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The Bio-Climatic approach to urban uublic space: A thermal evaluation of "Streets" in Colombo

Public spaces are the heart of civic life in a city, the common ground where people carry out the functional and ritual activities that bind a community, whether in the normal routines of daily life or in periodic festivities. The success of urban public space is based on many factors, of which we consider the level of thermal comfort as an important component. Although life in the equatorial tropics is largely an outdoor phenomenon, modern urban development has by and large failed to facilitate such living in a climatically pleasant manner. Therefore, the task facing environmentally sensitive designers is to make the equatorial urban outdoors thermally comfortable.

This study was a research initiative that aims at developing urban patterns that facilitate climate-conscious urban design in the equatorial tropics with special reference to the Sri Lankan context. The primary concern here was with the spaces in-between buildings that strictly speaking, belong to no building in particular.

The research established that;

1) Shading or shaded areas of the urban outdoors have a distinct positive bearing on the thermal comfort of the people using these spaces;

2) The orientation and the ratio of building height to the width of the open space (H.W. Ratio) can be consciously modified in order to achieve the above;

3) Increased H.W. ratio of the built mass increases the level of urban thermal comfort.

Based on these findings, the study proposes three sets of urban patterns for a street in central Colombo that specify H.W. ratio, street orientation and the Sky View Factor to achieve outdoor thermal comfort for different urban activities.