

## BIOCLIMATIC ARCHITECTURE

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### ABSTRACT

Architecture is always inspired by nature. For saving optimal thermal comfort inside building designs climate and environmental conditions must be taken into account. It deals with designing the architectural elements by avoiding complete dependence on mechanical systems, which are regarded as support.

This paper discusses bioclimatic architecture which refers to the design of buildings and interior, exterior or outdoor spaces based on local climate. The paper aims at providing thermal and visual comfort by making use of solar energy and other environmental sources. Passive solar systems that are incorporated into buildings and utilize environmental sources like sun, air, wind, vegetation, water, soil, sky for heating, cooling and lighting the buildings are the basic elements of bioclimatic design.

The paper addresses the use of bioclimatic architecture and energy efficient systems and technologies, such as passive solar systems the reduction of energy consumption in buildings that can be achieved by simple methods and techniques. Passive solar systems are divided into three categories:

Passive Solar Heating Systems, Passive (Natural) Cooling Systems and Techniques Systems and Techniques for Natural Lighting

**KEYWORDS:** Active and Passive Solar Architecture, Renewable Energy, Self-Sufficient House