

## Towards Sustainable Construction in the United Arab Emirates: Challenges and Opportunities

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**Abstract :** The UAE has experienced rapid economic growth due to its mature oil production industry, leading to a surge in urbanization and infrastructure development in the construction sector. Sustainable development practices are becoming increasingly important, and the UAE government has taken proactive measures to promote them, including the introduction of sustainable building codes, energy-efficient technologies, and renewable energy sources. Initiatives such as the Masdar City project and the Emirates Green Building Council further demonstrate the government's commitment to a cleaner and healthier environment. By adopting sustainable practices, the UAE can reduce its carbon footprint, lessen its reliance on fossil fuels, and achieve cost savings in the long run. The purpose of this paper is to conduct a thorough review of the current state of sustainability in the construction industry of the UAE. Our research methodology includes a local market survey and qualitative observational analysis of executed housing construction projects by the Mohammed Bin Rashid Housing Establishment. The market survey assesses eleven different challenging factors that affect sustainable construction project delivery. The qualitative observational research is based on data collected from three projects, including construction progress, bill of quantity, and construction program. The study concludes that addressing these challenges requires a collaborative team approach, incentivized contracts, traditional project management practices, an integrated project team, and an increase in sustainability awareness among stakeholders. The recommendations proposed in this study aim to promote and improve the application of sustainability in the UAE's construction industry for the future.

**Keywords :** sustainability, construction, challenges, opportunities, case study, market survey

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