

Lăpuș Basin - weakness and decrepitude

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Abstract. The environment is the most precious gift that we received and of which it is necessary to take care of, in an unconditionally way. 'Water is Life' has become a cliché and the term is well-known as a doctrine that everybody should believe in, to act not only for self-benefit, but also for the environment's benefit. The hydrographic network is the base of an ecosystem, and through this, we can also identify the areas with high economic and ecological potential, in order to be surely protected. The biggest environmental problems of the rivers, which are situated near by the abandoned mines and more precisely, the Lăpuș River, are the acid mine drainage and the uncontrolled mining waste, occurred after the communist period. Is also the case of the Lăpuș River, where the locals are confronted with these problems, to which no one has a solution. No longer having mine exploitations, the mines were left in ruins and no one has ever controlled their actions. Nevertheless, they continued to produce polluted water, with heavy metals and toxic substances harming, directly or indirectly, the people lives. Accidental pollution of mine waters, have devastating primarily effects in fish fauna and beyond. Heavy rain engages mine water from the ponds, waters which are known as waters with loads of hazardous substances. The route of these waters with loads of hazardous substances is flowing in the Lăpuș river, harming the fish fauna and then is being absorbed by the earth which is taken up by the plants that people consume.

Key Words: Lăpuș Country, threats, analysis, mines, Maramureș, river.

Introduction. Lăpuș Country has a huge potential for development, considering that it is part of the Maramureș county, besides Chioar and a part of Codru (Dăncuș 2012); starting with Tîrgu Lăpuș city and extending towards the most isolated areas, one can identify an abundance of resources that may be harvested. The city of Tîrgu Lăpuș presents a huge number of development opportunities, whereas the farther isolated areas of Lăpuș Country although far from the busy city, may still be considered points of interest. The unaltered "old ways" of living life and the preservation of the cultural heritage may be used as iconic trademark in order to promote better the tourism in the area (http://www.visitmaramures.ro/index.php?task=category&category=lapus_country&lg=RO). There are also other attractions such as, the world famous wooden churches, the Gorge of Lăpuș - natural reservation, The Baba straits, Baiuț, Zâmbrița and Lighet lake and an impressive number of caves like the Bone Cave, The Outlaws cave and the Tanks Stone Cave. The mineral springs in the area, situated near Poiana Botizei, Stoiceni and Baiut enhance the hiking experience that one may have when climbing the nearby Țibles Mountains.

The Țibles and Lăpuș mountains may in time become an important landmark for all those passionate about hiking trips in one of Romania's most beautiful areas. One may benefit from the simple accommodations that the region has to offer. Mountain cabins, small cottages or camping areas enable the tourist to live life, as it once was, simple, quiet, and beautiful.

One of the strong points of Lăpuș Area is the Lăpuș River itself (Figure 1). The river, which flows eventually in the Someș River, has a length of about 114 km and a basin surface of around 1820 square kilometers (Butian 2004). The river is asymmetric and has evolved mostly on the right, which means that the tributaries on the right are much more developed, with considerable flows, compared to those on the left. Some of the tributaries that flow in the Lăpuș are such as Libotinul and Dobricul (Posea 1962). The Lăpuș River has its origin in the central part of the Lăpuș Mountains from the Văratec peek, at an altitude of 1200 meters.

From a hydrological point of view, rainfalls hold an important place with values between 950 and 1400 mm. One hydro point is located in Răzoare village where the flow has reached at one time a value of 10 cubic meters per second.

The Lăpuș straits have been "dug" by the Lăpuș River (Figure 1) in the calcareous region of Culmea Preluca. The entire length of the straits is around 25 km, with abrupt walls, the left slope has a height of nearly 540 m in the Capul Podului region. If we are

talking about the natural aggregates, sand and rubble, all these may be found along the length of Lăpuș River. Near the villages of Rogoz and Răzoare there are also several gravel pits which exploit these natural reaches. The aggregates form whenever hazardous environmental episodes take places such as flooding. These materials may be used in construction work both in raw and processed forms. Furthering my exposition, I will define the gravel pits as being, from a morphological point of view, masses of sand and rubble on both sides of the river, with almost no bumps and no flora. Calcareous reserves are found near the Pietriș Hill, on the road to Baia Mare near the village of Stoiceni. Calcareous and crystalline dolomites are renowned for their use as mosaic components, construction materials, or even broken rocks. These can be found in Preluca, Inău, Bocut, and Cufoaia. In Răzoare, in Dealul Popii and in Dealul Cornilor, we may encounter numerous eruptive and metamorphic rocks and minerals that require selective and specific exploitations. These may be used in diverse industrial branches such as cement manufacturing or ceramics production. There are large exploitations in the Preluca crystalline and in the crystalline islands of Borcut and Inau but the selective exploitations result in small quantities. At the Răzoare mine, also called the bentonite deposit there were once exploitations of iron but those were stopped long ago. The bentonite might be used in the cement, ceramics and rubber industry.

Given the things said in this introduction, I want to draw attention to the positive aspects, but especially the negative ones, which cannot be neglected under any circumstances, moreover, they can influence life negatively. On this point we can draw a warning and to make the community aware of the repercussions of these negative effects that we cannot disregard.

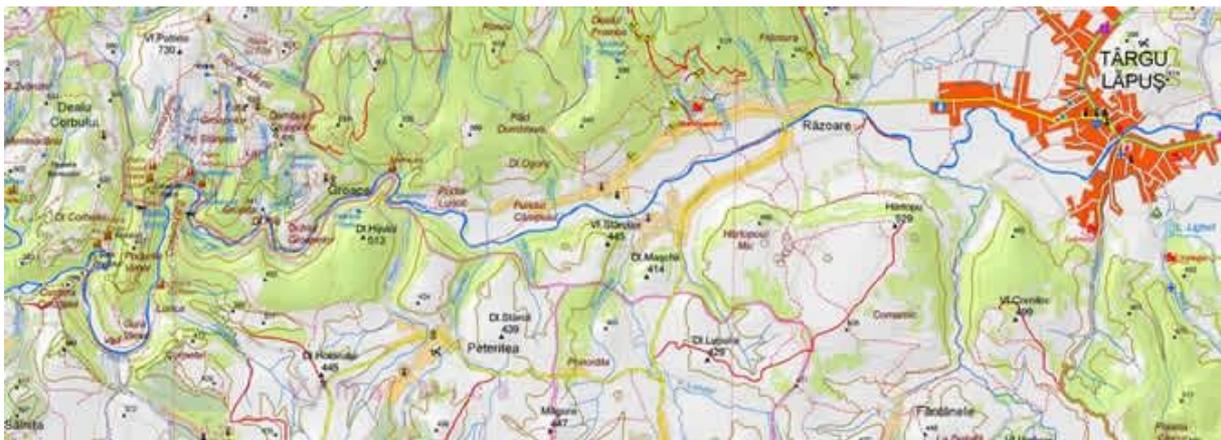


Figure 1. Lăpuș Gorge (Source: <http://www.defileul-lapusului.ro/>).

Material and Method. For the article in question, given the significant level of abstraction of the theme, I opted to use a methodology of study and analysis that allow me as much as possible, systematic juggling between the empirical prospects and the scientific method of generating knowledge.

Not accidentally, I considered it appropriate that a good portion of the article, to have a subsequent empirical foundation, along with the scientific, to make better use of the personal contribution made in the field of the proposed study.

In particular, I used the case study method, respectively the SWOT analysis, to experimentally test and verify the theoretical and applied value of the research results obtained from the research of the proposed theme.

Last but not least, the observation research and analysis activities were focused mainly on consultation of practitioners in the field and/or related fields, both in formal (thematic conferences, scientific events) and informal (e-mail, telephone or in the specialized forums available online), studying primary, secondary and tertiary documents.

Results and Discussion. A SWOT analysis is needed in order to highlight the strong and weak points of the Lăpuș basin, to form a development point of view, and also to better comprehend the opportunities and threats that may exist in the area.

STRONG POINTS:

- important underground resources such as minerals, methane gas, bentonite, iron and many more;
- business opportunities are on a continuous rise;
- tourism and anthropogenic resources that may allow the building of an important number of tourism structures;
- education is an important factor, that is why a complete educational infrastructure equally distributed amongst the land is needed;
- adequate health service, starting with the Lapus City Hospital.

WEAK POINTS:

- road infrastructure is very poorly rated;
- continuous degradation of an insufficient water cleansing facility;
- poverty;
- tourist accommodations are very poorly ranked;
- no tourist specialists in the area, no tourism products and no support for the local brands.

OPPORTUNITIES:

- multiple expansion opportunities for industrial products and furniture commerce;
- the use of European funds in order to rehabilitate or further develop the access infrastructure;
- continuous rise of public and private funding from education.

THREATS:

- low competitive strategies of the local business in the greater UE picture;
- the qualified work force is on a continuous path towards emigration;
- neglect and misuses of the cultural heritage;
- low quality public utilities that dims the prospect of further investments;
- the disbandment of schools in the small villages giving way to more illiterates.

Maramureș County has provided metals and gold (Cocean 2014) for the whole country for a very long period of time. A considerable contribution to this has also Băiuț mines (<http://mariosolomon.tripod.com/id83.html>) (Figures 2 A, B, C, D). After the exploitations were over, this county has lost everything and hasn't been offered nothing in return.

With the closing of the mines (Chorley 1973), the waters were no longer pumped out but instead, they started accumulating in the depths, adversely affecting plants, animals, underground springs and the people inhabiting the lands (Radu & Ionescu 2016; Radu et al 2017; Ionescu et al 2017). The most important act that should have been completed, the complete removal of the water from the mines has never taken place. It is said that "gold can blind you", it is precisely this happened not long ago, when rumors started circulating about a possible reopening of the mines due to the difficult economic situation in which our country finds itself. Another economical point with pluses and minuses is Vălenii Lăpușului stone quarry (Figures 3 A, B). It's no secret that the Vălenii stone is very good quality and that's what the authorities in the area are proud of, so many building companies are looking for it and use it in their projects, due to the high quality resource. Even so, some retorts come to light, so I tried to divide the pros and cons, the "+" and the "-".

Why pluses? Because, economically speaking of is an important income for the people in the area, it ensures also jobs, everything seems to be for the benefit of the citizen.

But why minuses? Because, the more we dig into the stone quarry, the more soil resources we have less.

The place where lime is made (Figures 3 C, D) is also very well-known, actually it used to be very well-known. At the moment, very few people make lime, lime stone and charcoal. Nowadays, it is easier to buy, instead of DIY (Do It Yourself).

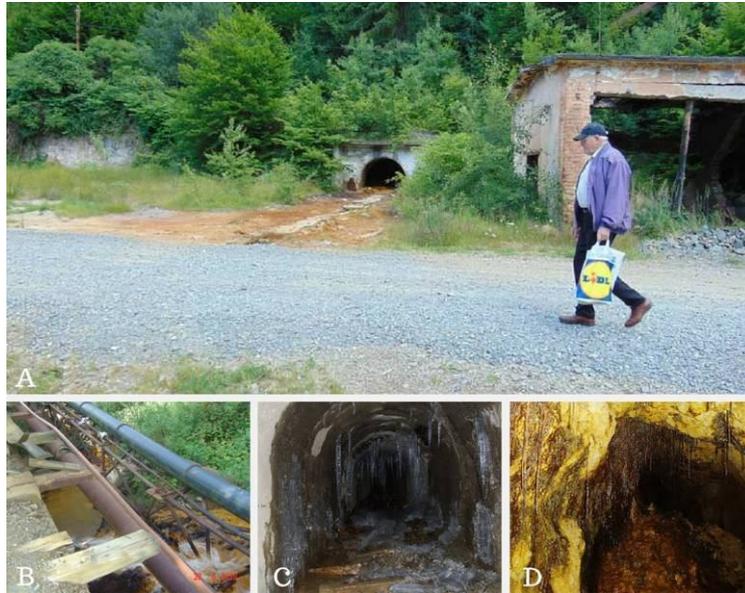


Figure 2. Băiuț mines (Source <http://www.graiul.ro/>).

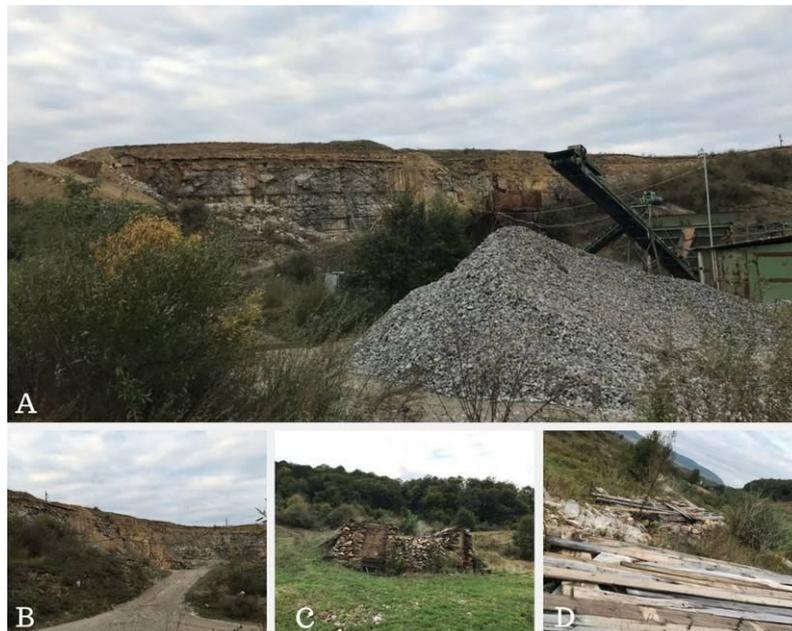


Figure 3. Vălenii Lăpușului stone quarry (original).

Conclusions. We have to admit that the present topic is not as dangerous as the above-mentioned subject, namely the seemingly inactive mines, which have had a very serious impact on us, but even so, none of these are negligible. We also have to think about the impact they can have on both in the terrestrial environment and on the aquifer environment. We will not be nicely impressed. As a direct result, we have to emphasize that we should set an alarm signal and to inform the community of the importance of this article topics. People who read this article should spread the word and make sure that the information will reach even the most isolated locals Together, we can help the planet, and implicitly ourselves.

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