

## Thematic Session 01

# Durability of clay-based bedding mortars and their regulation frame

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The development of alternatives to cement materials that can provide an inexpensive and sustainable solution in construction is drawing attention to replace conventional building materials. In this frame, clay-based building materials have been a research topic for many scholars. Yet, the high vulnerability of earthen structures to water leads to low durability and their low mechanical strength has limited their use in modern building designs. Additionally, the lack of regulatory oversight is a throwback for engineers and decision makers not to include these materials in construction design. The production of modified clay mortars in order to increase the durability and setting a regulatory framework to control their resilience is the aim of this session. The participants will have the chance to present methodologies and techniques in order to achieve durable clay-based materials. At the same time the protocols followed in order to test durability will be discussed and foundations will be set for a regulative frame that can be applied for these promising, innovative materials.

Keywords: Clay mortars, Durability, Cycles, Standards.

Potential Journals: Construction and Building Materials, Journal of Building Engineering.

