



## **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 sub-committee, such as In-Use, Technology and maybe Archaeology, as there are many aspects in common.





2.1 Conclusions and synthesis of damages assessment forms, both for individual Monumental buildings (work of the last period) and repetitive earthen typologies of urban centers and rural areas.

2.2 Collection of information about typical failures mechanisms of earthen structures, associating typical damages and vulnerability to the different earthen building techniques (together with Technology sub-committee).

2.3 Conclusions and graphic synthesis (graphic glossary) of typical failures mechanisms related to earthen building techniques.

3.1 Collection of information about suitable retrofitting techniques (together with In-Use sub-committee).



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3.2 Conclusions and graphic synthesis (graphic glossary or manual) of suitable retrofitting techniques.

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3.3 Developing Guidelines for Earthquake Mitigation containing what to Do and don't do, before, during and after an earthquake.

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3.4 Dissemination of the products in ISCEAH website and social media.