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<u>Entitled</u>

CONSTRUCTION WASTE MANAGEMENT PRACTICES IN ABU DHABI; INVESTIGATION AND EVALUATION

by

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<u>Abstract</u>

In 2012, the Environment Agency of Abu Dhabi has reported that 6.9% of the total Green House Gases was emitted by the waste sector emitting 92% by solid waste disposal in the landfills. In 2016, about 4.55 million tons of waste was generated by the construction and demolition industry, representing 47% of the total non-hazardous waste produced. This increased by 62.92% compared to the amount in 2015. The Environment Agency of Abu Dhabi has set its goal towards waste management starting by first using a reduction approach. Estidama has mandated a diversion of 30% of construction generated waste by reusing or recycling.

This research aims to investigate the current practices of construction and demolishment of waste management in response to current regulations in the emirate of Abu Dhabi while focusing on two main objectives; first, to understand the dynamics associated with human factor in relation to current construction waste management practices in the emirate, and second to assess the impact of one voluntary waste mitigation approach in terms of waste generated quantity and quality that is commonly used in Abu Dhabi. This study was conducted in 2019 using mixed methods approach, following the exploratory sequential design. The study has started with an exploratory qualitative stage that was accomplished by conducting unstructured open interviews with nine of Abu Dhabi construction industry professionals analyzed using a simple thematic approach, followed by analytical quantitative stage using Minitab 19, a statistical software, to analyze data collected from thirty construction sites across the emirate.

The research supports the understanding of current construction waste management practices in the Abu Dhabi emirate, as it has shed light on the process of considering waste management in construction sites of the emirate in 2019, the key players in such a process as well as their perspectives toward the current practices, the common enhancement methods of construction and demolition waste management plans in Abu Dhabi, and the fact that waste relative labors inductions and training sessions are reducing generated waste amounts by 10.2% and increasing the percentage of diverted waste from landfills by 51.4%.

This study contributes to the growing literature of sustainability and construction management in UAE. This research has opened the door for several future studies on the local level as analyzing the inductions' material for improvements and evaluating the other available construction and demolition waste management enhancement methods in the context. In addition, it suggests an approach that could be followed to assess any other practice associated with construction management in any context.

Keywords: UAE, Abu Dhabi, Construction waste management, Human factor, Inductions, Labors, Mixed method, unstructured interviews, Statistical analysis.