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RILEM Bookseries
Volume 18, 2019, Pages 1886-1894

Comfort Assessment of Heritage Buildings in Cuenca-Ecuador (Book Chapter)

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Abstract

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Intervention in heritage buildings with the purpose of extending their life span has been widely discussed on international forums for decades. Building comfort principles are intended to be incorporated within these heritage buildings; nevertheless, the intent implies extensive renovation with loss of important heritage values. This paper focuses on comfort strategies in selected heritage buildings of the city of Cuenca in Ecuador. The research reported here was initiated by an historic study and a heritage value assessment supported by the Nara Grid along with inhabitant's interviews. Indoor and outdoor conditions were analyzed with data logger equipment and climatic software tools. Then the collected data was interpreted and compared with the Ecuadorian Construction Norm. The outcomes showed possible intervention strategies to improve indoor comfort conditions of the heritage buildings without altering their values. Moreover, the research shows the potential of heritage buildings as resilient tools for sustainable development and that the improvement of quality of life of its residents is possible with less invasive interventions. In addition, the results showed that indoor conditions of heritage buildings could be improved; however, according to the current Ecuadorian Construction Norm, they will not always reach the ideal comfort range. Thus, the researchers encourage a revision of the existing Ecuadorian Construction Norm which under its current form is not fully applicable to the existing heritage assets. The norm gap shows restrictions and contradictions for the conservation of heritage buildings. Consequently, some interventions can destroy important heritage values. © 2019, RILEM.

SciVal Topic Prominence ⓘ

Topic: Buildings | Energy efficiency | Energy retrofit

Prominence percentile: 99.858 ⓘ

Author keywords

Comfort strategies Cultural heritage buildings Heritage values Indoor environment Intervention Resilience

ISSN: 22110844
Source Type: Book series
Original language: English

DOI: 10.1007/978-3-319-99441-3_202
Document Type: Book Chapter
Publisher: Springer Netherlands

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