www.kerpic.org/2026-kibris
Kerpic'26 – Earth – Based Architecture
15th International Conference
N.Cyprus, 22-24 May / 2026

Ecological Features of Earthen Rural Architecture in Cyprus

Ege Uluca Tümer
Eastern Mediterranean University, Famagusta

e.ulucatumer@gmail.com

-

ABSTRACT

Mudbrick has long been a primary building material in Cyprus, particularly in lowland areas where stone was limited and earthen construction provided a readily available and economical alternative. Over generations, local builders developed architectural forms and construction techniques that enabled rural earthen buildings to respond effectively to the island's climatic conditions and patterns of rural life. These features were not only structural adaptations, but also expressions of a broader vernacular environmental intelligence shaped by material availability, accumulated experience, and long-term adaptation to place.

In the context of contemporary concerns regarding climate change, increasing energy consumption, and the reduction of carbon emissions, the ecological significance of earthen rural architecture in Cyprus has attracted renewed attention. Mudbrick construction, due to its low embodied energy, use of local and renewable materials, and capacity to support passive thermal regulation, offers valuable lessons for sustainable building design. Accordingly, the study of these vernacular structures provides both historical insight and a basis for reconsidering contemporary architectural practice through more environmentally responsible approaches.

This study aims to document and analyze the ecological characteristics of earthen rural architecture in Cyprus, with particular emphasis on the ways in which traditional building methods and spatial configurations contributed to environmental performance. The analysis focuses on features such as thermal mass, natural ventilation, shading, orientation, material selection, and integration with the surrounding landscape. By examining these components, the study seeks to demonstrate how rural earthen architecture operated as a climate-responsive system well before the emergence of modern sustainability discourse.

The findings indicate that the ecological qualities of Cypriot mudbrick architecture are not incidental, but rather the outcome of a long-established architectural tradition rooted in local knowledge and environmental adaptation. Consequently, these buildings represent an important source of reference for contemporary sustainable design. Their underlying principles may contribute to developing new architectural strategies that reinterpret vernacular knowledge in response to present environmental challenges while preserving the cultural and spatial values embedded in traditional rural architecture.

KEY WORDS:
Ecological Features, Earthen Rural Architecture, Vernacular, Cyprus