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Poster

Spatial and seasonal variations of thermal comfort in Sri Lanka

Thermal comfort is a valuable indicator in terms of selecting sites and seasons for recreation and tourism. This would be employed in planning to improve energy efficiency. The objective of this study is to explore variations of thermal comfort within Sri Lanka. Thermal Comfort Index (TCI) was employed as the basic indicator (TCI = T+RH/4). Data from 2005 to 2009 from 20 meteorological stations were used to calculate TCI. Level of TCI and rank were used to demarcate comfortability regions. TCI was calculated for day and night and for four seasons separately.

Two regions of comfortability, region ***A***, including the stations at Nuwara Eliya, Bandarawela, Badulla and Katugastota and region ***B***, comprising all other regions were identified with their specific characteristics. Region ***A*** has no *very high* level of TCI neither day nor night in any season while region ***B*** possesses *medium* at night to *very high* levels of TCI in all four seasons. Most comfortable place is Nuwara Eliya with TCI being between *low* to *very low*. Most uncomfortable place is Hambantota with level of TCI between *high* to *very high*. In region ***A*** all nights experience *Low* level of TCI: between *medium* to *high* in day time, While region ***B*** at night experiences *medium* to *high* level and *high* to *very high* TCI level at day time. Seasonal variation of the TCI in region ***A*** is not significant and varies from 2.5 in North-East Monsoon to 2.75 in 1st Inter-monsoon. Seasonal variation of TCI in region ***B*** is higher compared to region ***A*** and consists 3.5 in North-East Monsoon and 4.3 in 1st Inter-monsoon. In both regions, most comfortable season is North-East Monsoon and most uncomfortable season is 1st Inter-monsoon.

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