Remanent Pollution in the Area of the Former Sulphur Exploitation Site in the Calimani Mountains, Suceava County

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Abstract

Purpose
The Călimani Mountains offers the only exploitable sulfur deposit in Romania. The technological difficulties, the unfavourable economic outcome and the poor quality of the final product have led to the definitive cessation of all activities of the Mining Exploitation Călimani. The main purposes is evaluation of the environmental impact caused by mining activities as a complex process that should be based upon a series of well-defined environmental indicators - ecological, social and economic, using a global, multi-criteria evaluation method.

Methods
In this paper, we have chosen as an integrated impact evaluation for the Călimani Mining Exploitation the matrix method (an adaptation of the Leopold Matrix model), adapted to the specificities of the useful mineral exploitation and prepration activities and identified the four categories of activities with environmental impact.

Results
For all categories we have obtained results that indicate an impact level from Significant to Major.

Conclusions
The exploitation-preparation of sulfur in Călimani caused visible repercussions on the environment and, to a high degree, quantifiable effects on the natural environment and human communities.
The fragmentation of habitats affects the conservation of the favourable, scientifically correct association of spruce and Swiss pine .
The destruction of vegetation in the mining perimeter, majorly affects the long term viability of both small mammal populations and large mammal .
The diffuse pollution of surface waters caused by uncovered surfaces and tailing dumps free of vegetation exerts significant pressure on the aquatic habitats.

Keywords
sulfur deposit, matrix method, integrated impact evaluation

Introduction

The Călimani Mountains belong to the volcanic chain that constitutes the West side of the Oriental Carpathians in Romania. This massif offers the only exploitable *sulfur deposit* in Romania. These native sulfur reserves were officially approved by the Romanian state in 1966. The exploitation of the sulfur deposits commenced in 1970 in the mining perimeter Negoiul Românesc- Pietricelu- Călimani, accompanied by subsequent preparation works in a specialized unit. The sulfur rock deposits have been confirmed and evaluated by 1971 for subterranean exploitation, although a quarry was eventually opened by excavating the top of Negoiul Românesc (between the altitudes of 1420 and 1740 m).

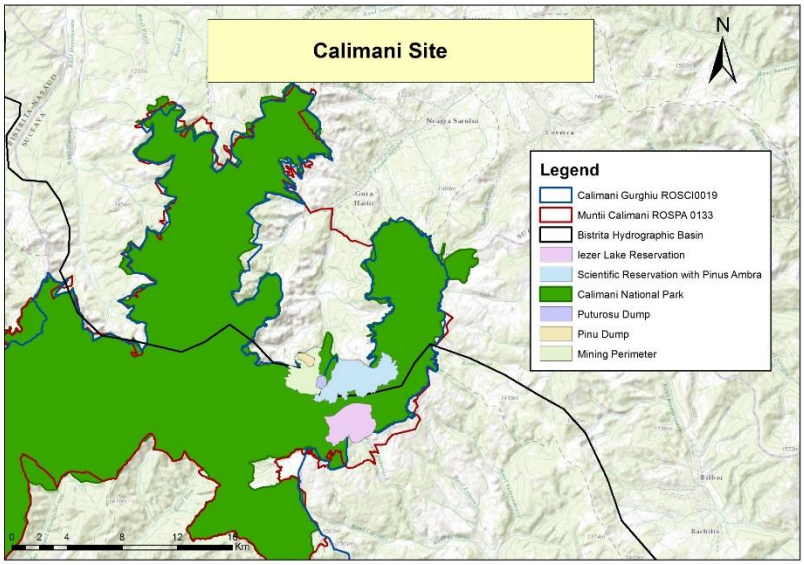

Fig.1. The placement of the Călimani quarry

The technological difficulties, the unfavourable economic outcome and the poor quality of the final product, combined with the disastruous influence on the environment have lead to the only reasonable solution: the definitive cessation of all activities of the Mining Exploitation Călimani in 1997.

Beginning with contouring of the sulfur deposit in Călimani, followed by the subsequent sulfure exploitation in the mining perimeter, the entire project ended as a fiasco, with serious damages on the environment and surrounding human communities.

1. The evaluation of the environmental quality in the Călimani mining area. Methodology

The evaluation of the environmental impact caused by mining activities is a complex process that should be based upon a series of well defined environmental indicators- ecological, social and economic. These indicators have to be representative for the normal funtioning of a system and demand a quantitative and qualitative approach, using a global, multi-criteria evaluation method .

In this paper, we have chosen as an integrated impact evaluation for the Călimani Mining Exploitation the matrix method (an adaptation of the Leopold Matrix model). The general global evaluation matrix model for the evaluation of the environmental impact of mining activities is one of the best methods to use, allowing for a comprehensive evaluation of a vast array of environmental factors and activities with potential environmental impact (Rojanschi, 2002)

We have adapted the matrix to the specificities of the useful mineral exploitation and prepration activities and identified the following categories of activities with environmental impact:

- matrix I: the modification of habitats, the alteration of the superficial stratum, the alteration of the subterranean hydrology, modifications in depth and debit of surface waters, the influence of sewerage, noise, vibrations and atmopsheric emissions;
- matrix II: the transformation of the terrain and buildings (industrial facilities, roads, power cables, dams, piers, facilities for the storage of raw material and preparation residues, deposits for dangerous substances and chemicals)
- matrix III: the storage and treatment of wastes (placing and storing technological waste, the accumulation of used oil and petroleum products, unloading used technological waters, unloading used household waters, deposition of sedimentable particles)
- matrix IV: accidents and risk factors (operational accidents, leakages from technological pipes, spillages of sterile material caused by extraordinary climatic events, political and economic factors - no allocation of funds for the remediation and ecological rehabilitation of mining sites)

The environmental characteristics considered in an impact analysis are listed below:

- ✓ physical and chemical characteristcs of soil, water and air;
- ✓ biological conditions: flora and fauna;
- ✓ cultural factors: land use, recreation, esthetics and people's interests (health and security, utilities, transportation infrastructure);

- ✓ ecological relationships such as: the salinization of water resources, acidification of water resources etc.

In order to create a matrix, the following steps are necessary:

- anthropic activities with environmental impact are firstly identified (in columns);
- a bar is placed in each box of the matrix;
- in the upper part of the box, a number between 1 and 5 is placed in order to indicate the magnitude of the impact, whereas in the lower part of each box the same will be applied in order to indicate the importance of the impact.

The impact index is calculated by multiplying the magnitude and the importance of the impact, according to the tabel below.

Table 1. Appreciation grid for the amplitude of the magnitude and the importance of the impact (impact index)

Magnitude	Grade for **M**	Importance	Grade for **I**	Impact	Impact Index M x I
Anthropized environment, reduced ecosystems	1	Very important (residential areas, natural rezervations)	1	**Major**- degraded environment, destroyed ecosystems	**1- 5**
Major pollution	2	Important	2	**Significant**- environment seriously affected by human activity, dangerous for all life forms	**6-10**
Pollution at average levels	3	Medium importance	3	**Big**-environment affected by human activities that create disturbances in the life of more sensitive organisms	**11-15**
Reduced pollution	4	Less important	4	**Medium**-environment affected by human activities that produce discomfort	**16-20**
Insignicant effects on the environment	5	Not important	5	**Low**- environment affected by human activities within acceptable limits	**21-25**

The values imparted for the amplitude of the magnitude and for the importance of the impact have been established in this paper based on the effects that specific pollutants resulted from the exploiting and processing sulfur have on the existing environmental conditions in the area, corroborated with studies, analysis papers and other documents about the environmental impact in the Călimani Massif .

For the graphical representation, we have calculated the weighted average of the obtained values for *Impact,* after multiplying the values from each colum*n* with those on each row

In order to illustrate as conclusive as possible the degree of the post-closure pollution determined by the activity of the Mining Exploitation Călimani, the impact evaluation by means of the matrix method has been used both for the active period (up until the year 1997) and for the year 2018 (post-closure).

1.1. The integrated Evaluation of the Impact of the Activities in the Mining Exploitation Călimani during the active period

The low profitability and the pollutive technologies used in all production phases have caused great damages to the protected area Călimani National Park (the surface occupied by the mining perimeter is 340,68 ha, out of which 297,76 ha belong to the park).

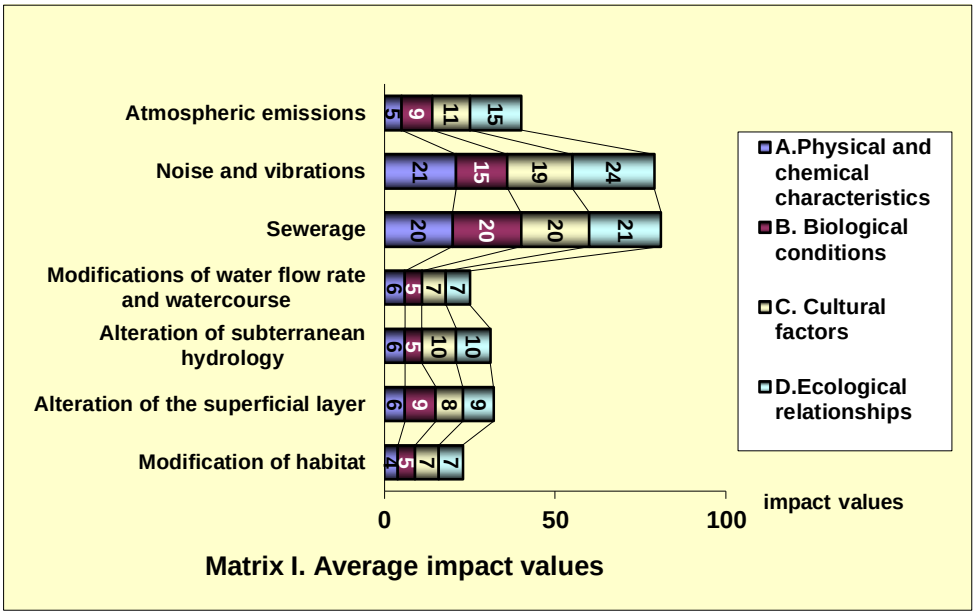

Fig. 2. Average impact values for the matrix „Modifications in the regime"

The sulfur exploitaion and preparation activities, by changing habitats, water courses and surface water quality, have impacted all environmental conditions on a *significant level;* however, specifically concerning the physical and chemical characteristics of the environmental factors (water, air, soil) and biological factors (flora and fauna), the impact level is *major,* according to current studies.

The amplitude and the importance of the modifications registered in the surface water flow rate have had a *significant impact* for the environmental conditions.

These assesements are based on the following data, aquired during the active period of the Mining Exploitation Călimani:

- ✓ The sulfur exploitation and preparation activities have been performed on locations very close to each other (because of economic reasoning) and over a surface of 105 ha; these have caused imbalances in the local geology through massive deforestation, subterranean excavations, the building of foundations and constructions. Mining has directly caused erosion, transportation, sedimentation and conumption of geological mass and, indirectly, the transformation of the nature of the geological environment, be it voluntary or involuntary.
- ✓ The specific natural factors of the volcanic massif Călimani (orographic, edaphic ad climatic factors) have contributed to the amplification of the anthropogenic effects in the area;
- ✓ The large excavated surface, corellated with the vertical fragmentation of the relief, steep slopes of the terrain, as well as the high density of the valleys- which provides

considerable amounts of water, indispensable for processing the sulfur- are all factors that amplify the slope processes. Deforestation has specifically caused steep slopes, an intensification of mechanical and torrential weathering and areolar erosion.

- ✓ The excavations from the sulfur quarry have destroyed several unique subterranean formations known as volcano-karst. As a consequence, several caves known as the *Luana's Caves* have been destroyed.
- ✓ The surface mining exploitation has introduced a 10 meter deep excavation in the landscape, as well as other impressive positive forms, resulted after depositing extractive wastes in the tailing deposits Puturosu, Pinu, Ilva, Dumitrelu and Pietricelu, all covering a surface of 53,24 ha and a volume of 33,4 million cubic meters. As necessary in the preparation process of technical sulfur, tailing ponds have also been built: Dumitrelu and the emergency artificial lake- the first is situated on the course of the Dumitrelu Creek and the secong on its shore. The tailing ponds occupy a surface of 11,4 ha and a volume of sterile of 2.4 milion cubic meters.
- ✓ Soils from the immediate proximity of the sulfur exploitation quarry and those in areas situated at various distances from the industrial platform are influenced by the pollutants resulted from the sulfur exploitation and processing, from the quarry's surface and tailing deposits (pollutants transported by wind). Solid particles containing sulfur, detonation residues, quarry exploitation residues together with acid rains (resulted from the oxidation of the sulfure dioxide- released into the atmosphere from the exposed surfaces from the quarry and tailing deposits- into sulfur trioxide and, finally, in the presence of atmospheric humidity, sulfuric acid aerosols) pollute the surface of these soils. The analysis of the sterile samples taken from the contiguous areas of the tailing deposit Puturosu (EPA Suceava, 1992)

revealed high values for the majority of the metals analysed (Fe, Mn, Zn, Cu) and very low pH values for the tailing deposit (pH=2,02) and the soils uphill (pH=3,05) of the area.

- ✓ Deforestations made in order to give space to the construction of the exploitation facility, the preparation unit and all other related units, destroyed the specific habitats for the alpine and subalpine levels of the Călimani Massif over a surface of aprox. 330 ha.
- ✓ The waters springing from the peaks Reţitiş, Pietrosu and Negoiul Românesc belonging to the Călimani Mountains merge and form the Neagra River. Its flow rate is increased by the tributaries Reţitiş, Pinului and Dumitrelu and downstream by the Mining Exploitation Călimani through the creeks Haitei, Călimănel and Sărişor (the last three mentioned are considered clean, with a slight tendency towards an acidic pH and a high Fe content from the geological strata they cross). The Puturosu Creek, after taking in waters that wash the quarry and the tailing deposits, is characterized by the following hydrochemical parameters with a major negative influence on the Neagra Șarului River (ICPM Baia Mare, 1992): highly acidic pH (2,5-2,7), very high real and total acidity (14,3-16,5 mval/l and 5,2-9,5 mval/l respectively), high sulfate concentrations (883-1016 mg/l) and iron (88-222mg/l).
- ✓ The negative effect of the unpurified waters is made obvious through the quality of the final receptor, the Neaga Șarului River, whose pH at its origin varies between 5,2 and 5,9 and, after taking in the acidic water (from the pump station Dumitrelu), between 2,3 and 4,5. The acidity is increased by the waters resulted from the exfiltrations from the tailing pond Dimtrelu, which, through the Dumitrelu Creek ends up in the same main emissary.
- ✓ According to all documentations and scientific studies, the tailing deposits, despite the fact that they do not occupy the largest surface in the hydrographic basin Neagra ,are the main source of silt transportet by the water courses; geochemically, the quality of the sediments from the Neagra Șarului River is strongly affected upstream, specifically the pH (with severe impact on the benthic organisms)
- ✓ The acid rock drainage phenomenon from the tailing deposits Puturosu and Pinu is partially due to the accumulation both inside and on top of the superior platforms of large quantities of untapped technical sulfur
- ✓ Sterile leakages along the hydrotransport pipeline from the Preparation Unit for Technical Sulfur caused by cracks resulted from mehanical and chemical weathering; the growth of vegetationis completely inhibited alongside the tracks left by the sterile material;
- ✓ The activity of the Mining Exploitation Călimani damaged the forest areas by removing the shrubs and the arborescent vegetation by generating highly acidic waters that flow through the tailing deposits,and contaminate the forest areas (the most visible effects have been registeredon the East side of the tailing deposit Ilva, where both the spruce and moutain pine areas became completely dry) and total dryness in the areas affected by the sterile leakages from the deposits, a process favoured by the continuous changes of slope;
- ✓ Concerning the quality of the aquatic ecosystems, the presence of certain pollutants resulted from the technological process of obtaining technical sulfur has considerably contributed to its degradation. The water of the Neagra Șarului River shows signs of qualitative and quantitative changes in the algae flora due to a decrease in the river's capacity to self-purge after receiving pollutants. The Neagra Șarului River, upstream of the Bistrița River, is considered to be heavily degraded according to biological and ecological indicators analyzed.

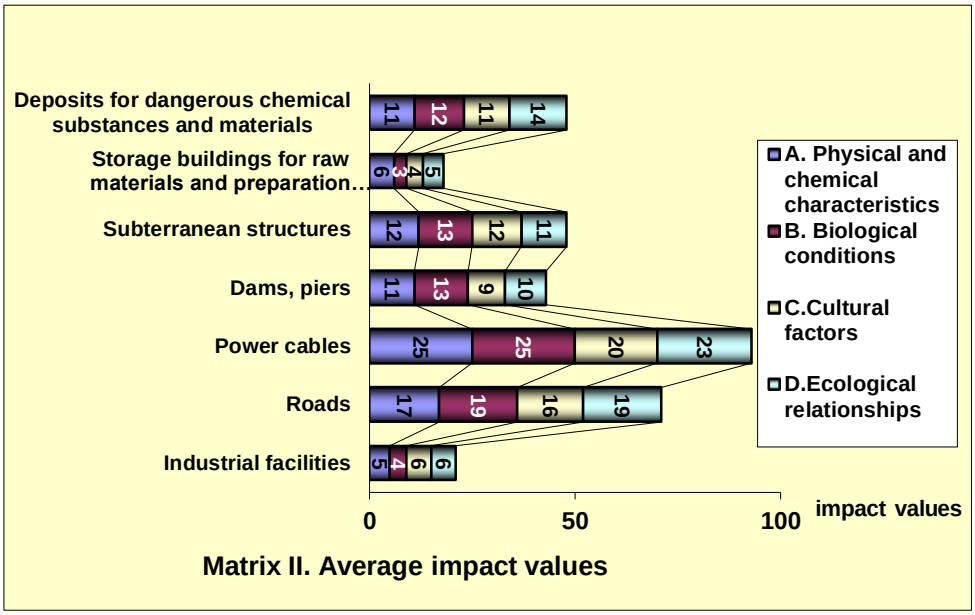

Fig. 3. Average impact values for the matrix „The Transformation of terrains and constructions"

The industrial facility, the raw material deposits together with the exploitation and preparation wastes significantly impact all environmental conditions. The subterranean structures and the dams built to block debris from flowing out of the safety zone (now clogged) are no longer functional, indicating a *high* level of impact; together with the tailing deposits, these structures require imediate intevention in order to mitigate further environmental damage.

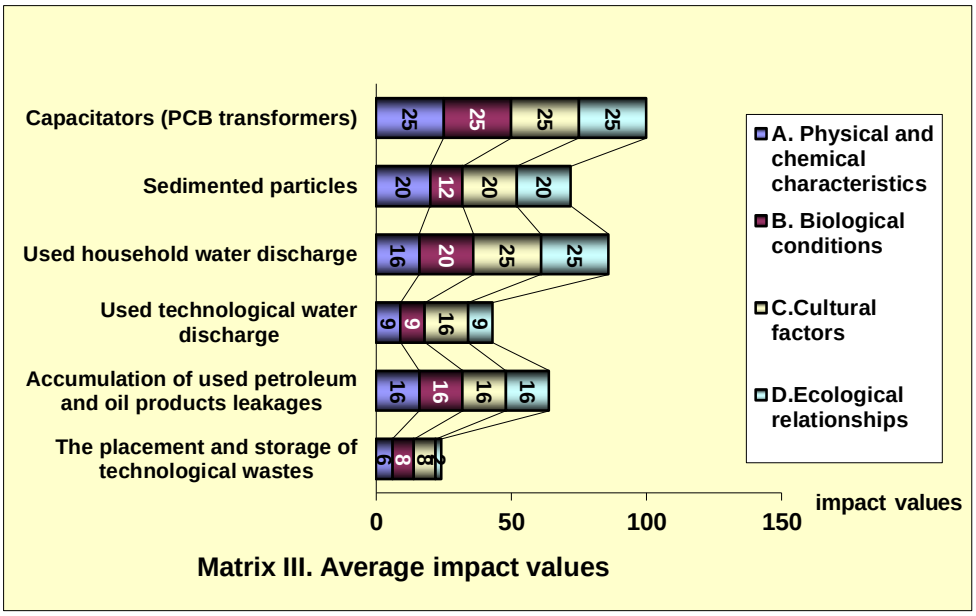

Fig. 4. Average impact values for the matrix „Depositing and treating wastes"

The tailing pond Dumitrelu and the emergency artificial lake are closely situated to the Dumitrelu Creek and Neagra Șarului River and *significantly* and *majorly* impact the environmental conditions: soil degradation and destruction, modifications in the natural course of the Dumitrelu Creek, sterile transported by water and accumulated in the riverbed of the Neagra Șarului River.

The volume of the sediments carried downstream by the abudant precipitation on the tailing deposits towards the surface water networks is considerable. The location and geometry of the deposits and the steep slopes of the substrata play a significant role in this case. The transport of sediments in massive quantities into the Neagra Valley, represents a serious environmental issue *per se.* Therefore, the impact is considered to be at

major for the physical and chemical characteristics and *significant* for the ecological relations and for all other environmental characteristics.

Geochemical data of the sediments from the rivers Toplița, Ilva, Puturosu Topliței, Dornișoara -that are preserved in their natural state because of their distance and position relative to the quarry- are used to reconstruct with approximation the sediment characteristics prior to starting the sulfur exploitation. Not being contaminated by technological waters nor by the waters washing the tailing deposits, these sediments share similar geochemical characteristics with those from the upstream section of the Bistrița River at its confluence point with the Neagra Șarului River, and show proper life conditions for the organisms; some particularities of the Puturosu Topliței River have been identified, revealing a slight acidic reaction in the non-consolidated sediments (ICPM Baia Mare, 1993).

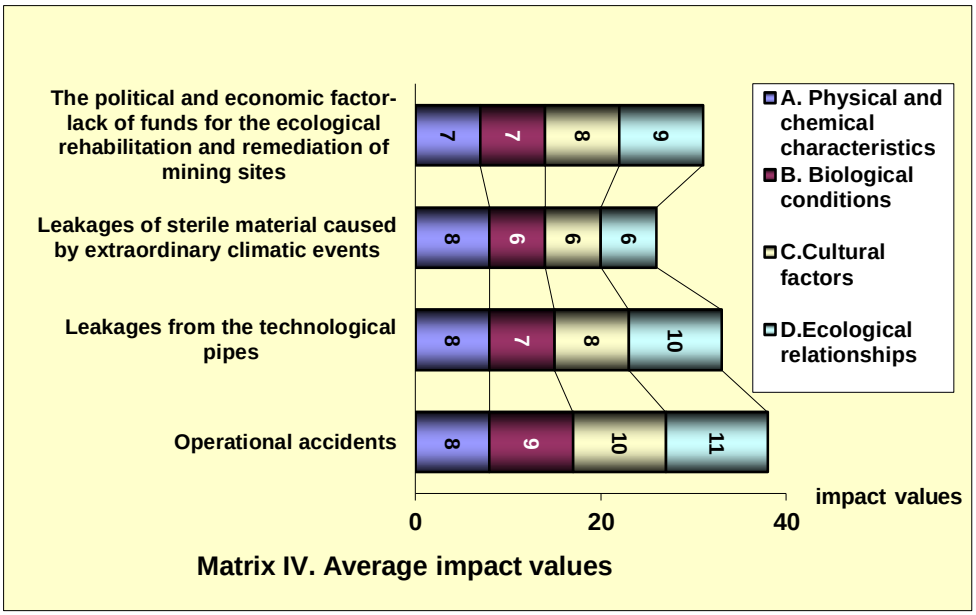

Fig.5. Average impact values for the matrix „Accidents and risk factors"

For the matrix „accidents and risk factors" we have obtained results that indicate a *high* environmental impact. Before the start of the implementation of the required safety measures, the collection well behind the end dam of the tailing pond used to be clogged annually (due to seasonal torrential rains) and gradually lost its stability; moreover, precipitation water transported materials from the tailing deposits Puturosu and Pinu, tailing ponds, degraded technical sulfur from the industrial facility and petroleum products and downstream, impacting the vegetation, water quality etc.

According to the available data provided by the Environmental Protection Agency Suceava from the period 1994-1997, a series of events took place such as fissures in the hydrotransport pipe for technological sterile due to mechanical and chemical corrosion, cloggings due to high pressures on the transport track, have lead to the spillage of significant quantities of preparation sterile into the Neagra Șarului River (the most serious case being registered on 1st of March 1995), implicitly affecting the Bistrița River also.

1.2. The integrated evaluation of the impact of the Mining Exploration Călimani in the post-closure period

The cessation of the activities of the Mining Exploitation Călimani in 1997 was decided through the Government Decision no. 816/1998, further modified into the Government Decision no. 644/2007 which also imposed the ecologization of the mining perimeter. Even though in 2008 similar works have been attempted (closure and ecologization), these never managed to cover the entire impact area. Moreover, these works have not been done continuously, but with interruptions (2008-2009, 2011-2014). At the present time no works are being performed on site.

Sporadic initiatives to monitor the environmental factors have been attempted, especially in regards to the quality of the surface and subterranean waters, for the purpose of deciding whether a water treatment plant should be built for the mining waters, exfiltrations from the tailing pond Dumitrelu and rain waters crossing the tailing deposits and quarry.

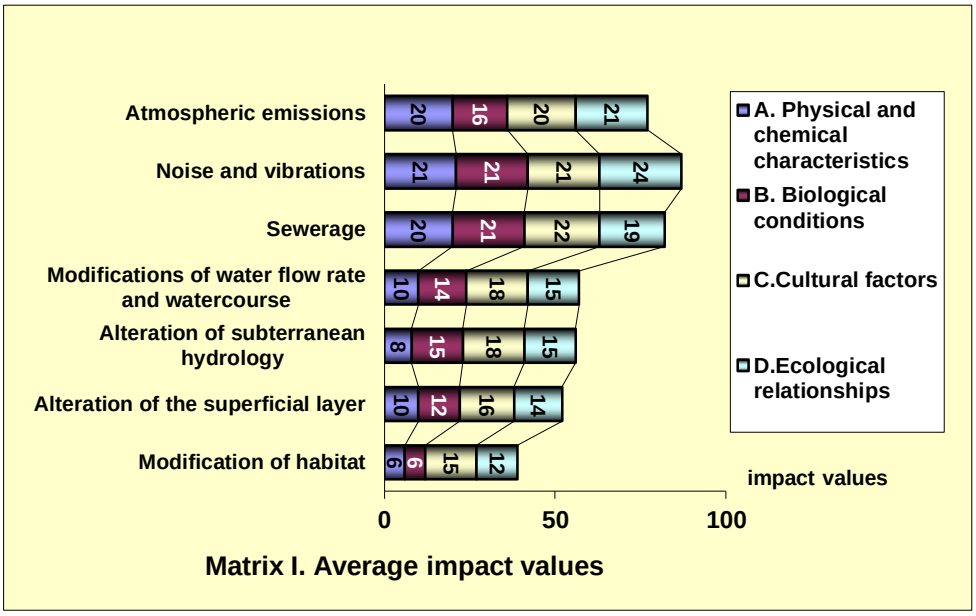

Fig. 6. Average impact values for the matrix „Modifications in the regime", 2018

After the cessation of the mining activities, from the surface of the mining perimeter, significant quantities of impurified rain waters pass through the contaminated surface and transport significant amounts of pollutants into the local hydrography. From its confluence with the Dumitrelu Creek (the last tributary with a significant flux of pollutants) and down to the Bistrița River, the Neagra Șarului River's hydrochemical and geochemical characteristics show important signs of improvement so that at the Gura Negrii point, downstream from the confluence with the Haita Creek, the water and sediment pH is 4 units higher than upstream, whereas the total sulfur content from the sediments represents only 5,84% of the upstream amount. The Bistrița river's high flow rate compared to that of Neagra Șarului makes the latter less influential of the physical and chemical characteristics of the waters and sediments over a relatively small area including the Zugreni Canyon (aprox. 15 km away); downstream of the canyon, the water is declared by the Water Management Sector Suceava to belong to the quality class I.

The atmospheric emmissions of pollutants have been drastically reduced, by virtue of the ecological reconstruction and greening works performed on the mining perimeter. The results of the analyses made by the Environmental Protection Agency Suceava concerning the pH of the precipitations in Vatra Dornei in 2001 (this was the last year analyses have been made) show that less than 20% of the total precipitations have a weak acidic character.

However, not finalizing the remediation works constitues an environmental issue *per se,* considering the meteorological and geomorphological variables and the fact that he mining perimeter is extremely prone to erosion. Another added risk is the high probability that the tailing dams responsible for blocking the sterile material from the deposits could collapse during torrential rainfall and afect the surrounding habitats.

Fig.7. The slope of the Pinu tailing dump Pinu, which affects and fragments the downhill habitats, 2018

When heavy rainfall occurs, the precipitation water washes the ground and transports significant amounts of debris from the tailing dump of the former Mining Exploitation Călimani into the Pinu Creek and, consequentially, into the entire hydrographic basin, damaging in its way the vegetation. The specific ecosystem alongside the riverbed of the Pinu Creek offers the downstream communities in Șaru Dornei valuable economic services (provision of water). Therefore, the modification of habitats, watercourses and the quality of surface waters are ongoing issues with a *significant* impact for the physical and chemical environmental characteristics and ecological relations.

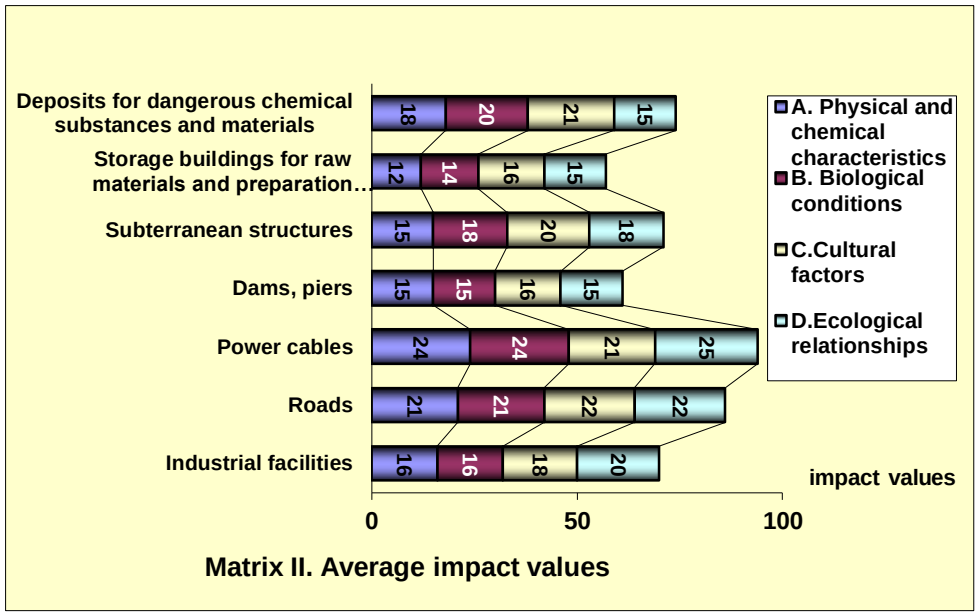

Fig. 8. Average values for the matrix „Transformation of land and buildings", 2018

The decommissioning of the industrial facility and the administrative area together with the ecologization of these surfaces have lowered the environmental impact to the *average* level; a higher impact level is nevertheless observed in the areas affected by ore and preparation material deposits located on the former technical sulfur preparation plant. This fact is due to the existence, of native sulfur and technical sulfur, brought after the cessation of activity in the Tehncial Station Argestru-Vatra Dornei, where it used to be oaded into wagons and transported to the beneficiaries and also mixed with the exploitation sterile.

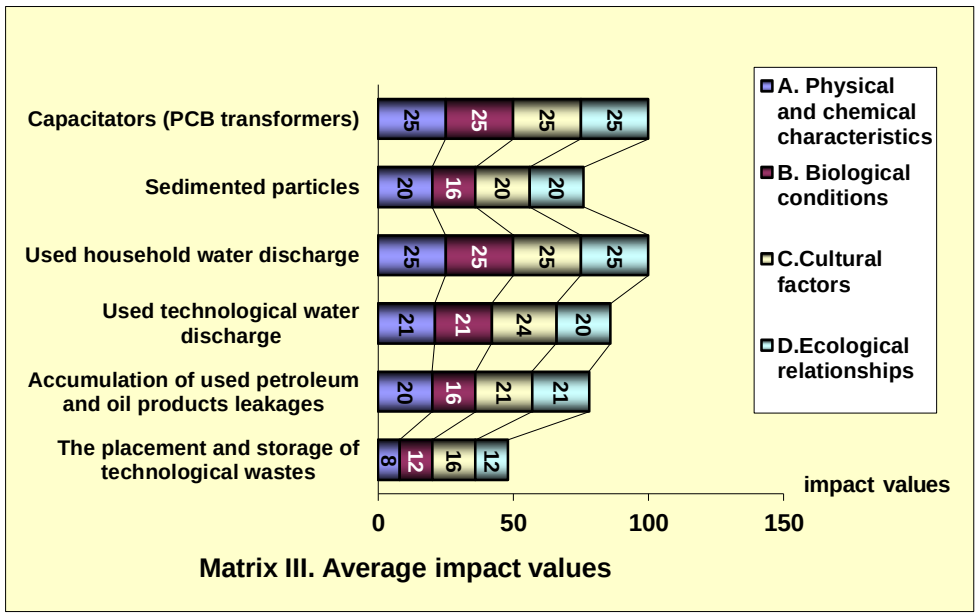

Fig. 9. Average values for the matrix „Depositing and treating wastes", 2018

After careful observation and topographic measurements in the period between 2006 and 2008, the existence of an active landslide of the extractive waste deposit Puturosu has been confirmed; a volume of more than 80.000 cubic meters has been observed to move over a distance of aprox. 2000 square meters.

The tailing dumps show deep gullies (Ilva, Pinu) that enable the transport of sterile material. All documentation and scientific studies point out that the tailing dumps, despite not covering the biggest surface in the hydrographic basin Neagra, are the main source of debris transport into the water courses; geochemically, the quality of the sediments from the Neagra Șarului River and its pH values (incompatible with benthic life) are strongly affected by the river's upstream sector.

Therefore, the impact level of the tailing dumps on the physical and chemical characteristics of the surrounding environment is estimated to be at a *significant* level, according to our classification, and *major* for the biological conditions and ecological relationships.

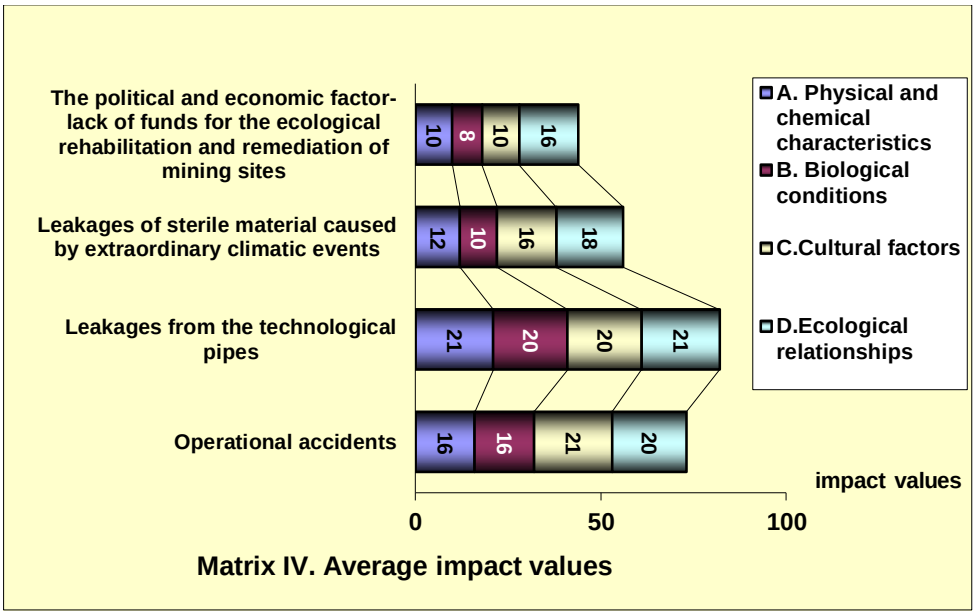

Fig.10. Average values for the impact matrix „Accidents and risk factors", 2018Valori medii impact pentru matricea „Accidente şi factori de risc", 2018

The lack of funding for finalizing the safety and ecologization measures in the mining perimeter Călimani represents one of the biggest risks with *significant* impact in the area, manifested by a constant level of pollution.

Several noteworthy events occured after the cessation of activity:

– sporadic (and current) accidental leakages of fuel oil from the decommissioned deposit of petroleum products downstream, amplified by climate conditions;

– in 1999, the retention basin of the microhydro plant on the Neagra Șarului River was cleaned. The samples taken immediatly afterwards reveal an acidic pH of the river water. The degradation of water quality in both the Neagra Șarului and Bistrița rivers is a direct consequence of slurry leakages form the basin and an indirect consequence of the pollution from the Mining Expliotation Călimani; the slurry mentioned stems from the flotation sterile that accidentally ends up in the Neagra Șarului river bed.

– in 2008, due to abundant rainfall, the collecting well of the Dumitrelu Creek situated behind the tailing pond became clogged, causing the creek to transport material from the body of the tailing dump towards the Neagra River. In addition, sterile material accidentally deposited in the river bed contributed to the decrease in quality of the Bistrița river, amplified by the high flow rate and turbidity .

Conclusions

The exploitation-preparation of sulfur in Călimani caused visible repercussions on the environment and, to a high degree, quantifiable effects on the natural environment and human communities. We would therefore like to sum up the following conclusions drawn in this paper:

- The data used for the impact evaluation by means of the matrix method have been also used for calculating the global pollution index(GPI) ; if at the moment of the cessation of the mining activity and before quantifiable cessation works have been initiated, the global pollution index calculated was 3,03 (a number indicating an environment affected by human activity with disturbances to all its life forms), whereas in 2018 the value of the GPI calculated was 2.06 (not very different from the initial value, indicating in this case an environment affected by human activities with discomfort for all life forms).
- Despite the fact that in 2008 cessation and ecologization works have been commenced on the mining perimeter, these did not manage to cover all the impact areas, the mining unit being merely an enclave in the National Park Călimani. These areas continue to affect the ecological coherence and the quality of the ecosystem services, as reflected in the matrix impact evaluation- the result was a *major* to *significant* level of impact through

→the fragmentation of habitats- according to studies used for the elaboration of the integrated management Plan for the National Park Călimani, this phenomenon affects the conservation of the favorable, scientifically correct association of spruce and Swiss pine;
→the destruction of vegetation in the mining perimeter, according to the same study, majorly affects the long term viability of both small mammal populations (*Rhinolophus ferrumequinum* Schreb., *Miniopterus schreibersii* Kukl, etc.) and large mammal populations (*Canis lupus, Ursus arctos L., Lynx lynx, Felis silvestris* Schreb.) ;
→the diffuse pollution of surface waters caused by uncovered surfaces and tailing dumps free of vegetation exerts significant pressure on the aquatic habitats.

- The safety/ecological rehabilitation measures on the tailing dumps have been repeatedly discontinued ; not finalizing these works is an environmental issue *per se*, since the volume of the sediments carried by the precipitation water downstream into the hydrographic network is considerable ;
- The negative effect of unpurified waters from the mining area Călimani is perceptable through the change in quality of the final receptor, the Neagra Șarului River, with a measured pH of 2 and, before it discharge into the Bistrița River due to the intake of unaffected tributaries, a pH of 4,1;
- The exploration and preparation of useful mineral substances in this mountainuous area have caused an intense anthropization of the landscape;
- The exploitation cased the destruction of geological structures that were unique in the world such as the volcanic pseudokarst *Luana's Caves*.

References

1. Anca Ionce, *Impactul sistemic al activităţii de preparare a substanţelor minerale utile,* teza de doctorat (manuscris) (2010)

2. Mititelu, D., colab., , *Flora Munţilor Călimani*, Analele Ştiinţifice ale Universităţii „Al. I. Cuza" din Iaşi, Tomul XXXII, s. II a, Biologie, (1986) ;

3. Naum Tr., Butnaru E., *Munţii Călimani*, Ed. Sport-Turism, (1989);

4. Rojanschi V., Bran Florina. „*Politici şi strategii de mediu",* Ed. Economică, Bucureşti (2002),

5. http://bio.geoportal-mediu.ro/geoportalcalimani/catalog/main/harti

6. Databes: Environmental Protaction Agency Suceava, CONVERSMIN SA