The Potential of Vernacular Materials to the Sustainable Building Design: Experience of Construction Design with Adobe Material

Zafer KUYRUKÇU¹ --- Emine YILDIZ KUYRUKÇU²

¹,²Research Assistant, Selcuk University, Architecture Faculty, Department of Architecture, Konya, Turkey

Abstract

The history of adobe, which is used as a sustainable structure material by the human being as old as its own existence. The premitive human who first left the cave found and used the natural materials such as stone, soil, water and wood when s/he needed to build a shelter in order to keep his/her existence. Adobe is a material which have easily found raw material, is recycled, economical, harmless to the environment while being produced and provide heat isolation. The importance of adobe buildings is considerable from the point of our architectural culture. The presence of adobe buildings in almost every settlement except big cities indicates a significant built stock. In addition to this stock, we also see the prototypes of this architecture in the country. Nowadays the tendency of industrial construction materials causes adobe architecture and its values to be forgotten. The work of this art, reflecting the characteristics, identity and heritage of regions, has to be conserved. In order to achieve sustainable architecture, cultural and sustainable design principles should be considered in a complementary relationship. Cultural context implies a sound respect to the traditional knowledge of place, technology and local materials. Sustainable design implies the recycling of energy, either by the use of passive energy or renewable energy. It also requires harmony with local economies and data supporting biological diversity. For this purpose, this study promotes the use of adobe as a sustainable material. Also this study emphasizes importance of adobe in architecture design education with a studio sample.

Keywords: Energy Efficiency, Sustainability, Sustainable Design, Adobe, Architectural Education