DESIGNING A METHODOLOGICAL FRAMEWORK FOR A GREEN BUILDING RATING TOOL TAILORED TO SRI LANKA'S INDUSTRIAL SECTOR

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Abstract: The sustainability challenges in the industrial sector of Sri Lanka are very different due to its distinct climatic, economic, and operational conditions. Even though international green building rating tools such as LEED, BREEAM, and CASBEE exist, providing frameworks for sustainable construction, their application to industrial buildings in Sri Lanka is constrained due to the potential misalignment with local needs. The existing GREENSL rating tool, developed by the Green Building Council of Sri Lanka, though providing a foundational framework, does not spell out specific details in relation to industrial applications.

The present study has proposed a methodological framework for the green building rating tool appropriate for the industrial sector in Sri Lanka. A comparative analysis was carried out with LEED, BREEAM, CASBEE, and GREENSL to understand the gaps with regard to addressing industry-specific indicators, cost-effectiveness, and relevance to the country's tropical climate. The proposed framework integrates global best practices with localized strategies to ensure relevance, feasibility, and effectiveness.

Key findings emphasize the need to incorporate industry-specific metrics, enhance adaptability to tropical conditions, and ensure cost-efficient implementation. The framework is intended to act as a guide for policymakers, industrial stakeholders, and sustainability enthusiasts in aligning sustainability goals with practical implementation. By addressing the specific needs of the Sri Lankan industrial sector, the framework is expected to ensure environmental, economic, and social sustainability while fostering green industrial practices.

Keywords: Green building rating tools, LEED, BREEAM, CASBEE, GREENSL, Industrial buildings, Sustainability, Sri Lanka, Developing countries