An Overview of Bioclimatic Design Strategies for Energy Efficient Buildings: A Case Study of Semi-Arid Climate, Lahore

Authors : Beenish Mujahid, Sana Malik

Abstract : Bioclimatic design Strategies plays a dynamic role in construction of Sustainable Buildings. This approach leads to reduction in the mechanical cooling of building which provides comfort to the occupants in sustainable manner. Such bioclimatic measures provide a complete framework of building design through responding to climatic features of particular site. The featured Passive cooling techniques for hot climatic region provides comfortable indoor temperature with ecological and financial benefits. The study is based on highlighting this approach to produce energy efficient buildings for Semi-Arid climate like Lahore, Pakistan. Being part of developing country, energy savings in Lahore city would help the Power Sector and resolves the World Issues of Global Warming and Ozone Layer Depletion. This article reviews the bioclimatic design strategies and their critical analysis to drive guidelines for Sustainable buildings in Lahore. The study shows that the demand for mechanical cooling systems including air conditioning, fans, and air coolers can be reduced through regional climatic design.