Name: Anwarul Haq Chowdury  
Degree: M. SC. (BUILDING SCIENCE)  
Department: Department of Building  
Title: Bioclimatic Architecture Study and Evaluation of HDB Flats

ABSTRACT

Except in those parts of the world with extreme climate, the contribution of passive comfort measures - that is those that exploit natural forces without recourse to mechanical and electrical system - can make a very considerable contribution to comfort if orchestrated effectively. Good Bioclimatic building will always call on these measures first and extract as much benefit from them as possible.

The aim of this study is as follows: -

1. To evaluate via subjective measurement (questionnaire survey) the general response from the occupants about the present indoor environment of their flats in terms of orientation, natural ventilation, daylight, solar control and thermal comfort.

2. To provide an objective measurement of these flats through simple instrumentation.

From the survey feedback, it is found that most of the occupants of Site-A, are satisfied with their living environment because of its orientation, adequate lighting and good natural ventilation, while in Site-B and in Site-C, the level of dissatisfaction is high. From the macro and micro climatic measurement, it is revealed that most of the time the air temperature and relative humidity remain above the desired human comfort level. Good day-lighting condition is observed throughout the measurement. Though the air velocity is quite satisfactory but it is always fluctuating.