, Coșna, Poiana Stampei, Dorna Bârgăului, Dornișoara, Dorna Mica, Șendroaia, Mănăstirea Fântânele, Măgura, Tihuța, Cărare, Cicerea, Valea Străjii, Mureșenii Bârgăului, Tureac, Macaz, Tiha Bârgăului, Prundu Bârgăului. Its role was deminished once the normal gauge railway was finished and started working: Ilva Mică-Vatra Dornei;

- The railway Bistrița Bârgăului-Colibița-Mița, 18.2 km long;
- The railway Susenii Bârgăului-Tiha Bârgăului, 6 km long.

Even though these days everything is quantified in terms of economical lucrativness, if possible in the shortest time, we consider as mercantile the vision driven only by the pecuniary component. Regaining values related to specificity, corroborated with long term strategic visions, may constitute the premises to ensure an appropriate environment to durable development.

2.1.1. Measures

At a major level, two clear directions should be taken: improve the railway and road transport infrastructure and increase the connectivity degree in the basin and trans-basin context (increased accessibility and quality). The last goal can be achieved by reclassification of some roads (including them in a higher class and treating them as such), by elaborating new road transport alternatives, and also by reinventing the narrow gauge railways (as seen in figure 1). Subordinate to these two directions, attention should be paid to increasing the use of public transportation.

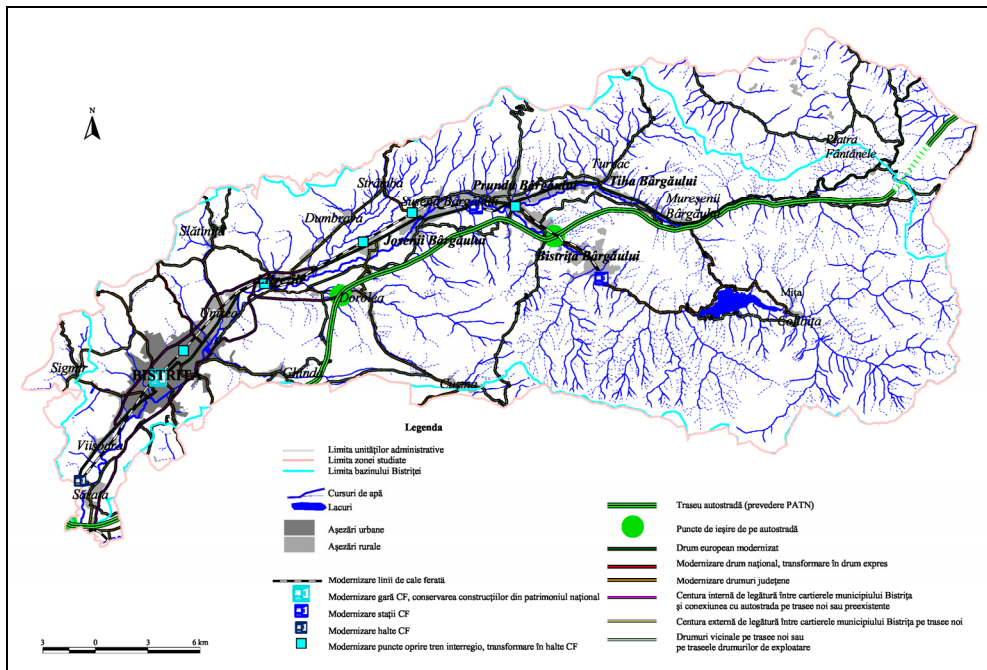


Fig. 1. Proposals to develop and modernize the transport network

One of the most important measures is related to *the accomplishment of the major infrastructure projects, foreseen in PATN, section I, Transport networks*, as follows:

- highway A 1.14. Petea – Satu Mare – Baia Mare – Mireșu Mare – Dej – Bistrița – Vatra Dornei – Suceava (according to PATN, section I, Transport network).

The local and county authorities must work together in order to motivate the importance of determining the final route of the highway, within the administrative territory of Bistrița and of the other communes of the basin in discussion.

In the context of major infrastructural achievements it is necessary to *build the south ring road: Sărata-Unirea, for Bistrița (Cocean, P. et al., 2010, p.124)*. The authors motivate the priority of this step for the development of Bistrița as follows:

- Increases the economical and urban value of the south suburban area of Bistrița;
- Determines the axial development of Bistrița on the east-west component;
- Increases the communication potential for the new industrial park type sites, proposed in the south-west of the town. This aspect represents one of the basic requirements to attract investors in the industrial park;
- Contributes to shape the new combined transport terminal in Sărățel;
- Supports the transfer of the traffic in Bistrița to the highway A14, on the western component [...];
- Leads to shaping a complete ring road [...]” (ibid.).

Upgrading and rehabilitation of the county roads through asphaltting and landscaping of gutters to collect rainwater, in line with the European requirements:

- DJ 172 B - Unirea-Slătinița-Nepos, with the role to increase the availability from the belonging village Slătinița to Bistrița, but also the strengthening of the link with the Someș Basin;
- DJ 172 G - Livezile-Dorolea-Cușma-Satu Nou-Orheiu Bistriței, with the role to streamline the access of the inhabitants from Cușma and Dorolea to Livezile and Bistrița, but also in the scope of the trans-basin interconnectivity.
- DJ 172 C - Josenii Bârgăului-Strâmba-Ilva Mică;
- DJ 173 D - Colibița-Mureșenii Bârgăului, with the role to remove from seclusion the future tourist resort of local interest, so that the tourists that cross the catchment area in discussion do not have to avoid virtual access to this area;
- DJ 173 A - Bistrița Bârgăului-Colibița, with the role to facilitate the access of the tourists travelling from Bistrița to Colibița, but also to facilitate the decent movements of the inhabitants of this area to Prundu Bârgăului and furthermore to the centre of the county municipality.

Upgrading and rehabilitation of the county roads through asphaltting and landscaping of gutters to collect rainwater, as follows: 6 C - Dumbrava-Rusu Bârgăului, 6 A - Dumbrava-Strâmba, 6 B - Rusu Bârgăului-Valea Poienii-Dorolea, 5 B - Piatra Fântânele-Dornișoara, 5 A - Piatra Fântânele-Ciosa.

These initiatives are desirable in order to avoid overcrowding of the county and national roads, facilitating the access of the farmers inside their properties and preventing the occurrence of traffic accidents.

Reclassification of vicinal and forest roads, by changing their status to communal roads. Here we consider appropriate the strengthening of the inner and trans-basin relation and also the shaping of some roads for tourist circulation, by improving them as communal routes: Piatra Fântânele-Ciosa -Tureac, on one side and Piatra Fântânele-Ciosa-Lunca Ilvei, on the other side.

Arranging the vicinal roads and the forest roads, also in order to enhance inter and trans-basin connectivity: Prundu Bârgăului-Leșu, Tureac-Lunca Leșului, Bistrița-Livezile, Livezile-Valea Poienii-Josenii Bârgăului-Prundu Bârgăului, Bistrița Bârgăului-Mureșenii Bârgăului (on the left side of the Bârgăului valley), Josenii Bârgăului-Prundu Bârgăului (on the right side of Bistrița valley), Mureșenii Bârgăului-Piatra Fântânele and furthermore to the Bâta Lui Ieremia (Dorna basin), Ghinda-Livezile, Ghinda-Cușma, Cușma-Bistrița Bârgăului, Slătinița-Nepos, Livezile-Slătinița-Dumitra, Piatra Fântânele-Lunca Leșului.

Upgrading the railway sector Bistrița-Bistrița Bârgăului to the European standards of comfort and safety, including the rehabilitation of the railway stations on this route. The purpose is to decently serve the commuters from Bârgău, but also to facilitate the access of the weekend tourists to Colibița and Piatra Fântânele, contributing to the road traffic flow of DN 17 and DJ 173 A.

Subsequently to his goal, we consider appropriate *the reinvention of the narrow gauge railway*, including the original locations and routes. The experience of tourist-oriented areas in which they operate efficiently, may constitute a starting point in accomplishing this approach.

2.2. Strengthening relations within the system of settlements

The diagnosis made in the first part of the paper nuances, among other things, setting up a set of dependency relation within the system settlement in discussion. Apart from the administrative dependency relation, specific of the communal systems, we paid more attention to the inter-communal relations, including the trans-basin context. The approach was motivated by the need to highlight the possible forms of association, coagulated around the over-communal control centre.

Considering the facility of the links with the county residence centre (for most of the villages in the investigated territory), the dynamic of the convergent flow to Bistrița prevents, apparently, the obvious disconnection of an intermediate control centre, to redirect part of it. Despite this, it remains palpable – historical and empirical, the status of over-communal centre Prundu Bârgăului.

Even if the economical transformations of the post-revolution period had the role to undermine the privileged status of the village mentioned above, the higher standard facilities of the health, education, services (e.g. legal) have the purpose to confirm and consolidate the empiric perception of this reality.

This plea was made in order to restore a balance established historically, so that we don't dilute the identity of the Bârgău villages that gravitate around Prundu Bârgăului. The identity coagulation around a recognized, respected and assumed centre of the local community represents a prerequisite in the process of legal association in accessing financial resources.

There are at least two rural subsystems that stand out in the settlement system from the Transylvanian Bistrița basin: the "Bârgău" subtype and the "German" subtype. There is another subtype we can mention, which is subordinate from the administrative point of view to Bistrița and Livezile, the interface subtype between the two mentioned above (villages that are not integrated in the two types mentioned above).

The subtype "Bârgău" considered to have a consolidated identity and includes the villages from the Bârgău Valley.

The “German” subtype, located near Bistrița (old medieval burg), includes villages belonging to the municipality on one side: Viișoara, Unirea, Slătinița, and on the other side includes villages belonging to the commune that unites the municipality to the villages from the Bârgău valley: Livezile, Dorolea.

Making a model of cultural association that evokes patterns of affective affiliation within the German population, may constitute a starting point of a virtual strategy of composing and decomposing the identity at basin level.

The belonging villages: Sărata, Slătinița, Sigmir, have a deep rural mark, the first two villages being situated at a considerable distance from Bistrița.

2.2.1. Measures

- Increasing the degree of dependency of the Bârgău villages to the over-communal centre Prundu Bârgăului, by the decentralization of certain administrative positions and services concentrated at the level of Bistrița City;
- Consolidating the transport infrastructure system as described below, in order to multiply the connectivity means in the basin context;
- Accomplishing economical partnerships and cultural associations within the communes from the Bârgău area with the purpose to efficiently promote the common values, to consolidate the identity and acquire funds.
- Promote the cultural German model and use this model at county, regional and national level, through tourist promoting.
- Achieve an identity cluster by associating two cultural models for the purpose of common promotion.

2.3. Support the tourism

One obvious option for the balance economical development of the entire area is promoting the tourist activities. The interest to develop this activity sector is motivated by the diversified, but underestimated offers, which have an intrinsic potential that is extremely attractive from the improvement point of view.

The organized tourism in the area in discussion is related to Slătinița and Colibița. These villages functioned as spas since the end of the 19th century, Slătinița lost this function gradually. Colibița maintained and confirmed this status (children camps were organized here in the communist period), even if it was never declared a tourist place of county interest (local).

The mineral water resources from Sărata and Slătinița are mineral springs irregularly distributed inside the basin may be the start of the tourist locations for balneary purposes. Colibița and Pietra Fântânele are the frame of this tourist project for balneary purpose and they provide a diversified range of tourist alternatives.

The cultural tourism is another direction worth mentioning. In this case there is a double perspective. On one hand, the cultural heritage of the medieval architecture – the architectural vestiges of urban and suburban territories of medieval original, well preserved, can be places for those who want to recreate the historical environment of those times and the cultural traditions of the Bârgău valley (clothing, customs, food, etc), on the other hand.

In the first case, we have to give special attention to creating products that value the affective nostalgic component of the descendants of the German population that emigrated from these locations. In the second case the offer is addressed to the nostalgic of the rural traditional environment.

The offer has to be motivational for the both parties: the recipient on one side and the rural community on the other side (rediscover the identity):

"A few years back I had the opportunity to take part in a series of shows that commemorated 60 years since the emigration of the Germans from North Transylvania. Hundreds of Germans from all over the world that were originally from the city and the villages around gathered in Bistrița. Most of them were called by the memories of their youth years, the places where they lived as children and the voice of the ancestors. It was probably the last time that the evangelical church was full of people. After they took communion they marched through the city in brass band music, and when they reached the cemetery they could hear the music of the choir singing the German hymn „Transylvania, blessed country of abundance and strength”. The elders were overwhelmed by emotion. The young – children and the relatives of the elder – who were paying attention to the singing, a bit disoriented and more neutral than the others that did not understand the lyrics were watching the elders burst of emotion and feeling. Then I thought how the elders could determine the young go to their ancestors lands, and get them close to the emotion of those places. What would be the values that would stir their interest, how much of the old could be attractive to them, apart from the remains of their ancestors.

Travelling through the former Nösnerland territory, one cannot but see the remains of the methodical community organization that slowly changed its appearance. The new inhabitants of the place have unwillingly developed an ambiguous identity, that of an immigrant in one side and that of an inhabitant of his country in political and administrative terms. The German location is foreign to them, and the effort to adapt to their own way of life lead to reshaping the architecture and the living conditions.

As a consequence, if the elder German would try to lead the young in a family environment that he keeps in his memory, the odds of making the young vibrate to this lost world are really diminished. On one side, this world is gone, and the young, who was brought up in a totally different cultural environment would not be interested in such a perspective. The changes in the ethnic and social structure did not lead to the disappearance of the space organizing of this community and the proof still exists around the area, rendering the territory an identity built in time. This identity was not the creation of any of its components, it was the creation of the interactions and influences, of the interference of people, community, space.” (Corneiu Gaiu, www.medievistica.ro)

2.3.1. Measures

- Value the tourist resources of the area and making it individual in relation to the territorial units with similar extensions and functionalities nationally and internationally, through the continuous development of prospecting and handling of the attractive resources, along with the tourist promoting and branding;
- Diversify the tourist activities and make them lucrative;
- Develop the tourist infrastructure and interconnect the components from the primary and secondary tourist offer and of the means that make possible the extension of the tourist period and the extension of the tourist duration (the number of the accommodation days) as well as promoting the image of the area as a unit for the national and international tourist markets;
- Develop the brand tourism (cultural, sport, business, workshop, agricultural, eco-tourism, etc.);
- Create a voluntary public-private environment of reflection, debate, decision and action, between all the sectors with impact on tourism;

- Encourage and support the initiatives to make professional associations among the parties involved in tourism;
- Build a camping in the lake areas to serve the transit tourism, the people who practice the fishing as sports and also people who enjoy the water sports (also building the necessary facilities);
- Build a school camp (boy scout / girl scout camps) in order to have outdoor activities, and also a teambuilding location;
- Build a centre where the locals can sell the products of their lands and farms;
- Use the investments in order to benefit of the tourist value of the mineral water resources;
- Improve the accommodation of the existent tourist guest houses;
- Build ecological sheepfolds and stalls;
- Build crafting centres and markets to sell the handmade products, craftworks and souvenirs;
- Create an yearly event calendar, also in the international foreign languages;
- Use the wood for buildings and dependencies (e.g. wood is well suited for wellness at a small scale: sauna, jacuzzi). Using the wood with other raw materials: teas and traditional resting based on medicinal plants, etc.

3. CONCLUSIONS

The vision on the territorial development in accordance to the desired outcome regarding the strategic landscaping was described with the help of a “choreme” analysis (see figure 2.).

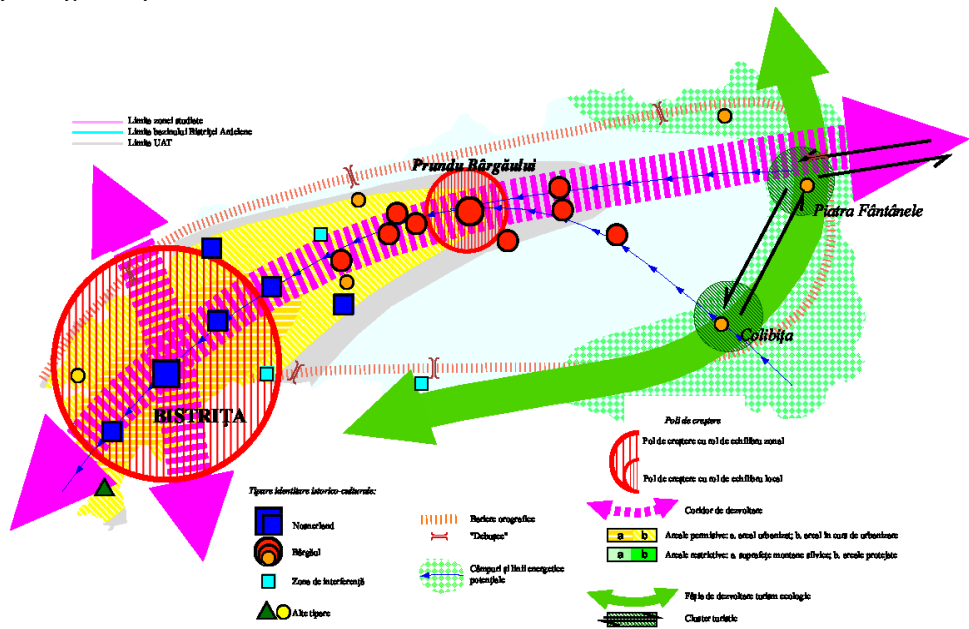


Fig. 2. Choreme analysis

This simplified sketch of the territory has a double meaning: on one side includes the patterns of evolution of the social-cultural component, developed historically on the geographical data, and on the other side prefigures the optimum development trends, adjunct to the durable development.

Expressed as conclusions, the chorema becomes corollary of the joint effort of a coherent, quasi-exhaustive vision.

REFERENCES

1. *** *Căile de comunicații și transporturile din județul Bistrița-Năsăud* (1999), Edit. Mesagerul, Bistrița.
2. *** *Centenar feroviar bistrițean 17 noiembrie 1898-17 noiembrie 1998* (1999), Edit. Ingram, Cluj-Napoca.
3. *** *Legea 363 din 21 septembrie 2006 privind aprobarea PATN – Secțiunea I – Căi de comunicație.*
4. Benedek, J. (2000), *Organizarea spațiului rural în zona de influență apropiată a orașului Bistrița*, Edit. Presa Universitară Clujeană, Cluj-Napoca.
5. Benedek, J. (2003), *Adaptabilitatea unor teorii ale migrației rural-urban la societatea din România. Studiu de caz în zona Bistrița*, Studia UBB, Geographia, 2, 113-122, Cluj-Napoca.
6. Boca, P. (1992), *Valea Bârgăului la 675 ani de atestare documentară*, Ziarul Răsunetul, 15 august-12 septembrie, Bistrița.
7. Bolovan, I. (2006), *Contribuții documentare privind istoria regimentului grăniceresc năsăudean*, Edit. Enciclopedică, București.
8. Chintăuan, I. (1997), *Bistrița-Năsăud – Natura și monumentele sale*, Edit. Carpatica, Cluj-Napoca.
9. Chintăuan, I. (1998), *Ape minerale și stațiuni din județul Bistrița-Năsăud*, Edit. Supergraph, Cluj-Napoca.
10. Cocean, P., Boțan, N., C., Ilovan, Ramona-Oana, (2011), *Județul Bistrița-Năsăud*, Edit. Academiei Române, București.
11. Cocean, P., coordonator (2004), *Planul de Amenajare a Teritoriului Regiunii de Nord-Vest. Coordonate majore*, Edit. Presa Universitară Clujeană, Cluj-Napoca.
12. Cocean, P., coordonator (2007), *Amenajarea teritoriilor periurbane. Studiu de caz: zona periurbană Bistrița*, Edit. Presa Universitară Clujeană, Cluj-Napoca.
13. Cocean, P., Zotic, V., Puiu, V., Moldovan, C. (2010), *Amenajarea teritoriului suburban al Municipiului Bistrița*, Edit. Presa Universitară Clujeană, Cluj-Napoca.
14. Mureșianu, M. (2000), *Districtul grăniceresc năsăudean (1762-1851). Studiu de geografie istorică*, Ed. Presa Universitară Clujeană, Cluj-Napoca.
15. Pușcașu, Violeta (2005), *Planificarea sistemelor teritoriale*, Edit. Didactică și Pedagogică, București.
16. Surd, V., Bold, I., Zotic, V., Chira, Carmen (2005), *Amenajarea teritoriului și infrastructuri tehnice*, Edit. Presa Universitară Clujeană, Cluj-Napoca.
17. www.medievistica.ro, accessed on April 24, 2014.