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A Comparative Analysis of Green Buildings Rating Systems

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Abstract : Nowadays, green building rating systems are an inevitable necessity for managing environmental considerations to achieve green buildings. The aim of this paper is to deliver a detailed recognition of what has been the focus of green building policymakers around the world; It is important to conduct this study in a way that can provide a context for researchers who intend to establish or upgrade existing rating systems. In this paper, fifteen rating systems including four worldwide well-known plus eleven local rating systems which have been selected based on the answers to the questionnaires were examined. Their similarities and differences in mandatory and prerequisite clauses, highest and lowest scores for each criterion, the most frequent criteria, and most frequent sub-criteria are determined. The research findings indicated that although the criteria of energy, water, indoor quality (except Homestar), site and materials (except GRIHA) were common core criteria for all rating systems, their sub-criteria were different. This research, as a roadmap, eliminates the lack of a comprehensive reference that encompasses the key criteria of different rating systems. It shows the local systems need to be revised to be more comprehensive and adaptable to their own country's conditions such as climate.

Keywords : environmental assessment, green buildings, green building criteria, green building rating systems, sustainability, rating tools
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