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A STUDY OF THE ATTITUDES OF SRI LANKAN ARCHITECTS TOWARDS THE ENVIRONMENTAL SUSTAINABILITY IN BUILDINGS.

A DISSERTATION SUBMITTED TO THE UNIVERSITY OF MORATUWA AS A PARTIAL FUFILLMENT OF THE REQUIRMENT FOR THE DEGREE OF MASTER OF SCIENCE IN ARCHITECTURE.

D.C.U.PEIRIS

Departement of Architecture
University of moratuwa
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DICLARATION

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 report submitted to this university or to any other institution for a degree, diploma or other qualification.

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D.C.U PEIRIS

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Prof.M.S Manawadu

Principle supervisor

Deparment of Architecture

Faculty of Architecture

University of Moratuwa

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ABSTRACT

The environmental consciousness is a common topic which can be hear in every discipline of works nowadays. Man who is a product of nature pay his respect to it by conquering it and day by day the issue becomes crucial. The built environment is a major area where this issue becomes critical. The rapid development which causes disturbing the lands and natural existences, use of natural resources, health and environmental hazards as problems. Then arises the question of how far we are going with this and what will be the end ? The term of sustainability has came to the scene and the argument of the way to be sustainable in built environment is a complex and comprehensive issue. When it comes to the environmental sustainability in buildings it is necessary to have correct identification built on the gathered knowledge to overcome it. There are many aspects within the issue and when compromising one another one have to sacrifice, but what it needs is a fine tuned total composition . This composition is known as the holistic approach.

The duty of the architects who are contributing the contemporary practice keep this in mind when it come to their duty, otherwise it likes the 'elephant to the blinds.' The study goes through a analytical reception of the issue with respect to Sri Lankan practice.

INTRODUCTION

Man's activities on earth has created an imbalance in natural systems of earth which has became a problem now. Any incompatible thing added in to the natural environment created problem to its ecological balance. Unlike in the past, developed countries have begun to put new buildings on the face of the earth at an alarming rate. Day by day number of constructions are increasing and getting complex by its work systems. Therefore the impacts due to new buildings that are coming up on earth is increasing. In future this impact will create a great problem on earth and its living beings.

From the end of 1990s there is an increased awareness throughout the world of the problems associated with the environment such as global warming, air pollution, rain forest destruction, acid rain or widening the hole of the ozone layer. It is widely accepted that, creation of human beings destructively change the natural environment of the planet. About 50% of the CFC(Chloro-Fluoro carbon) produced throughout the world which causes widening the hole of the ozone larger are used in buildings. About 50% of the world fossil fuel consumption is related to servicing of buildings. It is apparent that, water pollution and building industry are interconnected and acid rains that occurs due to air pollution in turn affect the building materials. Then today buildings are responsible for a larger part of the environmental degradation which is progressing rapidly.

All over the world, the awareness on this environmental degradation is spreading and search for solution for the problems. Solution for these problems are based on aethic which is aimed at rediscovering architectural responses that are in harmony with nature.

Sri Lanka is gradually reaching to an era in which design solutions derived from environmental sustainability of architecture are to be expected. This is due to the unmanageable utilization of energy and other resources. As an example if we consider air conditioning most of the new buildings that are coming up designed to be air conditioned. The greater part of the cost of maintenance of a building is to be spent on air conditioning without having proper control of utilization of energy and money. In most of such events architects can induce optimization of use of natural resources for the built environment which can be achieved at no cost, such as getting the benefit of solar gain by the building orientation. Most of climatic responsive measures can have

worthwhile energy saving benefits. Specification of environmentally benign. and CFC free building materials taken from sustainable sources, recycling of materials, bio degradable materials and usage of waste as a source

for building construction, design of long lasting buildings that can be adopted new functions, adaptation of old buildings as considering major event of energy efficient buildings and so forth can be achieved easily to overcome such environmental problems. Therefore a study of the relevant subject area is very important to increase awareness on the designers and achievement of green approach to architecture of Sri Lanka.

Although the green approach is not a new concept it is apparent that, this is a problem of lacking an awareness and conscious adaptation on the approach in designing building to day. As designers architects must understand that, what they do as individual designers affect entire global system on which we depend for survival. Accepting the interconnectedness of all the problems and their responsibility is crucial to the new approach. But by observing the attitudes of the contemporary architects to key areas of green approach it is apparent that there is a lack of understanding among contemporary architects to key areas of green approach it is apparent that there is a lack of understanding among contemporary architects on decisions that must be taken at earily stages stages of designs.

Intention of the study

The contribution of the built environment to the environmental hazards is increasing day by day. Therefore the architects and allied professionals should open their eyes towards the environmental sustainability in architecture. The most essential factor is to identify the appearance and the magnitude of the problem through a proper analysis. As we aware the concepts of environmental sustainability has practiced in traditions throughout a long period. This time tested knowledge is a valuable resource. On the other hand the practice of contemporary architecture has shown negative and positive approaches towards the same issue. It is important to create a transaction in between to the betterment of the future architectural practice to achieve environmental sustainability. The intention is to study both traditional practice and the contemporary practice analytically with the conceptual frames identified by different scholars. The amalgamated knowledge can use as a parameters to form guidelines to use as a reference to the environmentally sustainable architectural practice.

The method of study and limitations.

As far as the study aims to find the way towards the Sri Lankan architecture in environmentally sustainable meaning it is important to form a theoretical base as the first attempt. The comprehensive literature review regarding to the sustainable development and its co relation to the environmental sustainability has to be discussed in the first chapter. This basis will build up the arguments after that because the issue is a very subjective one.

The importance of the study of earlier approaches to achieve this will reveal through the second chapter by questioning the traditional architectural practices have existed in both global and local contexts. The changing attitudes are a part of the analysis and it discussed up to the point of contemporary situation. In here the special attention is offer on the Sri Lankan situation and there upon the issue deals with it.

The contemporary architectural practice is overviewed by the observation and literature review. The third chapter will begin with the criticism of the contemporary architectural practice and it will question the missing valuables of traditional practice and shortcomings of the present practice, and ways and means to regain it. In this perspective it is respect to the present day sensitive approaches, and the way to improved them up to a holistic approach. The local conditions will measure to present environmental sensitive guide lines, which needs to have for a proper environmental sustainable practice. To enhance this idea, case study will handle with four projects which are comprehensive enough to the main issue. The analysis of the case study will show the, present attitudes and the necessary changes, incorporated to the attitudes to achieve the environmentally sustain built environment. Within the limited time frame the study cannot cover up all the principles in detail version, the study concludes, with the basis of, respect in their meaning and the ways of applicability.