

Montenegro's Roman Treasures: Unearthing, Preserving, and Promoting Cultural Heritage

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Abstract. This research initiative delves into the historical riches of Montenegro through the exploration of three remarkable Roman localities: Municipium S in Pljevlja (Northern Montenegro), Doklea Roman town (Central Montenegro), and Mirište in Petrovac along the Adriatic coast. The study is characterized by a multidisciplinary approach, leveraging cutting edge technology, interdisciplinary collaboration, and community engagement to shed light on Montenegro's Roman heritage.

Keywords: Archaeological site; Cultural heritage; Modern technology; Preservation; Integrated management

1. Problem definition and background

The study discusses the archaeological sites three remarkable Roman localities: Municipium S [1-8] in Pljevlja (Northern Montenegro), Doklea Roman town, Central Montenegro [9-10], and Mirište in Petrovac along the Adriatic coast [11-16], dating back to the Roman Empire, and its significance in terms of architectural heritage from that era. The research and excavation efforts at the sites aim to understand and preserve these historical structures, even in the face of challenges posed by urban development. Advanced technological equipment such as drones, 3D scanners, and geo-radars have played a crucial role in documenting and surveying cultural heritage at the site. The SWOT analysis highlights various aspects related to this archaeological site. Strengths include its importance to local and national interests, rich cultural and natural heritage, involvement of experienced individuals and organizations, good communication networks, innovative approaches, multidisciplinary, and the potential for economic benefits through new models and heritage revitalization. However, the analysis also identifies weaknesses such as inadequate preservation and interpretation, limited financial resources, lack of trained personnel, and obstacles in legislation. These weaknesses can hinder effective heritage conservation efforts. Opportunities include the creation of sustainable management plans, forming international research teams, developing tourism products, involving the private sector, and raising awareness through collaborations with civil society and NGOs. These opportunities can contribute to the site's growth and development. Lastly, the threats such as insufficient planning in the surrounding area, lack of cultural diversity in offerings, financial limitations for research, potential destruction and vandalism, and ownership issues are evident. Addressing these threats and capitalizing on opportunities are essential for the sustainable management and development of cultural heritage such as Municipium S in Pljevlja, Doklea Roman town and Mirište in Petrovac. The importance of integrating research multidisciplinary and responsible decision-making in preserving and revitalizing this valuable cultural asset is highlighted. By harnessing the power of modern technology, fostering collaboration among experts, and engaging with the community and private sector, we can not only preserve this historical treasure but also breathe new life into it. Those localities stand as a testament to the enduring spirit of human ingenuity, and it is our responsibility to ensure that its legacy continues to inspire and educate generations to come. Together, we can create a sustainable future for our cultural heritage, where the past and present coexist harmoniously, enriching the lives of both residents and visitors alike. In the face of challenges posed by urban development, the research and excavation efforts at these sites aim to comprehend and conserve their historical structures. Leveraging advanced technological tools such as drones, 3D scanners, and geo-radars, the study seeks to document and survey these cultural assets. A SWOT analysis uncovers strengths, weaknesses, opportunities, and threats related to these sites, underlining their importance to local and national interests, while also addressing issues like inadequate preservation, limited financial resources, and potential threats to their conservation.

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2. Research methodology and our progress

Our research endeavors encompass the exploration of three distinct Roman localities within Montenegro: Municipium S in Pljevlja located in the North, Doklea Roman town in the Central part, and Mirište in Petrovac along the Adriatic coast nowadays in Montenegro. As we embark on this comprehensive study, it is essential to outline our research methodology and provide an overview of our progress in the preparatory phase.

2.1 Methodology

Site Selection: The initial step involved the careful selection of these three significant Roman localities, each offering unique insights into the history and architectural heritage of Montenegro.

Archaeological Surveys: We employ archaeological surveys and excavations as the backbone of our research. This includes systematic fieldwork, ground reconnaissance, and the use of specialized equipment to locate and document archaeological remains.

Technological Advancements: We used drones, 3D scanners, and geo-radars to enhance the precision and efficiency of data collection.

Interdisciplinary Collaboration: Our research methodology encourages multidisciplinary, fostering collaboration with experts in various fields such as archaeology, history, geology, and technology. This approach ensures a comprehensive understanding of the sites.

Documentary Analysis: Extensive analysis of historical documents, maps, and records relevant to the selected localities is crucial for contextualizing the archaeological findings.

Community Engagement: We emphasize community involvement and engagement with local authorities, ensuring that our research aligns with the interests and needs of the respective communities.

2.2 Our Progress

Our research is in the preparatory phase. Here are some key highlights of our progress:

Site Reconnaissance: Our team has conducted initial site reconnaissance visits to each of the three localities. This involved evaluating the accessibility, local infrastructure, and potential challenges that may arise during excavation and research activities.

Preliminary Data Gathering: We have begun the collection of preliminary data through literature reviews and document analysis. This phase has provided valuable historical context for each locality.

Stakeholder Engagement: We have initiated conversations with local stakeholders, including community leaders, government representatives, and academic institutions, to garner support and align our research objectives with their interests.

Equipment Procurement and Training: The acquisition of advanced equipment, such as drones and 3D scanners, is underway. Additionally, our team members are undergoing training to ensure proficiency in using these tools effectively.

Research Planning: We are in the process of developing detailed research plans for each locality, outlining the specific methodologies, timelines, and milestones to guide our work.

By applying a SWOT analysis (acronym of English words: Strengths, Weaknesses, Opportunities, Threats) we identify strategic choices by relating strengths and weaknesses to opportunities and threats in the external environment for gathering information from different points of view with the idea of using the results where threats or weaknesses can be turned into strengths or opportunities. The input data were obtained through individual conclusions, personal views of the candidate's many years of experience working in the field, and with interpretations of the facts of the available literature on the topic that deals with conservation research of architectural heritage.

The SWOT analyses show the following strengths: (1) The subject areas of study are of important local and national interest for science in general; (2) A large number of elements of cultural and natural heritage are concentrated relatively in a small area; (3) Key participants from the sector (from the country and the environment), civil society and the academic community have extensive experience and knowledge about cultural heritage and research in the country and the environment; (4) We have good communication network at the international, regional and national level; (5) The research may receive support of local self-government; (6) We will apply innovative methodological approach; (7) Multidisciplinarity will bring new quality to the research; (8) After completion of research we will have thorough research result; (9) With this research initiative we will catalyze revitalization of cultural property.

On the other hand, in this initial phase, we realized weaknesses such as (1) Inadequate presentations and interpretations; (2) Preservation of cultural heritage is not high enough on the list of national priorities as far as investments are concerned; (3) We have insufficient financial resources for solving cultural heritage problems; (4) Barriers to hiring/engaging experts (procedural and financial obstacles) are recorded; (5) Lack of equipment needed for proper research and preservation of cultural treasures is noted; (6) Overlaps and certain ambiguities in legislation cause weaker heritage management; (7) We have insufficient number of engaged personnel who are not trained to perform various new roles required for the integral management of the site and the development of tourist services of this cultural heritage; (8) It is well-known that we do not have availability of modern technologies; (9) Insufficient

availability of professional documentation is recorded also; (10) There is no integrated management system of heritage sites.

Preliminary research results shown the following opportunities: (1) The research will catalyze the development of management plans for the sustainability of this specific localities (integrated into the wider picture of the tourist offer of this region); (2) This may initiate creation of international scientific research teams for further studies of the regions in subject, as well as international gatherings on the subject in Montenegro; (3) Private sector represents a resource that can be used to improve - the support of heritage management and to benefit from private capital; (4) Relations with civil society and non-governmental organizations interested in the preservation of cultural heritage can be used to improve visibility, which can ultimately contribute to better protection and management of heritage; (5)

On the other hand, the threats may be (1) Insufficiently good planning and development in the studied regions and the immediate vicinity of the sites can reduce the attractiveness of the heritage site; (2) Tourists need multisensory experiences at cultural heritage sites and may avoid purely observational experiences; (3) Lack of diversity of offer may reduce attractiveness for groups with wider cultural interests; (4) Lack of financial resources for further research is one of the highest treats; (5) Possible destruction and vandalism in and around the heritage sites, due to the impossibility of organizing adequate control and safeguarding of the site itself may decrease the value.

Our research will transition from the preparatory phase to active fieldwork, allowing us to delve deeper into the history and heritage of these Roman localities in Montenegro. We are committed to conducting innovative research that contributes significantly to our understanding of these sites and ensures their preservation for future generations.

3. Future works and conclusion

In conclusion, this research initiative focusing on Montenegro's Roman treasures, specifically Municipium S in Pljevlja, Doklea Roman town in the Central part of Montenegro, and Mirište in Petrovac, represents a significant effort to unearth, preserve, and promote the country's rich cultural heritage. Employing a multidisciplinary approach and leveraging advanced technology, the study has successfully progressed through the preparatory phase, encompassing site selection, archaeological surveys, technological advancements, interdisciplinary collaboration, and community engagement. The SWOT analysis conducted highlights the strengths, weaknesses, opportunities, and threats associated with these archaeological sites, emphasizing their importance to both local and national interests. It also underscores the challenges posed by inadequate preservation, limited financial resources, and potential threats like destruction and vandalism.

Looking ahead, as the research transitions to active fieldwork, the aim is to deepen our understanding of Montenegro's Roman heritage and contribute to its preservation and revitalization. This endeavor is not only an academic pursuit but also a commitment to safeguarding the legacy of the past while fostering economic growth and providing a bridge between history and the present. The research seeks to inspire a renewed appreciation for cultural heritage and ensure that these invaluable treasures continue to educate and inspire future generations, reinforcing the importance of responsible stewardship and the enduring relevance of shared history.

This research is important for the aspect of sustainable development also for several key reasons:

- Sustainable development encompasses not only environmental sustainability but also the preservation of cultural heritage. The study focuses on preserving and promoting Montenegro's Roman archaeological sites, which are a valuable part of the country's cultural heritage. By safeguarding these historical treasures, the research contributes to the cultural sustainability of the region.

- The paper recognizes the economic potential of these archaeological sites through heritage revitalization and tourism development. Sustainable development involves harnessing economic opportunities while minimizing negative impacts on the environment and society. By developing sustainable management plans and involving the private sector, the research aims to generate economic benefits for the local community, contributing to the economic pillar of sustainable development.

- Sustainable development emphasizes the importance of involving local communities in decision-making processes. This research places a strong emphasis on community engagement and aligning research objectives with the interests and needs of the respective communities. This approach ensures that development efforts are inclusive and respect the values and aspirations of local residents.

- Sustainable development often relies on technological advancements and innovative approaches. The study leverages advanced technology, including drones, 3D scanners, and geo-radars, to enhance the precision and efficiency of data collection and documentation. This technological innovation contributes to more effective heritage conservation efforts.

- Sustainable development calls for multidisciplinary collaboration to address complex challenges. The research methodology encourages collaboration with experts in various fields, fostering a comprehensive understanding of the sites. This interdisciplinary approach is in line with the principles of sustainable development, which often require integrated solutions to complex problems.

- The research discusses the potential for forming international research teams and collaborations with civil society and non-governmental organizations. Sustainable development often involves global and regional cooperation to address shared challenges. By engaging with international partners, the research can contribute to broader efforts in heritage preservation and sustainable development.

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