

# THE CONCEPT OF SUSTAINABILITY AND ITS RELATIONSHIP TO ARCHITECTURE

A Dissertation presented to the  
University of Moratuwa  
For the Final Examination in M.Sc.



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## ABSTRACT

What do we find the world around us? Every thing is natural or man-made. Nature is a natural phenomenon but architecture is man made. Life and build forms sustain in the nature without any conflict. How ever in the past couple of centuries specially after the beginning of the "Industrial revolution". Man has been accused of the promoting development at the cost of environment and quality of human life.

Sustainable development as path of progress needs the need and aspiration of the present generation without compromising the ability of future generation to meet their needs. Architecture and social needs falls parallel to each other in designing for sustainable built environment.

What is design? Design is the innate pattern making impulse of human beings. Design and architecture are tools mankind uses to change an adapt to its environment extend human capacities and thus comprehensively change.



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Sustainable design is to observe nature, which is lavish in design. It is there for us to see and explore its richness to the full with in the frame of sustainability, which is in our reach at all times.

Design involves mans creativity. 'Creativity' is achieved by inspirations. 'Inspiration' we acquire by observing nature as the source of sustainability.

Industrial projects have polluted water, air and soil. To accommodate the growing population land has turned into a veritable jungle. Our future is uncertain and it's the time to design for sustainable built environment.

Taking tradition as the accumulated wisdom of the past and learning from it, it is up to us to design habitable and environmentally responsible built

environment, which is sustainable. Design for a sustainable built environment is a multi source synthesis.

As a holistic approach, this study analytically examined it.



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INTRODUCTION



## INTRODUCTION

The contemporary societies undergoing a qualitative transformation. The age of uncontrolled industrialization is giving way to a new wave of social development. The recent advances in information and communication technology have opened up new vistas of creativity. The interaction and conspiracy among peoples show that a new dawn is emerging in the evaluation of human civilization.

Architecture as a mother of discipline has to respond to these changes in societal and environmental context. Architecture as an art and science of the built environment has to build up and integrated understanding of the theory and practice related to specific contexts. This requires a scientific and rational approach to create the base for its further development. An approach, which helps mankind to, achieved higher level of living patterns, which is sustainable.



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According to the Oxford dictionary to sustain means to keep going holding up or to support. In designing in sustainability can be looked at from many angles. Eg. Financial, environmental, functional, spatial, etc. There is a growing awareness that sustainable design is necessary to be to hold up the built environment for the needs of nature and society for future and also future generations.

Sustainable development can be defined as a path or program to meet the needs and aspirations of the present generations without compromising the ability of future generation to meet their needs. Building and built environment play a major role in human impact in environment. It should be considered as socially, economically and culturally sustainable development, for the benefit of the present and future.

According to the AIA Chicago declaration sustainable design can avoid adverse effect on environment in economical, social and cultural well-being of the human being. Sustainable design can be accepted within the framework of sustainable development because these two fall parallel to each other in the development process of the country.

We as designers of the built environment are responsible for creating an environment for human beings that are both extremely habitable and environmentally responsible. Our traditional architecture possessed the sustainability of the past. It echoes the environmental harmony with built and unbuilt. Unconsciously our ancestors were adhered to sustainable life style. Nature was the most inspired factor in designing, increasing the relation ship of temple, tank and people, which sustained for years. So its important to peep into the past, as a proverb explains that there can be no present without a past, no future without both.

It's the challenge of the present day architects, designers, and urban planners to design a sustainable built environment in a situation of the qualitative aspects of human life. It is a long journey build able land area and demand for the shelter for the increasing population, which are, constrains in design in the future and achieving sustainable built environment.

It is important to study the implication of contemporary building practices on the built environment and to propose a holistic approach, which considers environment friendliness, and contextual compatibility, which are the main factors in achieving sustainability in all designs.

In this dissertation some of the key issues of today architecture have been explored. It is hoped that a dialog with a perspective towards future shall be initiated in designing for sustainable built environment. In the first chapter the concept of sustainable development and its contribution towards a

sustainable built environment is discussed. The second chapter its peeping to the past in searching the roots of sustainability. Third chapter is devoted to implication of contemporary building practices on built environment. Finally the fourth chapter approaches to a path in 'Design for sustainable built environment.

