

THE BROWNFIELD OF PĂDUREA NEAGRĂ (CRIȘUL REPEDE VALLEY)*

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Abstract

The presence and management of abandoned industrial sites (brownfields), which cover large areas of land in the Crișul Repede Valley Territorial Planning Unit, is a great challenge. Of the many abandoned industrial sites, the glass factory of Pădurea Neagră was selected in order to highlight the peculiarities of a certain typology of territorial occupation and use, which is representative for the studied area. The whole abandoned area was reserved entirely for the glass factory, which now finds itself in an advanced stage of degradation. As a peculiarity, one remarks that it is surrounded by the neighboring secondary homes, an area in full expansion. The industrial zone covers a significant part of the built-up area of the village (21%), preventing the development of the territory in question, while at the same time it creates an aesthetic disability for the small community which has only the perspective of tourism development. The revitalization of the community can be achieved through the rehabilitation/conversion of the industrial area, as a valid alternative to the inevitable urban expansion, as it will have a positive impact on the development of tourism. There are many uses which could be gained as a result of the rehabilitation, but the most appropriate use would be a multifunctional center of creation, accompanied by a small glass museum and a workshop that would produce small-scale traditional glasswork, for tourism purposes.

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1. Introduction

The expansion of built-up areas represents an unavoidable ubiquitous trend and the management of space designed for present or potential consumption represents a priority problem, no matter the size of the settlement. In these conditions, the rehabilitation/revitalization of brownfields covering important areas becomes a necessity.

Space was and is a cultural, historical and social product which cannot be dispossessed of significations, ideologies, inherent mythologies, no matter how we try to “abstract” it in order to manage it more wisely (Minea, 2007, p. 69).

The presence and management of brownfields has become a major issue all over the world. In the European Union, it is considered that their rehabilitation/conversion may play an important part in the revitalization of certain urban districts and areas, as a viable alternative to the unavoidable urban extension, because it has an impact on the social, economic, ecological and cultural development. The issue of revitalization of decommissioned urban areas which is included in the URBACT II program / Priority Axis 2 – Subject “Environmental Issues” and/or “Integrated Development of Disadvantaged Areas and Poverty Risk Areas”. URBACT II, a European territorial cooperation program, ensures non-refundable financing for projects concerning sustainable urban development. Urban local governments, universities and research centers are among the eligible applicants. Financing is granted to projects which propose sustainable and efficient solutions for: urban development, land use management and urban regeneration and spatial planning (The Urban Development Network Programme URBACT II, 2007).

The common European initiatives concerning the reconversion of decommissioned industrial sites and their reuse based on the community strategic orientations, within the subject entitled “The territorial dimension of the European policy on cohesion”, are grouped into five fields:

(1) The exchange of good practices regarding the innovating approaches for the physical rehabilitation of decommissioned industrial sites and the higher attraction of urban areas;

- The exchange of good practices in techniques of rehabilitation of decommissioned industrial sites, and strategies, including instruments and technologies, for the assessment of the effective costs for their decontamination;

- Economic and social incentives for the rehabilitation of decommissioned industrial sites; and

- Sustainable social, ecological and economic solutions for projects aiming at the integration of regenerated decommissioned industrial sites in the urban environment.

(2) The coordination of the EU land use policies and funds and the avoidance of “greenfield” sites;

(3) The development of partnerships between the actors involved, including the public participation within the integrated and coherent approach to urban development (governance);

- The strategies of communication for the rehabilitation of decommissioned industrial sites and instruments for the improvement in this sense and to fight against the loss of greenfields.

(4) The creation and development of urban planning long-term development plans and instruments for all the actors involved in the promotion of sustainable economic development and creation of new jobs, including monitoring and assessment systems;

- Instruments for the identification of decommissioned industrial sites and priority given for their rehabilitation; and

- Information and monitoring systems.

(5) Waste deposits, including historical waste deposits;

- Instruments and techniques of stock assessment; and

- The rehabilitation of these sites (Politica de Coeziune a Uniunii Europene, 2007).

Since 1990, industry underwent a large restructuring process at the level of the entire country. A number of industrial branches experienced a generalized decline or even collapsed. Industrial decline in Romania was determined by a series of socio-economic mutations which occurred as a result of the restructuring started after 1990, as a consequence of the different manner of approaching the economy that was characteristic for the Central and Eastern European countries, part of the former Communist bloc (Earle, 1997). The inherent result was the closing down of many factories, mining sites, and industrial platforms. The process was doubled by their abandonment and implicitly the loss of their intrinsic useful values, as well as the ones belonging to the lands they covered.

The analyzed area Crişul Repede Valley Territorial Planning Unit (TPU) is one of the 11 TPUs in Bihor County, and Aleşd town is designed as its development center (Figure 2).

At European level, the associations between local territorial communities (either rural or urban) created inter-community structures, the so-called “project territories” or “intercommunities”, in order to support mutual development projects. In Romania, this new types of territorial cooperation are still in an incipient stage. The setting up of TPUs by the Regional Development Agencies together with the County Councils is an example of optimal territorial development (Petrea, 2008).

Following the research on the Crişul Repede Valley TPU, one could remark an amplification of the phenomenon of industrial abandonment. The setting up of the disadvantaged zone of Aleşd – Popeşti – Derna has been ineffective (Figure 1).

Between 1999 and 2008, the town of Aleşd was part of Aleşd-Popeşti-Derna disadvantaged area (Government Emergency Ordinance no. 24/1998, modified by Law no. 20/1999). During this period, the area benefited from a series of advantages to attract investors, so as to ensure economic revitalization. Investors were given a package of substantial long-term fiscal facilities (exemption from the payment of the customs taxes and the value-added tax for the machines, tools, installations, equipment, means of transport, other imported redeemable goods, in order to make

investments in the area; exemption from the payment of customs taxes for the imported raw materials necessary for the materialization of their own production in the area; exemption from the payment of the profit tax during the period of existence of the “disadvantaged area”; exemption from the payment of the taxes collected for the change of destination or the removal from agricultural use of those lands needed for achieving the investment).

The setting up of the Aleşd-Popeşti-Derna disadvantaged area did not bring about the anticipated results because the facilities were gradually removed during the last years, and so the majority of trading companies postponed their investments in new production capacities and therefore in the creation of new jobs.

The new industrial objectives or the new buildings are made on new spaces, most of the times agricultural or forest lands, which leads to a high consumption of lands with other destination and consequently to the decrease of green areas. That is why the rehabilitation has a big ecological, social and economic importance (OFEV, 2009).

2. Objectives and methodology

Within the analyzed area, there are many brownfields and among them there is also the one belonging to the glass factory of Pădurea Neagră, a village located in the administrative unit of Aleşd town. The majority is concentrated in the communes of Suncuiuş, Vadu Crişului, Borod, Aştileu, which compose the former disadvantaged zones in the analyzed area (Figure 1).

Pădurea Neagră village was selected to highlight the peculiarities of a certain typology of territorial occupation and use, which is representative for Crişul Repede Valley. Consequently, the major objectives of this study are: (1) the quantification of the manner of using the habitat potential in correlation with the abandoned industrial sites; and (2) the setting up of alternative solutions, which are identified according to the optimal perspectives of evolution.

The study was based on field research, analysis of topographical maps and satellite imagery, bibliographical documentation and data collected from Aleşd Town Hall. The elements composing the urban landscape have been analyzed, stress being laid on the functional, statistical, cartographical, diagnostic and prognostic analysis. The comparative method has been used to highlight the original aspects.

3. Pădurea Neagră – traditional center of the glass industry. Background

The town of Aleşd is the urban center whose economic evolution is illustrative for the TPU space polarized by it. The town has a large administrative area (7,195 ha) because the villages of Tinăud, Peştiş and Pădurea Neagră are also included within it. Located at 20 km north of Aleşd, Pădurea Neagră has a privileged position within the administrative territory because it is located in an attractive mountainous range, Plopiş Mountains. Its emergence is related to the setting up of the glass factory in the first half of the 19th century (Petrea, 2009a).

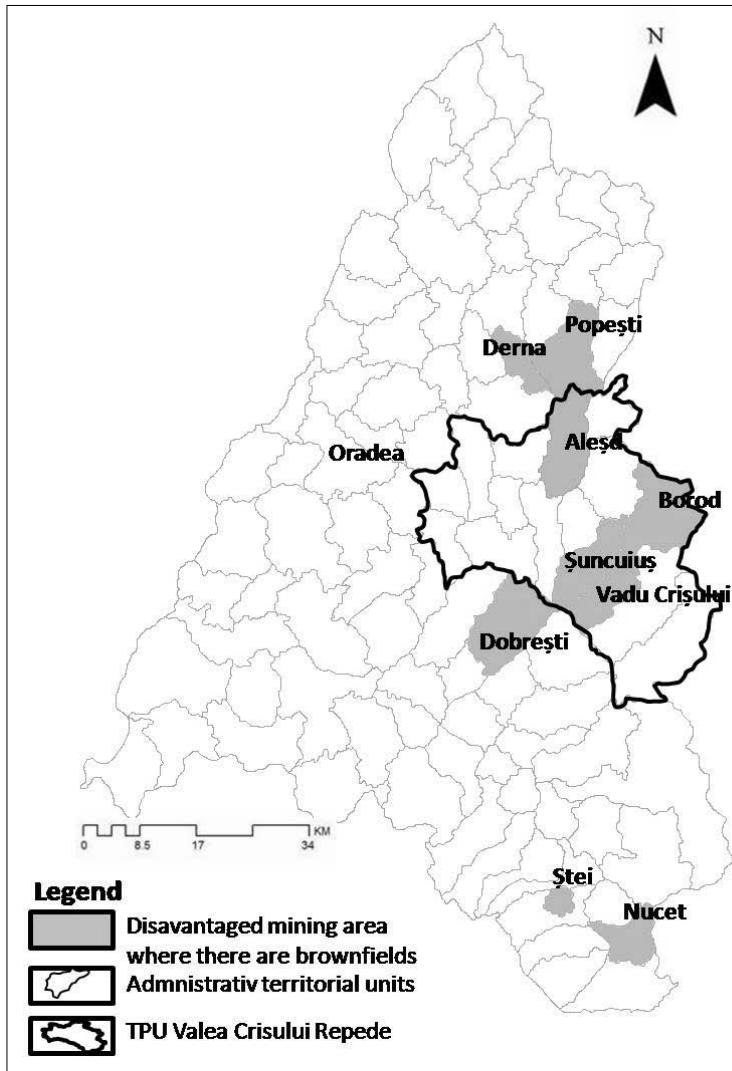


Figure 1: The disadvantaged areas of Crișul Repede Valley TPU, Bihor County.

The craft of glass processing at Pădurea Neagră is the result of the cooperation of two factors: on the one hand, the need to get additional income by capitalizing the labor force existing on the lands of the noble families, and on the other hand, the presence of some important local resources (quartzite sand collected from the stream bed of Bistra River and the wood used in the heating process, gathered from the steep slopes of the valley). Another advantage was the hydrodynamic power of Bistra River, on which water mills were built to grind the quartzite.

According to archive documents, the origins of this activity date back to around 1770, when a glassblowing machine is recorded. It was needed to raise the temperature for the processing of quartzite, as wood has a low calorific value. The setting up

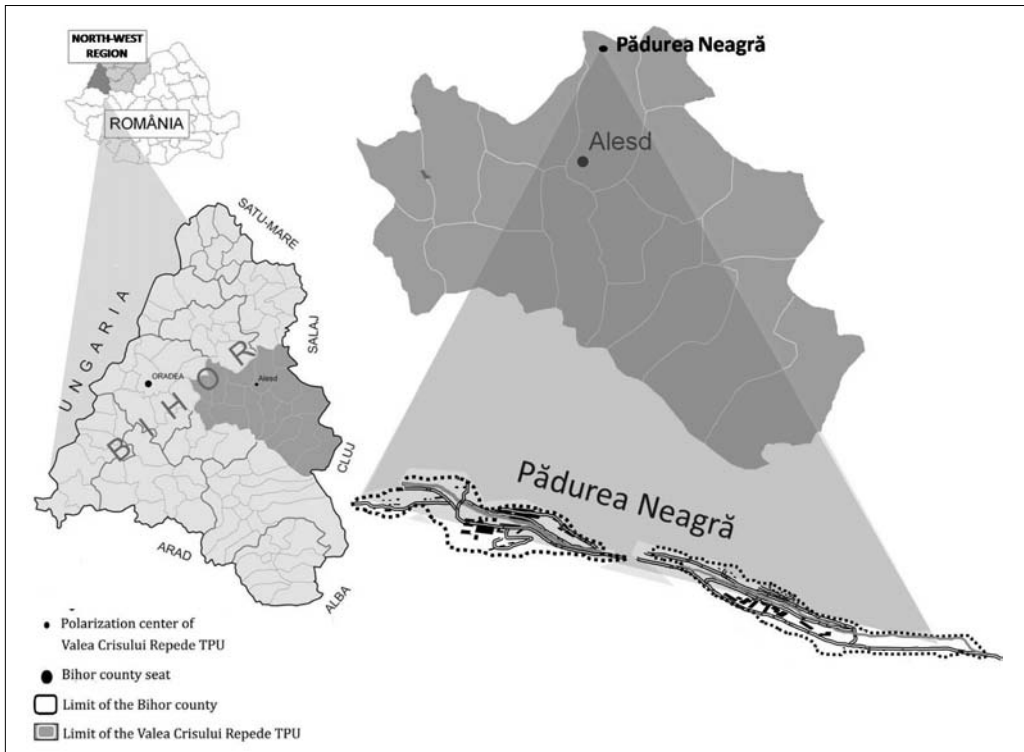


Figure 2: Pădurea Neagră. Geographical location

of the glass factory at Pădurea Neagră seems to date back to 1798, as justified by a founding act.

The year 1820 has a major importance in the history of glass making, because it was characterized by measures aiming at developing the activity. Glass craftsmen were brought in and buildings were raised, including residential homes. The glass craftsmen were brought from Slovakia by Baron Banfy (Siracky, 1980).

Another important stage in the development of glass production was the period between 1860 and 1890. The coal-based (more precisely lignite-based) gasogene ovens are introduced, with coal from Budoii mine, and the connecting road to Aleşd is finished.

Until around 1886, the village of Pădurea Neagră did not exist from an administrative point of view. The glass production was affected throughout the time by the numerous fires which emerged at the glass factory of Pădurea Neagră.

A good period was the one between 1910 and 1917, when the value of production reached 700,000 crowns. One may remark the following products: glass sets, lighting equipments, opal glass, glass for pharmacies, chemistry laboratories etc. A part of these products were exported to many countries in Europe and even Asia (Rozin, 2008).

The 1922-1937 period represents another important stage when the glass production was diversified and increased, despite the economic crisis (1929-1933). A possible explanation is the production of lamps. During the communist regime, the factory embraces the process of planned production, reaching a number of more than 1,000 workers.

After 1989, the high production costs due to the exhaustion of local resources and the need to bring them from long distances demanded its privatization. The quartzite was brought from South-Eastern Romania, Dobrudja, the commune of Turcoaia (Seghedi, 1988). The problems emerged on the one hand due to the weak management of the factory, and on the other hand due to the increased competition, which eventually led to the closing of the factory gates in 1996 (Pința, 1991).

4. Demographic and economic aspects

The closing of the factory in 1996 has had important consequences for the population. Two thirds of the population is not active, and almost half is made up of retired people. Only 21% of the population is employed (INS, 2008). The high emigration rates are determined by the departure of the Slovak population. The Slovaks of Pădurea Neagră now represent only 16% of the population because the majority of them left for Slovakia or Hungary to get a job suitable to their skills (Petrea, 2009a). There is also an internal migration of some people to the communes located in the basin (Filimon, 2009). The migration balance, defined as the difference between entries and exits from the system in reference to the number of inhabitants of the area provides a clearer image of the population mobility. Its analysis reveals the fact that there is a negative value of -44.2‰, as a result of internal and external emigration (Filimon, 2009). This situation has both demographic and social-economic repercussions.

The town of Aleșd concentrates 36.3% of the 950 economic units that are active within the TPU. The active economic units of Aleșd (25.8% in industry, 72.8% in services and 1.7% in agriculture) attract most of the workers from Pădurea Neagră (INS, 2008).

In the economy of the village, the weight of agriculture was insignificant, and industry is the dominant activity (INS 1992, 2008). After 1990, there was stagnation in the development of the area, before the emergence of “lohn”-type light industry. The economic reinvigoration, due to the development of the lohn industry, emerged in 1999, once Aleșd was included in a disadvantaged area; it was not however felt in Pădurea Neagră. Between 2000 and 2008, two lohn-type industrial units with foreign (Italian) capital were set up in Pădurea Neagră. They were specialized in footwear production, but only functioned for a few months (Petrea, 2009a). The workers from Pădurea Neagră are employed in small industrial units within the TPU, involved in the capitalization of mineral resources, or in the processing industry: food, footwear and furniture (Filimon, 2010).

5. Planning aspects

From an urban planning perspective, the settlement has some characteristics which are not defining for the rural space including it. It may be classified rather as a small urban settlement with a linear structure, dominated by a monofunctional industrial activity. Thus, one remarks many differences at the level of the street network, the functional zoning (the presence of a large industrial district) and housing. The simple street network, adapted to the morphology of the site, generally consists of the thoroughfares which ensure the access to the settlement. The inner streets are poorly represented and they are in fact alleys to access the residential blocks of flats. A new street is about to emerge on the right bank of Bistra River, giving access to the lands where secondary homes (holiday homes) have been built recently.

The functional zoning of the settlement is characterized by simplicity: the first RTU (Reference Territorial Unit), on the upper stream of Bistra valley, has a residential function, while the second one (RTU 2) has two, industrial and residential functions (Figure 3a).

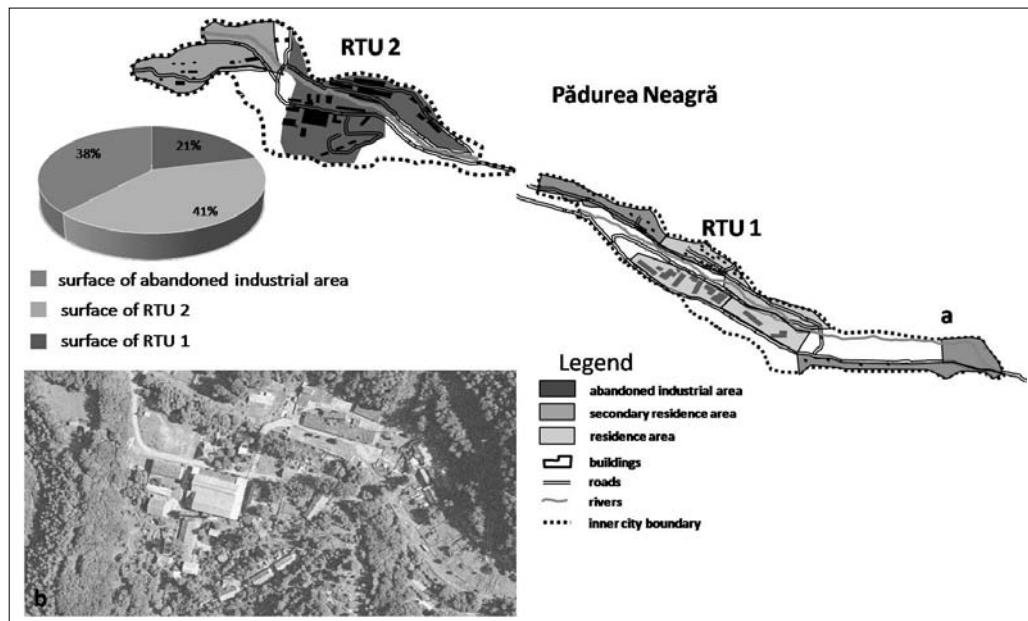


Figure 3: Pădurea Neagră (a) Functional Zoning, (b) Aerial photogram (ANCPI, 2006)

The main compositional axis is the valley of Bistra. Along it, one remarks the tendency of territorial extension due to the ever-growing number of holiday homes built at both ends of the built-up area.

The industrial zone belonged exclusively to the glass factory. The buildings meant for production on the left bank of the Bistra valley, together with the office buildings on the right bank, used almost entirely a small enlargement of Bistra valley, where the second body of the built-up area of the settlement lies.

After passing through diverse types of property, the factory is now in an advanced state of degradation. As a peculiarity, one remarks that it is surrounded by the neighboring secondary homes, an area in full expansion. Most of these dwellings are the property of retired people and inhabitants of Marghita town.

6. Conclusions

The industrial zone covers an important part (21%) of the built-up area. It hinders the spatial development and at the same time it represents an aesthetic disability for the small community which no longer has other perspective than tourism development.

The narrow morphological environment where the settlement developed does not have enough reserves for spatial expansion. At present, the new buildings concentrate at the two ends, leading to the lengthening of the built-up area at the expense of new lands. In these conditions, the development strategy of the settlement should take into account these aspects with major social, economic and planning effects.

The revitalization of the community can be achieved through the rehabilitation/conversion of the industrial area, as a valid alternative to the inevitable urban expansion, as it will have a positive impact on the social, economic, ecological and cultural development. There are many destinations which could be acquired as a result of the rehabilitation: an art creation center, museum, club, recovery center, multifunctional center etc.

At present, tourism is characterized by the presence of a significant number of holiday homes (44), a school camp, sporting (motocross and ATVs), educational and rural tourism (Petrea, 2009b).

The trend towards the tourism development of the village would be therefore supported by such a center where tourists would experiment a traditional craft for themselves. The presence of a glass museum would increase its attractiveness and encourage especially the development of school-based and rural tourism (Petrea, 2004). In Europe, there are many success stories. The architect Patrick Bouchain, who considers that industrial architecture has a great social value, transformed industrial sites into “cultural factories”. There are no such examples yet in the area of study.

The most appropriate destination would be a multifunctional center, accompanied by a small glass museum and a workshop that would produce small-scale traditional glasswork, for tourism purposes. It is proved that unusual, original destinations, which can provide a unique experience for the tourists, meet the greatest success. Rehabilitation involves large investments and high costs. It is therefore necessary to attract investors or to access European funds.

The Development Strategy of Aleșd Town (Local Council Decision no. 31 / 2008) outlined the major directions to achieve the sustainable development objectives. Regarding Pădurea Neagră and the issues approached in this paper, stress should be laid on the available structural funds in the Rural Development Operational

Programme. For the rehabilitation of the glass factory, it is possible to access the funds provided through the Regional Operational Programme, Axis 4: Support for the Development of Regional and Local Business Environment, Field of Intervention 4.2 – “The rehabilitation of polluted and unused industrial sites and preparation of new activities” (PNDR, 2009).

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