

**ATTRIBUTES OF URBAN FORM
FOSTERING SUSTAINABILITY:
AN ANALYSIS OF RESIDENTIAL NEIGHBOURHOODS
IN COLOMBO, SRI LANKA**

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ABSTRACT

Despite increasing number of studies on evaluation of sustainable neighbourhoods and urban forms, only a few have paid attention to the identification of the components that influence the degree of inhabitants' gratification. A neighbourhood is a built entity that lays the experiences of daily lives of a group of inhabitants in an identifiable geographical space. The neighbourhood sustainability is the process of nurturing its environment to support and meet both economic and social needs of its inhabitants. A sustainable neighbourhood should ensure the desired quality of life and satisfaction of the inhabitants by intertwining the local; social, cultural, environmental, and economic facets enabling its sustenance as an appealing place to live. However, observations show that most neighbourhoods in the context of Southeast Asia poorly addressing this need.

'Urban Form' of such neighbourhoods is the physical manifestation, expressing respective sustainability appeal sensed by the inhabitants. This is the intangible, significant finding, demonstrated in the physical design. This study attempts to explore the determinants of Urban Form that contribute to the Neighbourhood Sustainability for the inhabitants' appeal.

Specific intent of the research is to conduct a detailed investigation on the urban form of three urban residential neighbourhoods of Colombo, selected from the city core, intermediate city, and outer city. While it examines the degree of inhabitants' appeal based on their evaluations, it assesses the neighbourhood sustainability under the three main sustainability parameters: environmental, social, and economic facets. Physical and non-physical attributes of the neighbourhood form, such as density, layout, land-use, connectivity, transport infrastructure, building typology and architectural character, were investigated by using secondary data. Structured interviews were carried out with thirty-five inhabitants; household representations, in each neighbourhood to ascertain inhabitants' perception while physical observations were made to identify the deterministic attributes.

This research develops an integrated approach recognizing the fact that environmental, social, and economic goals in appealing neighbourhoods are often mutually reinforced with the urban form of a neighbourhood. It recognizes the physical and non-physical attributes of the urban form of a neighbourhood and each of their contribution in fostering sustainability to create an appealing environment for its inhabitants. Consequently, it establishes an overall sustainability rating on the inhabitants' perception and validates through case studies with reference to the attributes of urban form. This leads to formulate the requisites of an exemplary urban form; verbalizing its attributes that are determining the sustainability of neighbourhoods.

Key Words: Environmental Social and Economic facets, Urban Form, Attributes, Sustainability, Urban Neighbourhoods, Inhabitant, Colombo, Sri Lanka.

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LIST OF ABBREVIATIONS

Abbreviation	Description	Page
AARP	American Association of Retired Persons	37
APA	American Planning Association	51
CCDP	City of Colombo Development Plan	59
CEC	Commission of European Communities	27
CNU	Congress for the New Urbanism	35
DTCP	Department of Town & Country Planning	42
FCM	Federation of Canadian Municipalities	76
GIS	Geographic information System	07
GND	Grama Niladhari Division	106
ICLEI	International Council for Local Environmental Initiatives	39
LEED-ND	Leadership in Energy and Environmental Design-Neighbourhood Design	12
MUD	Master of Urban Design Program	124
NRDC	National Resources Defense Council	71
RTPI	Royal Town Planning Institute	21
SGD	Sustainable Development Goals	72
SOC	State of California	23
SPSS	Statistics package for Social Sciences	8
TND	Traditional Neighbourhood Design	68
UDA	Urban Development Authority	59
UN	United Nations	2
UNCSD	United Nations Conference on Sustainable Development	72
UNGA	United Nations General Assembly	2
UOM	University of Moratuwa	124
US-EPA	United States Environment Protection Agency	73
USGBC	United States Green Building Council	44

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