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Bridging the Gap for a Greener Tomorrow: Integrating Global Green Building Standards

Loc Tri Nguyen

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Introduction

As the global community confronts the repercussions of climate change, the construction sector is increasingly urged to adopt sustainable and environmentally conscious practices. Green building certification systems are crucial in establishing industry benchmarks, but selecting the most appropriate standard for a specific region or project can be challenging due to the variety of international options. In this commentary, we compare three key green building certification standards relevant to Australia, New Zealand, the Middle East, and Southeast Asia: Green Star, Green Mark, and Estidama.

Our goal is to discuss the advantages and disadvantages of each system and advocate for a harmonisation pathway that benefits the construction industry in these regions.

Green Star: Spearheading Sustainability in Australia and New Zealand

Introduced by the Green Building Council of Australia (GBCA) in 2003, Green Star is a voluntary certification system that evaluates the environmental impact of buildings and communities in Australia and New Zealand (GBCA, 2021). The system encompasses nine categories: management, indoor environment quality, energy, transport, water, materials, land use and ecology, emissions, and innovation (GBCA, 2021). Green Star's regional focus ensures criteria are tailored to the distinctive environmental challenges faced by Australia and New Zealand, such as water scarcity and extreme weather events (Szokolay, 2008).

However, Green Star's regional focus can also be viewed as a limitation since it may not be as applicable to projects in other parts of the world, including the Middle East and Southeast Asia. Moreover, it has been criticised for its complexity and high compliance costs (Sargent et al., 2012). While Green Star has significantly contributed to promoting sustainability in the Australian and New Zealand construction industry, there is potential for improvement in its accessibility and applicability to other regions.

Green Mark: Tackling Tropical Climate Issues in Southeast Asia

Initiated in 2005 by the Building and Construction Authority (BCA) of Singapore, the Green Mark certification system promotes sustainable design and construction practices in Southeast Asia (BCA, 2021). The system evaluates buildings based on five key criteria: energy efficiency, water efficiency, environmental protection, indoor environmental quality, and innovation (BCA, 2021). Green Mark's adaptability to the region's tropical climate and its focus on energy and water conservation are especially relevant in Southeast Asia, where rapid urbanisation and limited resources have led to increased environmental pressures (Sovacool & D'Agostino, 2012).

On the other hand, Green Mark has faced some critiques for not being quite as all-encompassing s other certification systems like Green Star or LEED (Chen et al., 2010). Moreover, its strong focus on the Southeast Asian market could make it less suitable for application in other regions like the Middle East, Australia, or New Zealand.

Green Mark has undoubtedly played a key role in tackling the distinctive climate-related challenges faced by Southeast Asian nations. However, by adopting a more comprehensive approach that encompasses various aspects of sustainability, its impact could be significantly amplified.

Estidama: A Comprehensive Strategy for the Middle East

Estidama, meaning "sustainability" in Arabic, is a green building certification system developed by the Abu Dhabi Urban Planning Council in 2010 (UPC, 2010). Designed to address the distinct environmental and cultural context of the Middle East and North Africa (MENA) region, Estidama focuses on four pillars: environmental, economic, social, and cultural sustainability (UPC, 2010). Its strengths lie in its comprehensive approach, which includes not only the physical aspects of a building but also the well- being of its occupants and the surrounding community (AlWaer & Sibley, 2013). Furthermore, Estidama places significant emphasis on water conservation and energy efficiency, which are particularly relevant in the water-scarce and energy-intensive MENA region (Elsheshtawy, 2016).

However, Estidama's regional focus may limit its applicability to projects outside the MENA region, including those in Australia, New Zealand, and Southeast Asia. Additionally, its relatively recent development means it may not be as widely recognised or understood as more established certification systems. Despite these limitations, Estidama presents a unique and comprehensive approach to sustainable construction in the Middle East, and greater efforts should be made to raise awareness and promote its adoption in other regions.

Harmonisation: The Path Ahead

While each of these green building certification systems has its strengths and weaknesses, their proliferation has led to a fragmented landscape that can be confusing and challenging for construction professionals and project owners (Fowler & Rauch, 2006). To ensure that sustainable construction practices are adopted more widely in Australia, New Zealand, the Middle East, and Southeast Asia, a harmonised approach that combines the best elements of each system is recommended.

This harmonisation could take the form of a regional certification system that addresses the specific environmental and cultural challenges of each area while incorporating international best practices. For example, a certification system for Southeast Asia could combine elements of Green Star's comprehensive assessment framework with Green Mark's focus on tropical climate adaptations. Similarly, a certification system for the Middle East could integrate Estidama's holistic approach to sustainability with best practices from Green Star and Green Mark in areas such as energy efficiency and materials selection.

Alternatively, existing certification systems could collaborate to create a unified set of criteria and assessment methodologies that are globally recognised and applicable across different regions. This approach would involve identifying commonalities and best practices from Green Star, Green Mark, and Estidama, and incorporating them into a shared framework that can be adapted to the specific needs of each region. Such a framework would not only streamline the certification process but also facilitate knowledge sharing and collaboration among construction professionals, ultimately driving greater adoption of sustainable practices.

Conclusion

In conclusion, the global community must address the urgent need for sustainable and environmentally responsible practices in the construction industry. Green building certification systems such as Green Star, Green Mark, and Estidama provide valuable benchmarks for sustainable construction in their respective regions. However, the construction industry in Australia, New Zealand, the Middle East, and Southeast Asia would benefit from a harmonised approach that combines the strengths of each system while addressing the unique challenges faced by each region. By working towards a unified certification framework, we can collectively promote a more sustainable future for the built environment and contribute to global efforts to mitigate the impacts of climate change.

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