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## THE IOVIA - LUDBREG ARCHAEOLOGICAL OPEN-AIR MUSEUM

### ABSTRACT

*Iovia-Botivo (present day Ludbreg, Croatia) was founded in the first century AD. After several centuries of prosperity, Iovia was most likely devastated during the invasion of the Goths in the late fourth century AD. The tradition of urban life was not abandoned; instead, this Pannonian settlement has existed in continuity up until today. During the four seasons of excavations (2008-2011), a smaller balnea and sizeable building with a portico were discovered in the very centre of Ludbreg (Somođi Garden). An optimal plan for presentation was made with all due consideration for the site's specific situation. By applying principles of cultural management and interdisciplinary cooperation between the national government, the municipal authorities and researchers, it was possible to provide a sound, legally secure future for this site. Objective of this paper is an overview of positive results obtained by implementing management principles from research to presentation i.e., giving new purpose to a cultural monument in compliance with the principles of sustainable development.*

**Keywords:** Iovia-Ludbreg (Croatia), conservation and presentation of an archaeological site, open-air museum, cultural capital, development strategy, cultural management.

The global financial crisis adversely affected the capacity for investment in the cultural heritage, leaving the burden of funding almost exclusively to the state. Considering global trends, there can be no illusion concerning the augmentation of state funding in this sector. Therefore, it is of utmost importance to devise a long-term *modus operandi* for balancing scholarly needs with realistic financial capabilities.

In the course of this economic crisis, the value of a specific cultural monument (whether aesthetic, historical, scholarly, spiritual, sociological or symbolic) came into conflict with economic value. Therefore, their re-evaluation is needed with the aim of recognizing the vast po-

tential of cultural capital. This goal can (hopefully) be achieved exclusively by long-term strategic planning, based on interdisciplinary cooperation, alignment of both professional and economic principles and with the well-argued, objective and consistent articulation of values. The utility of cultural capital (both specific monuments and the cultural landscape as a whole) is rooted in the clear articulation of values which can strongly impact the growth of national identity (i.e., by stimulating diversity). Therefore, it is extremely important to conduct studies encompassing the value of the cultural heritage with associated analyses of both the benefits and anticipated costs resulting from cultural policy. The proper devel-



Fig. 1 Aerial photograph of the site after archaeological excavations in 2011 (photograph by J. Kliska). By permission of the Croatian Conservation Institute, Zagreb.

opment of the potential of cultural capital is possible through the application of a system of economic values (always with a pragmatic attitude on the validation of value) by implementation of objective (as well as subjective) criteria and regulations. By identifying, adjusting and re-evaluating of cultural resources, numerous possibilities (often unrecognizable) for the utilization of cultural capital can be opened (Benhamou 2003: 255-262; E. P. 2006; Klamer 1997: 74-87; Klamer 2001; Klamer 2003a: 465-469; Klamer 2003b; Klamer and Throsby: 2000, 130-145; Throsby 1999: 3-12; Throsby 2001: 26-30, 69-71, 87-88; Throsby et al. 2010).

Since the cultural heritage is still palpably neglected in relation to other social and economic priorities, it is clear that much more attention should be accorded to long-term governmental planning for cultural heritage by conducting cost-benefit analyses. The aim should be implementation of objective, thorough and systematic procedures that would lead to enhancement of the cultural heritage and ensure sufficient funding for the improvement of individual cultural monuments when there is a clear need for this

(Throsby 2003b: 275-285; Throsby 2007). Furthermore, for providing sound future for a particular cultural monument, it very important to apply economic postulates (as well as SWOT and cost-benefit analyses) with a pragmatic attitude towards actualizing value and with the introduction of objective (and subjective) criteria and legal regulations. In addition, when implementing a developmental strategy, due consideration must be accorded to pre-existing fiscal and administrative measures which can ease the process of cultural heritage revitalization. Furthermore, into consideration should be taken decentralization of jurisdiction over the cultural heritage, with the goal of reorganizing administrative responsibility by the involvement of lower levels of authority. Taking responsibility and care for a particular cultural monument, a local government can, with strong developmental plan for cultural potential, strengthen the local population's identity, raise awareness of cultural history among individuals and encourage further growth of local business, as well as creating job opportunities (both full and part-time). In line with the principles of self-sustainable development, local governments should

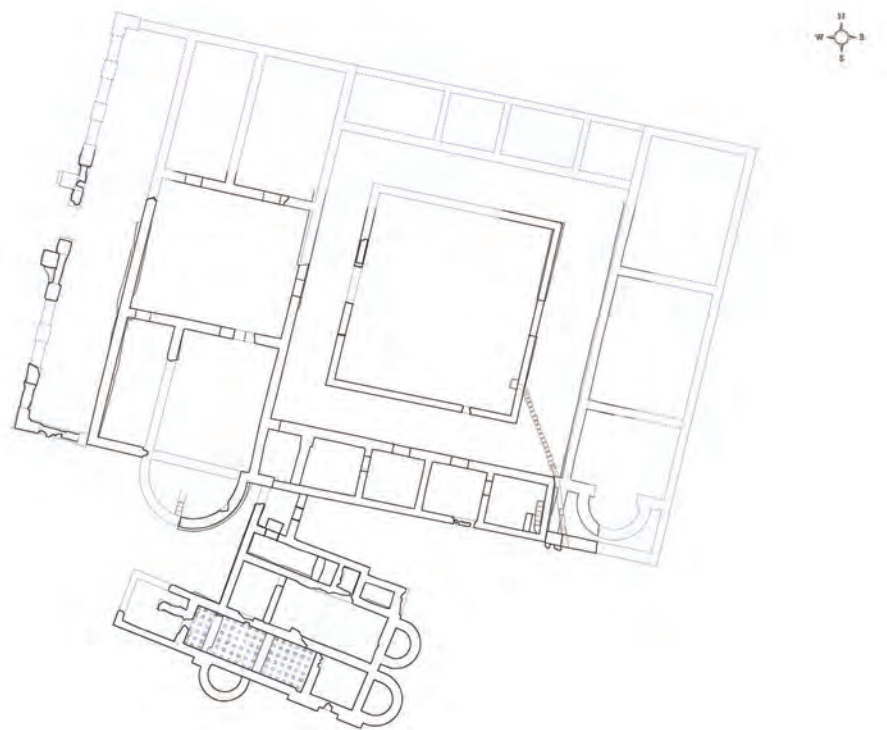


Fig. 2 Ground plan of the site with reconstruction based on extrapolation and mirroring symmetry of the data collected with ILRIS-3D laser scanning (by: Vektra d.o.o.). By permission of the Croatian Conservation Institute, Zagreb.

draft guidelines for cultural tourism with the aim of maximising the positive impact on the cultural (especially architectural) heritage. The steady growth of cultural tourism in each local community is dependent upon the cultural program, social and organizational structure, proficiency, and the psychological and (desired) social prestige (as a method of diversity). The results of this development strategy can be measured by the TIAS (tourism impact and attitude scale) (Antolović 1998; Antolović 2003: 100-109; Antolović 2009; Antolović 2010; Bachleitner and Zins 1999: 199-209; Benhamou 2003: 255-262; Choi et al 2010; Dumont, E. (ed.); Dumont, Asensio and Mortari; E. P. 2006; Lankford and Howard 1994: 121-139; Throsby 2001: 76-78, 128-130; 138-147; Throsby 2003a: 183-186; Throsby 2005; Throsby 2006; Vaughan 1984: 1-36).

The objective of this paper is to present the example of ancient Roman archaeological site Iovia-Ludbreg (future archaeological open-air museum) and how it can (despite the global financial crisis) be positively managed by applying the principles of vision, mission and

goals, thus leading to revitalisation grounded in self-sustainable development.

*Iovia-Botivo* (Ludbreg, Croatia) was founded in the first century AD along the left bank of the Bednja River. *Iovia* was situated on an important route that ran along the Drava River, connecting Pannonia's major provincial centres, e.g. *Poetovio* (Ptuj) and *Mursa* (Osijek). A connection with the southern regions of the province was made possible by a route passing through nearby *Aquae Iasae* (Varaždinske Toplice) which continued down to *Siscia* (Sisak). After several centuries of prosperity, *Iovia* was most likely devastated during the invasion of the Goths in the late fourth century AD. The tradition of urban life was not abandoned; instead, this Pannonian settlement has existed in continuity up until today (Deluka et al. 2003: 733-742; Egger 1924: 340-341; Gračanin 2010:20; Gregl and Migotti 2004: 131-143; Jarak 1994: 35-36; Mayer 1935: 69-82; Migotti 1994: 51-53; 2002: 51-66; Mócsy 1974: 222, 225, 309, 329-342; Tomičić 1997: 34).

Project *Iovia-Ludbreg* was developed in compliance with the European Commission's

guidelines for cultural monument management principles (Dumont, E. (ed.); E.C. 2005; 2006; 2007; E.P. 2006). Planning of specific works began once positive responses were obtained to the questions of whether the presentation and revitalization are desirable, whether demand for its protection exists, whether it can be harmoniously integrated into the existing environment and whether the site will be accessible, understandable and educational for the wider public. Next step was resolving legal matters, making of preliminary SWOT analyses and schedule for implementation of short-, medium- and long-term plans. After the pre-existing state of the site was determined, the necessary interventions (archaeological excavations, interim conservation, additional documentation, etc.) were defined. At the same time, the main contours of cultural tourism needs were determined with reference to target visitors and users. Furthermore, while these first steps were defined, particular attention was accorded to the interplay between the positive (strengthening identity, pride in local history, revitalization of the local community, improvement of infrastructure, job creation, etc.) and negative outcomes (devastation due to increasing numbers of visitors, stereotyping, increased pollution, etc.) of this cultural heritage protection method. After operative tasks were organized and assigned, it was possible to start with archaeological excavations.

Archaeological excavations (2008 - 2011; conducted by Tajana Pleše, PhD, Croatian Conservation Institute) in the very heart of the present-day town of Ludbreg (Somodi Garden) are a continuation of systematic test digs (1968 - 1979) conducted by the Archaeological Museum in Zagreb. These systematic test digs were confined to free, green surfaces, mostly in the backyards of private lots, therefore limited solely to small test trenches. Since Ludbreg is an active small town with the corresponding infrastructure, it was not possible to expand the research area of these certainly intriguing finds. The results of this pioneering work made it possible to presume the general (?) layout of Roman *Iovia*. All of the discovered architectural structures may be dated from the 2<sup>nd</sup> to 4<sup>th</sup> century AD (Vikić Belančić 1984: 119-166).

Although it is entirely clear that these excavations will never be comprehensive because Ludbreg completely overlays the previous Roman

settlement, the opportunity created by the earlier, pioneering efforts had to be seized. Prior to the continuation of excavations, it was imperative to resolve the legal aspect of ownership of the Somodi Garden (large estate of total area of 3629 sq m in the very centre of Ludbreg). The best long-term option was to purchase the Somodi Garden. After the purchase, a written confirmation from the new owner (i.e. municipal authorities) was made, legally defining the Somodi Garden as a future archaeological open-air museum. Municipal authorities also conducted a SWOT analysis and compiled cost effectiveness studies that showed how this type of tourism product could nicely supplement with the very potent religious tourism based on a pilgrimage site of the Shrine of the Precious Blood of Christ (Choi et al. 2010: 213-220; E. C. 2007; Klamer and Throsby 2000: 130-145; Throsby et al. 2010). Furthermore, careful coordination of dual funding (research was financed by the Croatian Ministry of Culture and by the Ludbreg municipality) facilitated the achievement of excellent results in a short period.

During the four seasons of excavations, a large portion of Roman architecture was discovered in the Somodi Garden. In the south-east part of the site, a small *balnea* was discovered. The Iovian baths (230 sq m) belong to a group of smaller city baths, widespread throughout the Empire. Built as compact, unpartitioned buildings (*Blocktyp*), they fulfilled the rules of economical and structural efficiency. Similar baths were discovered in Baden-Baden, Pforzheim-Hagenschieß, Saint-Rémy de-Provence and Heilbronn-Wartberg. (Smith 1875: 188; Durm 1904: 200-217; 700-718; Heinz 1983: 9-23, 176-185; Yegül 1992: 48-91). On the northern side of the baths, a large part of sizeable building was discovered (assumed portico and peristyle villa type). The dimensions had to be estimated by extrapolation and mirroring symmetry of all collected data because of the Somodi house and its very deep foundations (assumed total area: c. 1500 sq m). The building was defined on its western part with a colonnaded portico, through which one could enter a wide space divided into five rectangular rooms. On the eastern side the building was organised around square courtyard, defined by corridors and adjacent wings. Both buildings were re-



modelled during several construction phases, clearly indicating a long period of usage (Pleše 2012: 310 - 321).

After excavations, ancient Roman site of *Iovia* was documented with ILRIS (Intelligent Laser Ranging and Imaging System)-3D laser scanning. The precision of this method enables much easier designing, and the result is an exemplary base for making interpretative graphic aids.

Once the documentation was complete, both making of general architectural design and conservation/restoration works could begin. At the same time it was possible to deal with the questions of *in situ* presentation. Thanks to scholarly/professional synergy, it was possible to make a general design solution that was developed both pragmatically, in accordance with professional postulates and funding possibilities.

Here should be mentioned that the decision to pursue the idea of presenting this Roman site was made on the basis of several factors. First, that was the clear scholarly value, as new data will enhance the rather meagre knowledge of Roman settlements in the Croatian part of Roman province of Pannonia. Equally important was the enhancement of cultural (very few archaeological parks in Croatia), social (awareness of the Roman heritage by the local population) and economic (endorsing small and medium-sized local businesses) values. Furthermore, since the site is easily legible and therefore relatively simple to present, it would be a great loss not to make the most of its educational value. Because of these factors, instead of re-burying after excavations, the decision was made to present this site as an archaeological open-air museum (E. C. 2005; E. C. 2006; Klamer 1997: 74-87; Klamer 2003b). Employing management principles, the project's main vision is to open a self-sustaining, open-air museum within ten years (as of the beginning of excavations). The mission statement was formulated through the scholarly aim of supplementing knowledge on the Croatian part of the Roman province of Pannonia and making this site a mainstay of Outdoor Education Days (required by the *curricula* of elementary and secondary schools). Another mission principle was the strategy rooted in the merger of strong religious tourism (based on pilgrimages to the Shrine of the Precious Blood of Christ) as well as with other open-air museums in the northern parts

of the Roman province of Pannonia e.g. *Flavia Solva* (Leibniz, Austria), *Poetovio* (Ptuj, Slovenia) and *Aquae Iasae* (Varaždinske Toplice, Croatia). The value of this site is defined by making it the hub of successful collaboration between the local community and researchers.

The presentation plan encompassed the scholarly and professional demands concerning conservation *in situ*, combined with the needs of successful cultural management, thus resulting in alignment between the latter two factors as well as cost effectiveness. Given the fact that mainly building foundations were found (due to the aforementioned reasons), a decision had to be made as to how to present them. Complete restoration (in the manner of *Carnuntum*, the present-day villages of Petronell and Bad Deutsch-Altenburg, Austria) as well as wire-frame reconstruction was out of the question due to the lack of data. Presentation of the site at ground level was dismissed because in the long run it is very expensive to maintain and also difficult for visitors to understand. Building a structure over the entire site would be very complex and rather difficult to justify. Re-burial of the site was not taken into consideration due to all of the reasons cited above. Therefore, conservation of the foundations and restoration of the walls (all built of Lithothamnium limestone from local quarries) to a height of approximately 120 cm was chosen, as this will secure clear visual communication with visitors.

Implementation of the plan began with conservation/restoration works on the foundations and with the construction of a drainage system. The original Roman walking surface will be levelled. Alignment with the higher surrounding level will be accomplished avoiding visually aggressive fences and structures. All communications will be adapted for disabled persons and strollers. At each visually expressive point, a 3D reconstruction with a brief, simple explanation will be set up, thus emphasizing the accessibility of information. A dilapidated two-storey building in the north-eastern corner of the estate was torn down, thus improving the visual ambience and making space for the educational corner where several Roman military tents with Roman games (*latrunculi*, *reges*, *duodecim scripta*, etc.) will be displayed. The south-eastern part of the Somodi Garden is left unexplored for the next genera-

tions and future technology. However, above it a wooden structure resembling a small theatre is going to be built. The whole site, according to the landscaping study, will be defined with “green walls” that will also define the boundaries with neighbouring properties. The only remaining building on the estate (the Somodi house) will be reused. One third of the building will be remodelled as the head office of the tourism board. Among its primary functions, it will provide exemplary protection of the site and enable monitoring of the entrance. A small museum will be arranged in the other part of the Somodi house. A permanent display, formed as a cross section of Ludbreg from prehistory to the present, will be based on archaeological finds. The excavated part of Roman *Iovia* will be explained through 3D interactive models and videos.

A priority in the successful promotion of the Iovia-Ludbreg project was the creation of a trademark (*Iovia-Ludbreg*), which would be the visual backbone of the whole brand. The first series of souvenirs with the trademark was made in cooperation with the municipal authorities and produced exclusively by local small and medium-sized businesses, thus serving as an anti-recession measure. The collection is represented by two replicas of Roman coins (a *nummus* of Maximianus and a *denarius* of Lucilla), *Conditum paradoxum* (spiced vine made according to the instructions from *De Re Coquinaria* by Apicius), *Mel Ioviae* (locust blossom honey), *Spiritus mellis Ioviae* (mead) and *Spiritus pruni cerasi Ioviae* (cherry brandy), an homage from Ludbreg’s beekeepers and winemakers to their Roman ancestors. Apart from these souvenirs, a collection of environmental tote bags, T-shirts, caps, mugs, magnets etc., all with the *Iovia-Ludbreg* trademark, is also available.

Since the ultimate goal is to familiarize visitors with the cultural heritage, promotion already began during the early phase of works: verbally (from active participants), using printed matter (newspapers, informative leaflets and brochures), notices on local television, press conferences, and online (newsletters, Facebook and e-forums). Furthermore, the site is promoted with multimedia presentations (both occasional, in public discussions, and permanent, via an exhibition), scholarly/professional lectures and with mesh banner with aerial photographs and

short texts set up in the main square (near the main entrance to the site).

The *Iovia-Ludbreg* project can be considered a model of interdisciplinary collaboration between the national government, municipal authorities, small and medium-sized local businesses and researchers, all of them acting for the benefit of the site and its visitors. Project was primarily based on cost effectiveness and fundamental management principles with strong pragmatic attitude. In making of this project all members of core group were fully aware that this site has primarily local significance (i.e. that excavated Roman architecture is part of provincial settlement of Roman province of Pannonia) and that it will never be fully researched (due to the above mentioned problem of modern town built entirely on previous Roman settlement), as it is clearly emphasised with a site trademark. Bearing that in mind, it was possible to create feasible project, with carefully balanced professional postulates and funding possibilities, thus providing a sound, legally secure future for this site.

It is hoped that the *Iovia-Ludbreg* open-air museum will effectively combine both scholarly and popular demands, up-to-date techniques of excavation and documentation, proper conservation and restoration methods and a diverse tourism product. By adhering to these principles, we ensured that this archaeological site would avoid the fate of excavated monuments that were later abandoned and forgotten.

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**REZIME****IOVIA - LUDBREG  
ARHEOLOŠKI MUZEJ NA  
OTVORENOM**

**Ključne reči:** Iovia – Ludbreg (Hrvatska), konzerviranje i prezentiranje arheološkog nalazišta, muzej na otvorenom, kulturni kapital, razvojna strategija, kulturni menadžment.

Antička Jovija (*Iovia-Botivo*; današnji Ludbreg, Hrvatska) nastala je u ranocarsko vrijeme na važnoj podravskoj prometnici koja je povezivala Ptuj (*Poetovio*) i Osijek (*Mursa*), dva velika centra provincije Panonije. Dobru je pak povezanost s južnim dijelom provincije Panonije omogućavala blizina Varaždinskih Toplica (*Aquae Iasae*), gdje se priključivala cesta iz smjera Siska (*Siscia*). Pretpostavlja se kako je Jovija nakon nekoliko stoljeća prosperiteta bila razrušena tijekom provale Gota krajem 4. stoljeća n. e. No, tradicija urbanog života na ovom prostoru nije zamrla, nego se kontinuirano nastavila sve do današnjice. Prva sustavna sondažna istraživanja je na širem prostoru grada Ludbrega proveo Arheološki muzej u Zagrebu (1968.-1979.).

Zahvaljujući brizi Grada Ludbrega o kulturnoj baštini te svjesnosti Ludbrežana o njihovom antičkom nasljeđu, stvoreni su (prvenstveno imovinsko-pravni i financijski) uvjeti za uspješan nastavak istraživanja. Lokalna samouprava je za potrebe istraživanja osigurala veliki slobodni prostor (3629 m<sup>2</sup>) u samom centru grada („Vrt Somodi“), omogućivši time određivanje šireg konteksta nalaza. Tijekom četiri sezone arheoloških istraživanja (2008 - 2011) koja je u „Vrtu Somodi“ proveo Hrvatski restauratorski zavod, u cijelosti istraženo kupalište (231 m<sup>2</sup>) te veliki objekt (oko 1590 m<sup>2</sup>) organiziran oko kvadratnog, nenatkrivenog dvorišta te određena sa zapadne strane trijemom s kolonadom.

Poštujući specifičnu situaciju ovog nalazišta smještenog u središtu grada, napravljen je plan prezentiranja kojeg zajedno provode znanstvenici, lokalna samouprava te državna uprava. Njime su obuhvaćene znanstvene i stručne potrebe konzerviranja i prezentiranja *in situ* u kombinaciji s načelima uspješnog kulturnog menadžmenta, a s posebnim naglaskom na skladnoj integraciji dinamičnog malog grada i njegovog antičkog nasljeđa. Provođenjem navedenih metoda možemo se nadati kako smo uspjeli osigurati sigurnu budućnost ovog nalazišta.