

# Abstract

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## **REBUILDING THE DESERT: A NEW ECOLOGICAL VISION FOR THE DESERT ENVIRONMENT**

Desert areas make up a third of the world's land and 93% of the total area of Egypt. In an era of increasing population growth, with possible shortages of food and the degradation of the built environment, arid zones will be the frontiers of future development, and proper strategies for designing man-built environments in desert areas may shortly become a major world's concern. While desert areas survive in a harsh environment and scarcity of natural resources they have the opportunity to confront these environmental constraints and serve as models for the solution to ecological problems of our time. Desert architecture may be characterized as "architecture of the extremes" being basically similar to 'regular' architecture but differentiated from it by its obligation to address needs and problems of an extreme character. Architects should re-consider alternative kinetic glasses to enhance the architectural, ecological and aesthetic aspects in the desert environment, so a new ecological vision is needed. This research will demonstrate the climatic and architectural characteristics of the desert environment and means of applying green architecture and LEED principles to affect the design and construction process positively. The case study will be carried out in Siwa as an example for the desert environment to identify a criteria for designing the new desert communities to be in accordance to the new approaches and trends of the future. The importance of this research is focused on creating new glasses to reshape our time from conventional thinking to a sustainable mind set. It creates a new language and a new thinking theory and mind for the desert environment in the next era. Keywords :Desert Environment - Ecological design - Green architecture - Sustainable solutions