

Conceptual Understanding for the Adoption of Energy Assessment Methods in the United Arab Emirates Built Environment

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Abstract : Regulation and integration of public policy, economy, insurance industry, education, and construction stakeholders are the main contributors to achieve sustainable development. Building environmental assessment methods were introduced in the field to address issues such as global warming and conservation of natural resources. In the UAE, Estidama framework with its associated Pearl Building Rating System (PBRS) has been introduced in 2010 to address and spread sustainability practices within the country's fast-growing built environment. Based on literature review of relevant studies investigating different project characteristics that influence sustainability outcomes, this paper presents a conceptual framework for understanding the adoption of PBRS in UAE projects. The framework also draws on Diffusion of Innovations theory to address the questions of how the assessment method is chosen in the first place and what is the impact of PBRS on the multi-disciplinary design and construction processes. The study highlights the mandatory nature of the adoption of PBRS for government buildings as well as imbedding Estidama principles within Abu Dhabi building codes as key factors for raising awareness about sustainable practices. Moreover, several project-related elements are addressed to understand their relationship with the adoption process, including project team collaboration; communication and coordination; levels of commitment and engagement; and the involvement of key actors as sustainability champions. This conceptualization of the adoption of PBRS in UAE projects contributes to the growing literature on the adoption of energy assessment tools and addresses the UAE vision is to be at the forefront of innovative sustainable development by 2021.

Keywords : adoption, building assessment, design management, innovation, sustainability

Conference Title : ICGB 2019 : International Conference on Green Building

Conference Location : Paris, France

Conference Dates : March 28-29, 2019