

# Resilience of historic residential areas subjected to hazard events

M. Drdácý<sup>1</sup>, R. Cacciotti<sup>2</sup>, T. Drdácý<sup>1</sup>

<sup>1</sup>Institute of Theoretical and Applied Mechanics of the Czech Academy of Sciences

Department of Heritage Science

Prosecká 76, 190 00 Praha 9, Czech Republic

[drdacky@itam.cas.cz](mailto:drdacky@itam.cas.cz), [drdackyt@itam.cas.cz](mailto:drdackyt@itam.cas.cz)

<sup>2</sup>Institute of Theoretical and Applied Mechanics of the Czech Academy of Sciences

Department of Diagnostics and Conservation of Monuments

Prosecká 76, 190 00 Praha 9, Czech Republic

[drdacky@itam.cas.cz](mailto:drdacky@itam.cas.cz), [drdackyt@itam.cas.cz](mailto:drdackyt@itam.cas.cz)

## ABSTRACT

Residential areas with cultural heritage assets are considered as complex adaptive systems with specific characteristics. Complex adaptive systems have histories allowing to learn from experience. Then the resilience of built heritage as a substance or a set of elements of a historic city takes into account resilience of individual cultural heritage objects together with their interactive, dynamic, emergent and adaptive roles. Therefore, the approach involves cultural heritage stakeholders into development and materialization of measures reducing possible damage from natural hazards and climate change harming actions. It is based on the identification of criticalities decisive for improved resilience of cultural heritage affected by natural hazard risks and the associated measures. The methodology has been developed during international research project Interreg CE “ProteCHt2save”. The paper presents decision supporting tools developed for municipalities and historic city managers. The tool exploits categorization of cultural heritage assets according to their vulnerability in disaster situations. Further, a manual guiding individual cultural heritage owners, users and other citizens historic areas provides them with advice how to prevent or reduce damage or loss of cultural heritage. The recommendations cover pre-disaster periods, the events as well as post-disaster situations and concern the both built and moveable heritage. All measures are illustrated with examples taken during real disaster situations.

## REFERENCES

Drdácý, M.: The vulnerability and resilience of historic structures. Transsylvania Nostra. Vol. 11, No. 4 (2017), pp. 8-12 ISSN 1842-5631

[www.interreg-central.eu/Content.Node/ProteCHt2save.html](http://www.interreg-central.eu/Content.Node/ProteCHt2save.html)