

ANNEXES

ISCEAH International Scientific Committee on Earthen Architectural Heritage 3-Year Plan 2021-2023

Appendix 5 - Theme 5: Seismic

Often earthen buildings, earthen historical centers and earthen rural settlements are in seismic areas, and suffered several types of damage after earthquakes, putting lives and heritage authenticity at risk. While information about how to assess damage and to recover damaged earthen heritage post-earthquake has been developed in the last years, there is still an important lack in prevention of seismic risk in earthen structures. Prevention and, therefore, mitigation of seismic risk in earthen structures and sites is possible, by achieving a greater knowledge about the seismic vulnerability of earthen heritage (architectural typologies, building techniques and recurrent failure mechanisms) and on learning about the damage caused by earthquakes in the same locality. Therefore, the work of the Seismic sub-committee of ISCEAH will be focused on the pre-earthquake preparedness, as an essential task to include in the Charter for Earthen Architecture.

Objectives

- 1) Collecting damage assessment forms, created to assess quickly repetitive earthen typologies and 'minor' architecture on an urban scale.
- 2) Identifying and disseminating the most typical failure mechanisms of earthen structures, associating typical damage and forms of vulnerability to the different earthen building techniques.
- 3) Identifying and disseminating the most suitable and simple retrofitting techniques to be simply implemented by local communities.

Methodology and expected results

During the first months of 2021, the work done in the last period will be revised and will be complemented with the collection of damage assessment forms, created to assess repetitive earthen typologies and 'minor' architecture of urban centers and rural areas. To this purpose, as well as to identify typical failure mechanisms and suitable retrofitting techniques for earthen structures, all the work will be done through the collection of already existing information in scientific publications, manuals and building codes of countries located in seismic areas.

The work will be done by the interested members of ISCEAH, together with the interested members ISCARSAH and ICORP, and will be coordinated with other subcommittee, such as In-Use, Technology and maybe Archaeology, as there are many aspects in common.



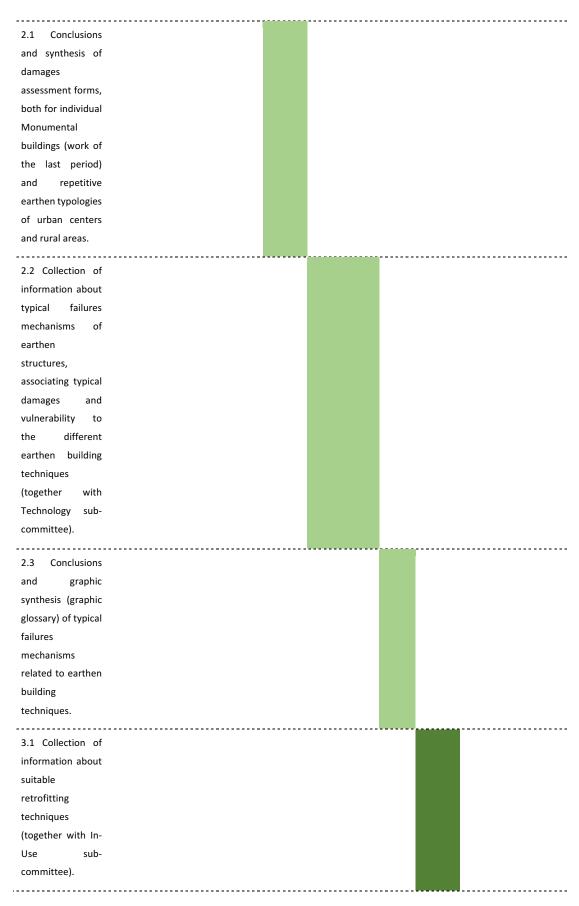
The products of the work will be:

- A graphic glossary of typical failures mechanisms of earthen structures, associating typical damages and forms of vulnerability to the different earthen building techniques present in seismic areas.
- A graphic glossary/brief manual of suitable and simple retrofitting techniques.
- A Guidelines for Earthquake Mitigation containing what to Do and don't do, before, during and after an earthquake in Earthen Historic Structures, sites and rural areas.

Workplan

Activities	2021				2022				2023			
	Jan-	Apr-	Jul-	Oct-	Jan-	Apr-	Jul-	Oct-	Jan-	Apr-	Jul-	Oct-
	March	Jun	Sept	Dec	March	Jun	Sept	Dec	March	Jun	Sept	Dec
1.1 Distribution of												
proposal and call												
for members of												
ISCEAH, ISCARSAH												
and ICORP to work												
on it.												
1.2 Revision of the												
work done in the												
last period (2018-												
2020) by the												
Seismic sub-												
committee												
1.3 Collection of					[
damages												
assessment forms,												
for repetitive												
earthen typologies												
of urban centers												
and rural areas.												







3.2 Conclusions and graphic synthesis (graphic glossary manual) of suitable retrofitting techniques.3.3 Developing Guidelines for Earthquake Mitigation containing what to Do and don't do, before, during and after earthquake. 3.4 Dissemination of the products in ISCEAH website and social media.