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Natural Ventilation techniques in the Vernacular Buildings of Coastal region in Tamilnadu

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In many developing countries in Asia, hundreds of millions of people live in houses with natural ventilation basically because they cannot afford luxurious living with AC. It is believed that in India, only a very small percentage of people can actually meet the expense of installing AC system in their houses. The relationship between architecture and the climate is always a hotspot in the recent architecture studies. Architecture is considered as a mirror of a civilization that is shaped up by needs, society, technology, culture and climate. Except climate these factors are modifiable and changeable with respect to time. Climate is a fixed environmental factor affecting architecture and its built environment. Thus, different climatic conditions pertaining to the countries force them to take special architectural precautions to create more comfortable living spaces. In Tamilnadu along the coastal belts typical vernacular houses which are designed to provide adequate natural ventilation. In their living environment, people naturally tend to be more tolerant to any uncomfortable thermal conditions. The purpose of this paper is to qualitatively and quantitatively analyse the ventilation techniques in various typologies of traditional houses like wind catcher houses, courtyard houses, clear storey houses using the custom made instruments called Architectural Evaluation system. The results show that traditional houses made use of a natural ventilation system during the summer. The principles of this system could be helpful in constructing environmentally friendly and sustainable residences.

Biography

Shanthi Priya has completed her PhD at the age of 35 years from Anna University, Chennai and completed two major Research Projects in the area of BUILDING SCIENCE. She has a teaching and research experience of neary 15 years in preier Institutions like Thiagarajar College of Enginnering, Madurai and Kalasalinga Academy of Research and Education. She has published more than 20 papers in reputed journals and has been serving as an editorial board member of repute.

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