

ADAPTING PORTUGUESE ARCHITECTURE TO FORMER AFRICAN COLONIES CLIMATE CONDITIONS

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Abstract

The Portuguese architecture is borderless due to the colonialism period. Many African countries can testify this influence and the cities still sprawling around remaining old buildings. These constructions are characterized by using local resources and adapting Portuguese architecture to the climatic characteristics and answering local natural hazards. The work developed presents a systematic approach about the constructive changes, identifying the solutions adopted for answering climatic demands. The passive solar systems used were categorized and some examples were selected according to examples found in African cities with Portuguese influence as Beira (Mozambique), Lubango, Namibe and Luanda (Angola) and Praia (Cape Verde). This analysis encompasses strategies to improve thermal behavior of buildings, as ventilation through the analysis of ventilated roofs or windows geometry, shadowing devices as large eaves, brises and second facades, among other issues. The local construction was also analyzed in order to find out traditional techniques for cooling buildings in a natural way.

Keywords: *Passive solar systems, bioclimatic architecture, thermal behavior, traditional construction*