

Examining the Coverage of CO₂-Related Indicators in a Sample of Sustainable Rating Systems

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Abstract : The global climate is negatively impacted by CO₂ emissions, which are mostly produced by buildings. Several green building rating systems (GBRS) have been proposed to impose low-carbon criteria in order to address this problem. The Green Globes certification is one such system that evaluates a building's sustainability level by assessing different categories of environmental impact and emerging concepts aimed at reducing environmental harm. Therefore, assessment tools at the national level are crucial in the developing world, where specific local conditions require a more precise evaluation. This study analyzed eight sustainable building assessment systems from different regions of the world, comparing a comprehensive list of CO₂-related indicators with a various assessment system for conducting coverage analysis. The results show that GBRS includes both direct and indirect indicators in this regard. It reveals deep variation between examined practices, and a lack of consensus not only on the type and the optimal number of indicators used in a system, but also on the depth and breadth of coverage of various sustainable building SB attributes. Generally, the results show that most of the examined systems reflect a low comprehensive coverage, the highest of which is found in materials category. On the other hand, the most of the examined systems reveal a very low representative coverage.

Keywords : Assessment tools, CO₂-related indicators, Comparative study, Green Building Rating Systems

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