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A CASE STUDY ON TECHNICAL AND SOCIAL ASPECTS OF EARTH HOUSES IN RURAL INDIA

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Abstract

Earth houses are considered sustainable and affordable as compared to houses built with concrete or fired clay bricks. Moreover, it preserves the vernacular social and spatial traditions (cultural identity) of the community. With rapid industrialization and the increase in popularity of concrete and brick constructions, a decline in earth houses has been observed especially in the rural areas of India. A survey was carried out in four regions of the country (Himachal, Orissa-Jharkhand, Gujarat, Tamil Nadu) to understand the technical and social factors favouring/limiting the construction and everyday use of earth houses.

As an outcome of the survey, two specific but opposing motivations were identified: 1. Low-income families living in traditional earth houses that aspire for a brick or concrete house and 2. Families that have adopted an alternative and sustainable life-style and prefer living in a "natural habitat". Although the advantages of mud houses, such as better indoor climate, better affordability, and ease of construction and maintenance were widely acknowledged, limitations with regard to abrasion, poor water-resistance and termite infestation were the major technical drawbacks that motivates the aspiration (for concrete/brick house) of low-income households. However, the social aspects such as a low societal image of earth houses as compared to modern building materials and comparison with fellow community households were the main reasons behind the choice in favour of modern building material over the earth.

The identified negative social and technical aspects place new requirements and demands re-invention of earth house as a necessary step toward their acceptance.

Keywords: Earth house, Social aspiration, Technical issues, Affordable housing