



Traditional Climate Responsible Solutions in Iranian Ancient Architecture in Humid Region

Elham Mehrinejad Khotbehsara ^{a*}, Fereshte Purshaban ^a, Sara Noormousavi Nasab ^b,
Abdollah Baghaei Daemei ^a, Pegah Eghbal Yakhdani ^a, Ramin Vali ^c

^a Department of Architecture, Rasht Branch, Islamic Azad University, Guilan, Iran

^b Department of Architecture, University of Guilan, Guilan, Iran

^c Department of Civil Engineering, Faculty of Shahid Mohajer, Isfahan Branch, Technical and Vocational University (TVU), Isfahan, Iran.

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Abstract

The climatically compatible design is one of the closest ways getting the optimum use of renewable sources of energy since consideration to climatic conditions is the main concern in sustainability. Occupants suffer from this uncomfortable situation due to the overheating indoor high temperature. This region is located north of Iran, is influenced by humid climate conditions. Adaptation to climate condition in the vernacular architecture of west of Guilan is the main reason of using all these solutions to use the environmental potential for providing comfort for its occupants, which are the main purposes of sustainable development. The research question is how the Guilan's historical architecture has been able to answer the weather conditions. In this research was performed by analysing appropriate climatic solutions in the vernacular architecture of west of Guilan. The methodology based on a Qualitative–interpretative approach was applied. Their location, formation and different functions are investigated. According to this issue, porches and balconies provide best solutions for weather balance conditions in summer and winter and climate comfort.

Keywords: Climate Design; Porch; Balcony; Ancient; Vernacular Architecture; Sustainability.

1. Introduction

Increase of indoor compared with outdoor temperature is a major concern in modern house design. Occupants suffer from this uncomfortable condition because of over- heating indoor temperature [1, 2]. Recognition of porches and balconies using patterns inspired by current conditions can be regarded as important solutions with regards to environmental attributes lead to sustainable development as increase or decrease of indoor temperature in comparison with outdoor temperature has been a significant concern from past ages to come [1], One of the most important environmental issues of today's is preserving environment [3]. As a matter of fact, about 40% of worldwide energies are consumed in buildings in developed countries [4, 5]. Balcony designs can be helpful in increasing natural internal air movement they can be taken into consideration on designing [5]. Sustainability is a complex word with a lot of considerations and conceptions; however, the tolerance of ecological pressure in buildings is one of the most important questions included in the meaning of this word, sustainability energy efficient and non-toxic houses and elimination of the usage of non-renewable resources are targets of sustainable architecture On the other hand, Main philosophy of climate reaction design is based on the assessment of the influence of the climate and the optimization of the creation of environmental structures [6]. The indoor climate of an architectural or closed space is influenced by the microclimate

* Corresponding author: mehrinejad.e@gmail.com

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