

A Multi-Dimensional Architectural Documentation Framework for Earthen Heritage Conservation: The Case of the M'Zab Valley, Algeria



Sonia Bouabdallah, Amira Zatir

Laboratory of City, Architecture and Heritage (LVAP), École
Polytechnique d'Architecture et d'Urbanisme (EPAU),
Algiers, Algeria.

s.bouabdallah@epau-alger.edu.dz

ABSTRACT

Earthen architectural heritage embodies centuries of environmental adaptation, vernacular knowledge, and sustainable construction practices. In Algeria, the M'Zab Valley represents an outstanding example of earthen architecture, characterized by its distinctive urban organization, traditional building techniques, and cultural significance. Despite its recognized heritage value, the documentation of earthen architecture remains fragmented and largely descriptive. Existing inventories primarily record historical and administrative information while providing limited documentation of the architectural, constructive, material, and conservation characteristics required for effective preservation and restoration.

This study aims to develop a multi-dimensional architectural documentation framework specifically designed for earthen heritage conservation. Unlike conventional inventories, the proposed framework integrates historical, architectural, spatial, constructive, material, technical, and conservation-related information into a unified documentation model, improving the consistency and completeness of heritage records.

The research follows a qualitative methodology based on four stages: a critical literature review on earthen heritage conservation, a comparative analysis of existing documentation practices, the identification and classification of key documentation parameters, and the development and conceptual application of the framework using representative examples from the M'Zab Valley.

The proposed framework provides a standardized and transferable approach for documenting earthen architectural heritage. It supports more comprehensive heritage recording, facilitates conservation planning and restoration, promotes the transmission of traditional construction knowledge, and offers a methodological reference for future documentation and management of earthen heritage in Algeria and similar contexts.

KEY WORDS:

earthen architectural heritage; Architectural documentation framework; Heritage conservation; Vernacular architecture; M'Zab Valley.