THE IMPACT OF ENERGY CONSERVATION MEASURES ON ARCHITECTURAL DESIGN IN HOT, HUMID TROPICAL AREAS.

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For the

Workshop on

"The Interaction Between Physics and Architecture in Environment Conscious Design."

Miramare - Trieste

21 - 25 September, 1987.

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Abstract

The hot, humid tropical areas are characterized by a high incidence of thermal discomfort due to warmth for most of the year. During the hot period bioclimatic comfort may be achieved with air conditioning or fans, resulting in a considerable consumption of energy. This proportion of domestic energy consumption is significant in overall energy use. The increasing difficulty faced by almost all developing countries in meeting the rising costs of energy supplies makes it necessary that serious efforts be made to reduce energy consumption.

By employing energy conservation measures through the application of bioclimatic design techniques and natural cooling systems, a considerable reduction in energy consumption can be achieved. In conservation-oriented design, energy consumption should be considered as a major design factor.

For the conservation measures to have the desired impact on overall national energy demand, governments (and parastatal bodies) have a role to play. Through extensive information programmes, pilot projects, building legislation and regulations, education and retraining of experts, measures may be taken to reduce consumption of non-renewable energy in new buildings.