

**ECO- SENSITIVE ENERGY DIMENTION OF
HIGH-RISE BUILDINGS IN TROPICAL
CLIMATE.**



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S.M.M.K. SENEVIRATHNE.
JULY 2007

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ECO- SENSITIVE ENERGY DIMENTION OF HIGH-RISE BUILDINGS IN TROPICAL CLIMATE.

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*The dissertation presented to the Faculty of Architecture of the
University of Moratuwa, Sri Lanka for the Final examination in M.Sc.
(Architecture)*



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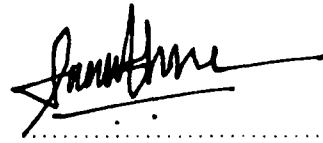
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Declaration

I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or submitted to this University or to any other institution for a degree, diploma or other qualification.



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"I see the future of tropical high rise buildings not as "energy – champers" but rather as "energy towers" that are self sustaining energy to the surrounding neighborhood. The towers should be the energy source of district. Imagine whole of Asia tropical cities being covered by these "energy towers" it will be new architecture a form still not been before."

(Tan Kok Means. Asian Architecture. PP205)

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ABSTRACT

ABSTRACT

One of the greatest challenges in South Asia is to adapt building types evolved in temperate climates to the rigors of tropical climate. High-rise buildings specially adapted to the regional climate and open-air lifestyle would punctuate the pattern, providing urban landmarks and focal points for more intensive activities.

The precedents for adapting the tower type to location and climate are few and far between, but not without significance in this context. After air-conditioning became standard, this was common for high-rise buildings in the tropics to be protected by an external sunscreen. Therefore high rises become more expensive structures as a result of that.

Architects try to find out new concepts of high rise for development of future cities though, studying various methods, such as sustainability or eco- sensitivity.

"I believe that this decision will help to control the process of construction of high-rise buildings in the capital city, sustain the integrity of the Vilnius city panorama, and ensure the quality of life for Vilnius citizens. Investors intending to build new high-rise buildings in Vilnius will have to offer exclusive architectural solutions for the city, without making a negative effect on the environment". (*Mayor Artūras Zuokas, 2006*)

Considering the present situation the most prominent problem is design eco-sensitive high rise buildings in local context, because Sri Lanka are seriously neglected about environmental aspects. Although the principles of designing with climate are relatively advance for low rise and medium rise buildings attention and research has to be direct to high rise buildings. Sri Lanka is a country, which is in tropics buildings have to be designed with greater concern with climate. Natural ventilation and lighting become major design component in building design within topics to over come impactation the economy and on urban environment.

This is a most suitable time to be activating eco-sensitive concepts for the future generations.