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Part 10 – Moldova

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Author(s) Ungheni City Hall
Iurie Cujba, Ina Olearciuc, Tatiana Talpă, Victoria Darie

With additions from Michaela Zorko & Gábor Tarcsay
Danube University Krems

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1. Characterisation of the pilot site



Figure 1: Aerial image of Ungheni

The Strategy for cultural property protection of Ungheni is focused on the Moldavian Pilot Site represented by the Museum of History and Ethnography from Ungheni. The Museum is located within the building of the Palace of Culture of Ungheni city, situated near the Prut river, flowing into the Danube river. The building hosting the Museum was built in 1987. A year after its construction, the Museum of History and Ethnography was transferred into the new premises, after which small renovations have been done in order to preserve the heritage kept inside.

The museum is situated at the basement of the building, with an exhibition space of about 400 m². The institution manages a heritage of over 10,000 pieces, some of national value, such as those from the collection of medieval archaeology, traditional fabrics, folk wear, the art of artistic woodworking. Institution's museographers carry out archaeological research and archival documentation.



Figure 2: Artifacts, Museum of History and Ethnography Ungheni

It is the only one museum, except the national ones, which edit a scientific magazine - "Pyretus".

The museum is as important as it hosts artifacts having a national and international value, such as discoveries from the Roman necropolis from Petrești and Medeleni sarmatian cemetery.

The cemetery from the 2nd - 4th centuries AD from Petrești is one of the largest and most representative funerary sites from the Roman era on the territory of the Republic of Moldova. A rich funerary inventory was also collected consisting of ceramic and glass vessels, ornaments and clothing, tools and utensils made of metal, stone, clay and other materials.



Figure 3: Artifacts from Roman necropolis from Petrești

Medeleni sarmatian cemetery findings are also kept by the museum. A rich inventory was discovered there, consisting of three pendants and 11 vestment gold applies, 13 agate beads and a clay spindle whorl. The analysis of the inventory items with chronological value and of other objects confirm the dating of discovered complexes in the second half of the century I - century II AD.

These important archaeological discoveries from Petrești and Medeleni are still to be

capitalized, the heritage pieces being preserved at the National Museum of History of Moldova in Chișinău and at the Museum of History and Ethnography in Ungheni.

The Museum of History and Ethnography, Ungheni is under the state protection, according to the Law of museums, No. 262 of 07.12.2017¹.

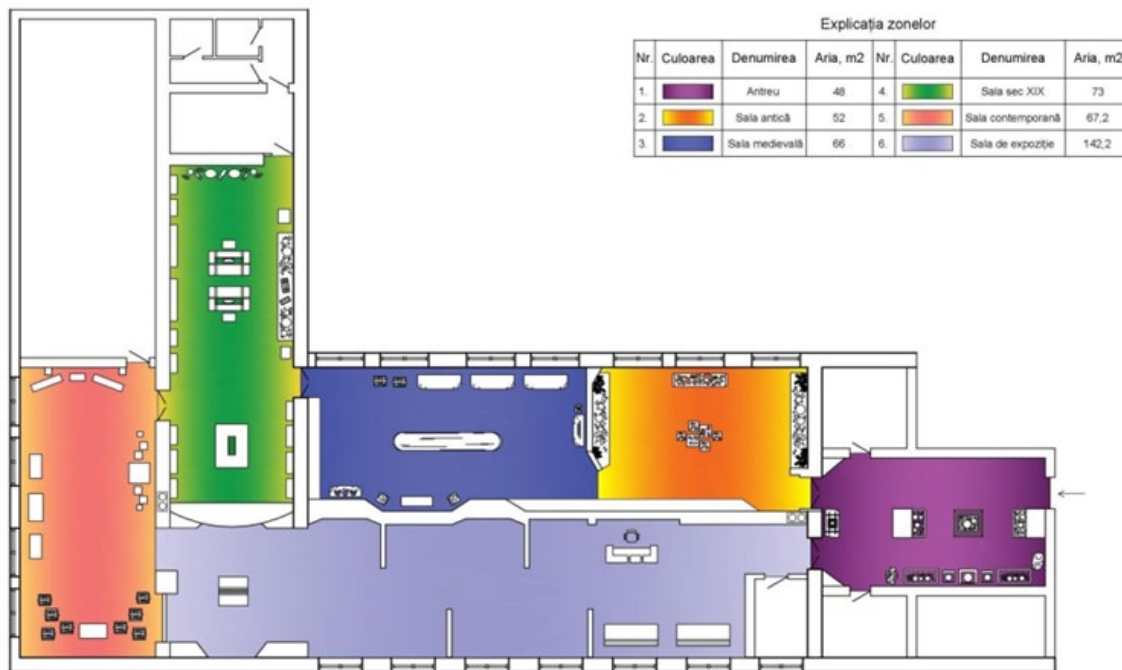


Figure 4: Zoning plan, Museum of History and Ethnography, Ungheni

¹ https://www.legis.md/cautare/getResults?doc_id=105639&lang=ro

Its location near the Prut river makes the settlement prone to floods, as the existing dyke needs rehabilitation works, being an improvised dam, constructed during the severe floods from 2008, which serves no more as a barrier against heavy rains. The zone is also vulnerable to landslides, although in 2016 there were consolidated and restored the Prut river banks and the construction of rainwater sewerage sections in the city of Ungheni. Due to fact that Moldova entirely is a seismic zone, the building is also threatened by earthquakes of over 7 Richter magnitude. In the same time, being an urban area, which is subject to constant construction works, this fact remains a risk for the building.

2. Threat analysis pilot site

Likelihood	Almost certain					
	Likely					
	Possible	Accidents Vandalism	Theft	Pests & Mold	Severe Weather Flood	Fire Earthquake
	Unlikely		Deterioration			
	Rare	General Security Violence				
		Insignificant	Minor	Moderate	Major	Severe
Impact						

The analysis is based on the SiLK Guidelines² and takes the whole area of the Museum building. As the Museum is situated in building of the Palace of Culture, the site is considered as a whole, situated in the central part of Ungheni city. Some improvements to the building structure have been made, but still renovations and consolidations to the construction must be executed in order to protect the artifacts, which are exposed during permanent or temporary exhibitions.

Due to the building location a wide range of risks must be taken into account. On the seismic map of the Republic of Moldova, Ungheni City is within the seismic zone 7, so that 90% of the population and 45% of the vital networks in the municipality are exposed to the risk of moderate and powerful earthquake.³ The impact of a strong earthquake will be significant due to the fact that Ungheni district is situated on the shock wave, but also because it is placed on soil made of silts, unstable and sedimentary. A major concern is related to the vulnerability of buildings.

Extreme weather events due to climate changes (heavy rains leading to floods and intensifying existing landslides) may result in major damage to cultural heritage. Heavy rains contribute to the frequent occurrence of floods in the area. Climate changes and variations contribute to the increase

² SiLK - Sicherheitsleitfaden Kulturgut, <https://www.silk-tool.de/en/> (accessed 01.10.2022).

³ Disaster Risk Strategy of Ungheni City, 2019

of intensity and frequency of natural disasters.

The biggest threats among the SiLK Guideline categories are fire and flood⁴. Part of the city's area is located in the meadow of the watercourse, at a height of 0.5-1.5 m from the base of the meadow. The meadow has a total area of 41.6 ha. The possible height of the flood in the meadow can be 2.2 m. Potentially floodable floodplain area with transit floods can occupy 60.4 ha, thus there is the possibility of affecting the building of the museum. Floods represent one of the disasters that may cause the greatest damages to the pilot site building having a major impact. Having a “possible” likelihood, the positioning of floods on the risks matrix is one position lower than earthquakes as regards the likelihood.

Fire is also recognized as severe risk for the whole area. The institution has an approved fire plan, complying with the national regulations. Despite this, the fires remain a high risk as the electrical networks should be changed, as well as the ventilation system must be improved. The fire fighters’ brigades are well trained and organizing permanent simulations, following plans according to the national standards and in line with international best practices. In the same time, volunteer rescue teams are also available in the city, being capacitated to provide help during disaster risks.

3. Threat analysis for further selected Roman sites along the Danube

3.1. Cărbuna (Roman settlement)

The roman settlement of Cărbuna can be confirmed by non-invasive prospection methods such as the interpretation of aerial images and a recent excavation in the year 2020. The Roman remains of the site have been partially excavated and conserved, further elements are still preserved underground.

Likelihood	Almost certain					Agriculture
	Likely		Theft			
	Possible					
	Unlikely	Fire, Earthquake	Severe Weather			
	Rare	General Security Violence, Accidents, Vandalism, Deterioration, Pests & Mold, Flood				
		Insignificant	Minor	Moderate	Major	Severe
Impact						

⁴ SiLK - Sicherheitsleitfaden Kulturgut, <https://www.silk-tool.de/en/> (accessed 01.10.2022).

3.2. Medeleni (Roman necropolis)

The Roman necropolis of Medeleni was partly excavated in 2015 (rescue excavation) and dates back in the 3rd century. Aerial images show the cemetery near to the village of Medeleni, about 1 km north of the river Prut. The archeological site is not covered with modern building structures.



Figure 23; The site of Medeleni is used for agriculture.

Google. Bilder © 2023 Airbus,Maxar Technologies, Kartendaten © 2023

Likelihood	Almost certain					Agriculture
	Likely		Theft			
	Possible					
	Unlikely	Fire, Earthquake	Severe Weather			
	Rare	General Security Violence, Accidents, Vandalism, Deterioration, Pests & Mold, Flood				
		Insignificant	Minor	Moderate	Major	Severe
Impact						

4. Responsibilities in cultural heritage protection – case study pilot site

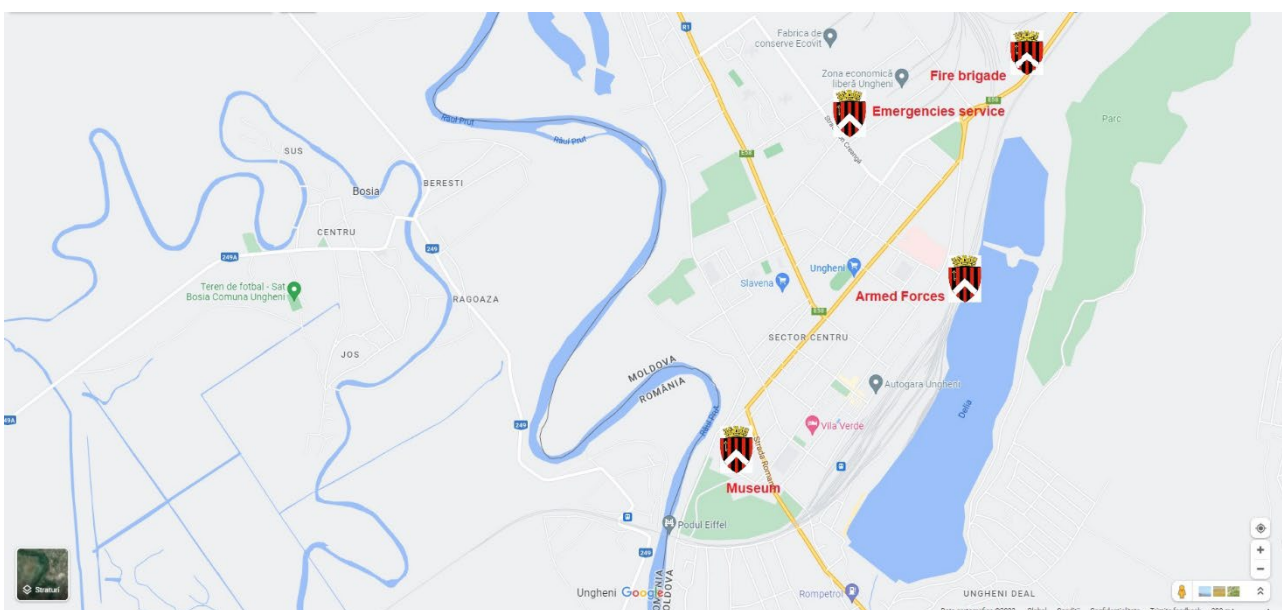


Figure 5: Location of possible first responders for cultural heritage recovery Ungheni.

According to the Law 280 of 27.12.2011⁵ regarding the protection of mobile national cultural patrimony of the Republic of Moldova, the museum patrimony is under the responsibility of the entity. Each institution has a firefighting plan and evacuation plans, these documents being mandatory by law. Although emergency plans especially for movable cultural plans are not drafted, as being not compulsory. Each administrator of a cultural heritage institution is obliged by legislation to attend yearly training regarding the security policy and emergency plans of the building.

During an emergency, the fire brigades are the first to respond in liquidation of the disaster and reducing the losses of cultural heritage assets. However, peculiar trainings involving the staff of the museum and fire brigades were not carried out. When major disasters occur, the Armed Forces are involved in diminishing the disaster and its effects. The cooperation among Armed Forces and fire brigades is a good one, but the two entities are subordinated to different Ministries (Ministry of Defense and Ministry of Domestic Affairs), making this cooperation slower than the situation may request. In the same time, the city has established a rescue volunteer team (Decision 77-02/1-07 from 29.04.2016)⁶ aiming to strengthening the capacity of local public authorities for preventing emergencies and increasing the resilience of Ungheni city and citizens against emergencies. According to the decision, the volunteers may intervene and represent a valuable resource during disasters.

As for the assistance and specialized expertise, a major contribution besides the specialists of the Museum of History and Ethnography from Ungheni may be brought by experts of National Museum of History of Moldova⁷ and National Museum of Ethnography and Natural History of Moldova⁸. The museums' specialists have adequate expertise to make restoration activities of the heritage. Annually, around 150 museum objects are conserved-restored. The conservation-restoration section is authorized to make restoration of old books, icons, metals, ceramics, textiles, furniture.

While the Agency for Inspection and Restoration of Monuments from Moldova⁹ is a specialized institution subordinated to the Ministry of Culture of the Republic of Moldova, whose basic attribution is the field inspection of historical, art and architectural monuments and their protection zones, as well as the control and supervision of compliance with the provisions of the legislation in force in the field of monument protection. The mentioned institutions may contribute with specialized expertise and laboratories endowed with equipment and adequate premises for restoration activities.

5. References

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⁵ https://www.legis.md/cautare/getResults?doc_id=106379&lang=ro

⁶ https://drive.google.com/file/d/1Nwh_QzoxpRmUP_dMjE6Xa0qA98CurbCL/view?usp=share_link

⁷ <https://www.nationalmuseum.md/ro/>

⁸ <https://www.muzeu.md>

⁹ <https://e-patrimoniu.md>