

Building Rating Systems: A Critical Review on Their Sustainability Compatibility

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Abstract : The most accepted international definition of sustainable development quoted from the Brundtland Report published in 1987 states that development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition serves as a foundation for many fields including the building sector to consider sustainability and focuses on the three pillars of sustainability social, economic, and environment. The building industry due to its multi-faceted nature requires building codes, standards, and certification systems to effectively address the sustainability assessment. In the last decade, many buildings rating systems evolved that address sustainability in one way and many more are on the drawing boards yet to come. This paper attempts to offer a comprehensive literature review of seven popular building rating systems (LEED (US), BREEAM (UK), CASBEE (Japan), GRIHA, LEED, IGBC), scrutinizing their macro-areas, segments of sustainability and thus highlight the need for a framework which addresses the assessment of the building in terms of sustainability as a whole.

Keywords : building rating systems, sustainability, LEED, BREEAM, CASBEE, GRIHA, IGBC

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