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# Model za inventarizaciju, monitoring i evaluaciju suhozidnih gradnji u Hrvatskoj na primjeru Starogradskoga polja na otoku Hvaru

## Doktorska disertacija [sažetak]

# Model for Inventory, Monitoring and Evaluation of Dry-Stone Structures in Croatia; Case Study Stari Grad Plain on Hvar Island

## Doctoral Dissertation [Summary]

Different manifestations of the dry-stone phenomenon – from single buildings and structures to the aggregated elements of landscape such as terraces and boundary walls – are characteristic elements of the cultural landscape of Adriatic Croatia and one of its most acknowledged cultural symbols. However, our understanding of them could still be considered relatively scarce and fragmented over different academic fields: archaeology, architecture, environmental history, ethnology, forestry & agriculture, geography, landscape architecture, etc.

The main goal of the research was to establish an integral methodological framework for research and management of dry-stone heritage, using the contemporary technologies (including the establishment of a crowdsourced data GIS platform) and applying the contemporary standards for spatial information modelling and cultural heritage data. The topics that were covered by the research are the typology and ways of documenting dry-stone structures, their origins and changes, their cultural significance and possible criteria for their valorisation.

The primary result of the research is a conceptual model of the spatial database, which, along with the information about physical objects, contains information about intangible components of the phenomenon, such as people and activities. The applicability of the model was tested by quantitative and qualitative analyses of dry-stone structures in Croatia in general and in the case study area: UNESCO-listed cultural landscape Stari Grad Plain on the island of Hvar, a site chosen for its complexity, heritage value and extensive fundus of the available data.

Some of the following results are: 1) dry-stone structures are confirmed as the dominant anthropogenic feature of the cultural landscapes of Adriatic Croatia. GIS analyses have shown that the total length of dry stone walls in this area (ca 17.000 km$^2$) is not less than 100.000-300.000 km and that more than 40% of the Adriatic Croatia's territory (and more than 90% in the case of some municipalities) lies within the 100 m from the nearest wall; 2) in the global dry-stone context, Croatia is represented with all the most recognized phenomena: terraces, boundary walls and corbelled stone shelters. Taken individually, they may not be among the finest examples of their type, but their collective presence, abundance and density can be considered extraordinary. That is especially true in the case of landscape patterns defined by clearance piles, which occur in the number and variety not recorded elsewhere; 3) cultural significance of dry-stone heritage in Croatia has undergone a semantic shift in the last 150 years. The second half of the 19$^{th}$ century can be considered as a last and decisive formative moment of dry-stone landscapes in Adriatic Croatia as a result of the large wine-growing boom (which puts them in the broader European context of "phylloxera plague" event). The boom was followed by a rapid decline that could have triggered the resemantization of the phenomenon in the 20$^{th}$ century – from the productive to symbolic one – through the works of art, literature and media. In the 21$^{st}$ century, dry-stone heritage is being partially "rematerialized" through the new trends in heritage protection (like hands-on heritage activism) and agri-environmental policies; 4) the dry-stone heritage of Stari Grad Plain can be considered extraordinary by its structural and temporal complexity. The most characteristic dry-stone phenomena of The Plain are the structures on the orthogonal land division (mostly walls, paths and their combinations), complex inner patterns of clearance piles, water canals, and the abundance of corbelled stone shelters locally called *trim* (pl. *trimi*). While it is still not possible to establish the time-depth scenario of emergence and changes of dry-stone structures from antiquity (and earlier) to the present times, it can be said that the structural matrix of The Plain also underwent significant transformations at the end of 19$^{th}$ century, manifested by emergence of new clearance piles, water cisterns and *trimi*.

[Translated by the author, proof-read by Vanja Šrajer, prof.]

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u istom sastavu kao i Povjerenstvo za ocjenu
Obrana: 24.9.2019.
Promocija: 11.11.2019.

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Suhozidne gradnje karakterističan su element kulturnog krajolika jadranske Hrvatske i jedan od njenih općeprihvaćenih kulturnih simbola. Na temelju sinteze podataka iz strane i domaće literature (uključujući i uspostavljenu javnu internetsku web kartu) te vlastitih terenskih istraživanja formiran je model prostorne baze podataka za njihovu inventarizaciju, monitoring i evaluaciju. Model je upotrijebljen za izradu kvantitativnih i kvalitativnih analiza njihove distribucije na nekoliko prostornih razina: od razine države do istaknutog hrvatskog kulturnog krajolika, Starogradskog polja na otoku Hvaru.