ASPECTS OF INTRODUCING THE CADASTER INFORMATION SYSTEM OF CULTURAL HERITAGE SITES WITHIN THE HISTORICAL MARAMURES

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Abstract: The cadaster of cultural heritage sites, as a subsystem of general cadaster in Romania, aims to record and realize a systematic inventory of the historical cultural sites. The Laws and specific regulations concerning the cultural heritage and cadaster provide the framework for the management of real estates listed as historical monuments. The paper proposes an overview of steps on realization of the cadaster information system of cultural heritage sites with representative aspects within the Maramures Depression, in northern part of Romania, as one of the richest in such cultural and historical sites. In conclusion, it is necessary to develop and implement a new software product for the integrated management of historical cultural sites to contribute to the sustainable development of the referred area.

Keywords: cadaster of cultural heritage sites, information system;

1. PRODUCTION MANAGEMENT FEATURES OF LIGNITE MINING PITS

The cadastre reflects the relationship between the human being and space, being a product with multiple technical, legal, economic and also cultural valences. It has its origins in the political, social and economic history of the territories where it is applied. By its historicity, the cadastre becomes the witness of the spatio-temporal organization of the communities to whom it is addressed. The documents created by the cadastre works done in different historical times are sources of knowledge and documentation of the built space and of that space with various other destinations within the perimeters administered by the local communities whose space was being inventoried. In this respect, the cadastre of historical cultural heritage directly reflects the cultural valences of the cadastre. The importance of this subsystem of the general cadastre becomes evident during the devising of any sustainable development strategy at different levels: local, regional or national. In any such strategy, the protection and

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revaluation component becomes essential; assuming the development of specific strategies with projects and measures related to the protection, conservation and sustainable use of the built heritage in order to achieve sustainable territorial development.

Such a strategy of local development has been conceptualized starting from the needs and trends of local development by The Association of Intercommunity Development "The Maramures Land" (AID), which represents an associative entity of the town halls from the historical Maramures, with the role of attracting grants and of achieving cross-border and international cooperation structures for fundraising and investment in the associated communities. This is the largest territorial association in the county, proposing opportunities for revitalizing Sighet as the center of the historic region of Maramures, organizing a platform that will become the driving force to initiate, implement and coordinate investment projects in the town halls which are members. One of the strategic priorities of the sustainable development strategy proposed by AID "The Maramures Land" is the preservation and revitalization of local cultural heritage, especially those inscribed on the List of Historical Monuments 2010. It was took into account mainly the exploitation of the built heritage through urban revitalization projects, the exploitation of the archaeological heritage by providing access to archaeological sites and organizing outdoors exhibitions. To achieve this highly complex objective which requires multidisciplinary skills, it was necessary to outline an interdisciplinary research project with multiple objectives that constitute basic documentation for preparing the themes for designing the specifications, for purchasing the feasibility studies, for investment objectives relating to development works and documentation for approval of intervention works.

In this project it was proposed to be built an informational system of cadastre for the historical monuments in the mentioned area whose implementation was drawn up following the following plan:

- consultation of a specialized bibliography and the pre-establishments of a set of specific conceptual delimitations;
- documentation regarding the laws concerning the legal status of the historical monuments and also concerning the introduction of the specialized cadastre;
- evaluating the current state of the documentation of monuments, ensembles and historical sites in terms of management of these categories of objectives;
- documenting the progress in achieving the cadastre of historical monuments;
- developing a working methodology to achieve topo-cadastral work in accordance with the regulations in force;
- developing a methodology for obtaining and editing final results;
- the need for making a software for the management of historical monuments.

1. The consultation of specialized bibliography and the pre-establishments of a set of specific conceptual delimitations.

The premises of the research started from the first conceptual delimitations provided in Romanian legislation, namely the definitions of art. 3 of Law no. 422/2001 on the protection of historical monuments.
a) monument – a building or part of a building, together with the equipment, artistic components, interior or exterior furnishing elements that are part of these, as well as commemorative and funerary artwork, for public forum, together with the topographically delimited adjoining land, which is of cultural historical testimonies from an architectural, archaeological, historical, artistic, ethnographic, religious, social, scientific or technical point of view;

b) ensemble – a coherent group in terms of cultural, historical, architectural, urban, rural or museum construction, which together with the adjoining land forms a topographically defined unit which constitutes a cultural-historical witness significant from an architectural, town planning, archaeological, historical, artistic, ethnographic, religious, social, scientific or technical point of view;

c) site – a piece of land topographically delimited including those natural human creations that are cultural historical testimonies in terms of architecture, urban planning, archaeological, historical, artistic, ethnographic, religious, social, scientific, technical or cultural landscape.

According to the meanings of legal definitions, the reference works consulted and the proposed for consultation report to the urban and rural architecture in Maramures, the museology and ethnographic museotechnique, history and memoirs of the mentioned area, the archaeological research and specialized archaeological repertoires drawn on localities, bibliography on the preparation of planning documents, as well as works related to the making of the historical monuments cadastre. Wherever possible, there was retained reference works of renowned authors for each of the areas listed. References and sources proposed for consultation give a horizon on the current state of knowledge of the issues referred to members of the mentioned association.

2. The documentation regarding the laws concerning the legal status of the historical monuments, and the introduction of the specialized cadastre. In this respect, we took into consideration the following categories of legislation:

- the European law and European conventions to which Romania joined, as well as the charters, resolutions, declarations and recommendations of specialized international bodies agreed by UN,-UNESCO and CE are also treated as international law although not normative;

- legislation on the legal regime of the monuments, ensembles and archaeological and historical sites available online on the website www.cimec.ro;

- laws concerning the functioning of legal entities responsible for the management of historic monuments available online on the website mentioned; laws on urban and spatial planning available on the website www. mdrap.ro;

- legislation regulating the introduction of the cadastre in Romania, available on the site ANCPI;

3. Evaluating the current state of the documentation of monuments, ensembles and historical sites in terms of management of these categories of objectives. In achieving the proposed objective we consulted the existing documents at Maramures County Directorate for Culture, Cults and Heritage which holds a small part of records
files for monuments, ensembles and historical sites listed on LMI 2010. The ranking, representing the legal procedure by which a building access regime for the protection of historical monuments, attested by its inclusion in the List of Historical Monuments, was done on the basis of documents that were submitted to the National Commission for Historical Monuments of the Ministry of Culture and they were not available for documentation at this stage of research.

According to article of the Law no. 422/2001 on the protection of historical monuments, the filing folder includes mainly:

- the technical documentation containing the analytical data sheet inventory, situation plans, a survey of the current building, a photo documentary with interior and the exterior of the building, the surroundings of the site and, where appropriate, data on the use of property and the technical expertise;

- the historical documentation, namely the historical-architectural study drawn up by a specialist certified by the Ministry of Culture in the field of historical monuments;

- the documentation regarding the legal situation containing copies of documents confirming ownership or other real rights over the property or documents issued by local government authorities, together with copies of the cadastral plan of the land register. As a result, a significant amount of the required documentation to make the informational system of the monuments, ensembles and historical sites of mentioned area are founded in these files. Therefore, some of these documents, for reasons of efficiency, can be updated by project promoters with the agreement of the specialized structures of the Ministry of Culture. By consulting the List of Historical Monuments, LMI 2010, the result is that the historical Maramures area comprises a relatively large number (over 200) of monuments, buildings and historic sites and Sighetu Marmatiei is by far on the first place with more than 100 such targets.

4. Documenting the progress in achieving the cadastre of historical monuments. To achieve this objective of the research, given the large volume of information that is supposed to be managed, we can at this stage propose a methodology of documentation that can be applied in specific cases. Thus, for the sporadic cadastral works relating the notation of buildings qualified as historical monuments, it is necessary to consult the Eterra geoportal of the National Agency for Cadastre and Land Registration (ANCPI), with the last version, Eterra 3, in which the authorized people to perform cadastral works have direct access to the cadastral plan and the information in the land books (within certain limits), both collections of data being updated and available in real time. Thus the authorized person can proceed with the demarcation and communication of an affected area of interest of a historical monument, drawing a polygon within the cadastral plan from the system representing the focused area, communicating the request to the staff of the territorial Cadastre and Land Registration Office BCPI to process the application. The areas of interest can be identified using the eGISpat application. The eGISpat program, conducted through the Ministry of Culture in 2005 to achieve a geographic information system (GIS) for real protection of national cultural heritage (archeology and historical monuments), was the result of a partnership between the Ministry of Culture and ESRI Romania. eGISpat is,
As is described by ANCPI, a comprehensive database of registration of the immovable property which stores, analyzes and correlates multiple data types, spatial, non-spatial, cartographic, photographic, etc., in order to obtain the necessary information for decision making in management activities, restoration, conservation and heritage building. For the purposes of information on the list of historical monuments and their location on the map, it can be viewed and used by the general public as an interactive online applications with capabilities of searching a historical monument by the following criteria: LMI 2010 code, city, address, timing, selection by the criterion county and navigation and identification directly on the map using specific instruments. The monuments, ensembles and historical sites are represented as a vector polygon perimeters placed on geographic coordinates. The legend allows loading and unloading the map by checking the thematic layers that compose it: LMI (warning that there are objectives registered in LMI in that locality), ensembles, monuments, sites, inventory, roads, rivers, communes, counties, and towns, each with its distinctive representation. The data provided by Eterra 3 refers to the related works for the registration of a building in the integrated system based on the sporadic works of cadastre and land registry, at the request of some interested people or upon notification by the competent authorities. In case the concerned area is not contained in such records, there is a need of consulting the existing cadastral documents in the current territorial archives BCPI or the National Archives, respectively maps, cadastral plans, land registers and books for the areas around the historical monuments. This procedure can be completed by georeferencing the scanned maps by using a minimum of four checkpoints on the ground and used to determine the location of the boundaries of historical monument buildings. The document also includes other specialized cadastres, an urban cadastre being, for example, developed for part of the historic center of Sighetu Marmației, and for forest areas that include landscaped areas within the surfaces there are required silvic plans and possibly parcelled description for the studied area.

5. Developing a working methodology to achieve topo-cadastral work in accordance with the regulations in force. The proposed methodology aims to establish working procedures to be followed in scoring in the land the buildings that are listed as historical monuments. Registering is according to the article 18 from the Annex of Order 700 from 2015 of the ANCPI Director, an entry through which acts, legal facts or legal relations regarding personal rights, status or capacity of persons, in relation to buildings recorded in the land register become opposable to third parties or they are included with informative effect. In the same law is assigned that the registration of the historic or archaeological site quality of a real estate property is nonrestrictive achieved at the request of any interested person (the land owner registered within the land book, bearers of other real rights, the Romanian Government, Ministry of Culture and the county offices for culture and cultural heritage, respectively Bucharest similar offices, the National Commission for Historical Monuments, National Archaeology Commission, the National Commission Museums and Collections, as well as
associations and foundations that have as object of activity protecting the historical monuments according to the law or the articles of association, based on the classifying order issued by the Minister of Culture and Religious Affairs and published in the Official Monitor of Romania. The historic monument attribute of a real estate property, in accordance with Law no. 422/2001 on the protection of historical monuments, had to be registered by the owner in the Land Registry, without charge, within 30 days from the date of registration of the Order of Ranking in the Official Monitor of Romania, Part I. In general, the cadastral documentation prepared for the registration in the land registry in the case of historical monuments and archaeological sites are similar of those first the first registration in the integrated system of cadastre and land registry.

Making the cadastral documentation involves the following steps:

- Identification of the location of the real estate on its natural or conventional limits prior to work execution followed by technical documentation which comprises sampling the current situation, according to the records held by the owner, in relation to the existing site elements and also requesting updated information from the database of Territorial Office / District Office.

- Implementation of field and office works involve choosing the method of work followed by the surveying works to determine the configuration, location and size of the real estate, achieving connection the surveying networks for thickening and lifting, lifting the planimetric cadaster details located on the boundary and inside the real estate, collecting attributes, verifications and validating existing data. The parcels components of the real estate that have different categories of use will be determined through expeditious methods. The permanent buildings located within the real estate will be represented by their ground level footprint. The kind of fences will also be written down.

- Drawing the analogue and digital documentation –. The digital part will include the site plan and boundaries and also the cpxml file. The analogue file will include a number of standard forms, copy of the classification order, copy of the land book information excerpt real, the coordination inventory of stationing points, the analytical calculation of the land, the technical memorials, topographical description, the area plan and delimitation on an appropriate scale of real estate, surveys of buildings, where appropriate, the framing plan of the real estate, so the property can be located and a property statement regarding the identification of the limits of the measured real estate. From the field practice there can be seen the precarious state or even the lack of geodetic or topographic points from the thickening geodetic network across a real estate classified as a heritage site or near it. These shortcomings can be filled using GPS technology to determine new points using the static method with increased residence time. On these new stationing points determined points, a total station could be set to determine new thickening points through the radiation method. The property regime of the real estates included in the List of historical and archaeological sites is diverse and it creates difficulties in achieving the subsystem of historical sites cadastre. A large part of them are private real estate with various land use categories but
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formally classified as built historical monuments, architectural ensembles or
archaeological sites. The state also owns part of such real estate included in the public
or private domain of the territorial administrative units, in some cases the operative
management right being entrusted to local councils or museums within the area. Others
are owned by institutions of education, culture or religious ones and a small number of
such sites are located within the management units of forestry areas. To be noted that
RomSilva has introduced a new concept in the forest management in the FSC forest
certification system namely high conservation value forests (HCVF) based on six
criteria established by the FSC standard. According to the sixth criteria of the
mentioned standard, the management of forest areas with essential value for preserving
the cultural identity of a community or area, so those areas comprising their perimeter
historical monuments or archaeological sites too, is aimed at improving conservation
attributes considered at the time of determining these HCVF sites, prohibiting or
limiting any forest works.

6. Developing a methodology for obtaining and editing final results. The
registering procedure in the Land Book of the historical monument is an approach that
has its final aim its inclusion in the integrated system of cadastre and land registry. The
drawn up documentation for each real estate classified as a historical monument or
archaeological site is subject to approval procedure and reception of specialized
cadastral works with the award of a cadastral number. The elaborated result with legal
value in this case is the land book information excerpt issued following the opening of
a new entry in the land registry. For the mentioned research project there was proposed
the drawing of new final works to help the potential applicants for funding
applications.

- A code of built heritage for the city of Sighetu Marmatiei which will contain
precise regulations establishing the buffer zone for historical monuments, the approval
of intervention works as well as responsibilities and recommendations for local urban
planning regulations. 3D models drawn in CAD environment for the improvement of
the quality of documenting handouts. This requires the introduction of new
technologies in the process of documenting the historical monuments such as using
digital photogrammetry as well as some specialized software products in digital
imaging and processing into formats that can be used in the CAD environment. One
such software that does not require large budgetary effort is Photomodeler. The result
will be getting the 3D model of the building heritage.

7. The need for making a software for the management of historical
monuments. This finding derived from the addressed issues and from the questions of
the research is also the main conclusion of the research. At the national level there is
no software for the integrated management of historical monuments and the created
documents only serve to certain punctual objectives. The EGISpat program mentioned
above partially covers the management needs of historical monuments although it is
made on GIS platform with the ability to integrate and correlate spatial data and
attribute data. It was created as a pilot project of digital mapping of historical
monuments and it only covers limited user needs, serving as a medium for public information on the location and configuration of the buildings included in the List of Historical Monuments. From the perspective of the management of monuments, ensembles and historical sites, the realization of a computerized land records on buildings classified as historical monuments is a tool for their effective management. The validation of the research results will be considered as accomplished with the development of the proposed integrated strategy developed by AID ”The Maramures Land”

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