Special Issue

Solid Waste Management in the Construction Sector

Message from the Guest Editors

With the rapid pace of urbanisation, globally, construction and demolition waste (CDW) accounts for approximately 36% (equating to between 2.5 and 3.5 billion tonnes) of the total solid waste received annually at landfill sites around the world. It is possible to classify the effects of construction and demolition waste caused by the industry into two levels: the project level and national level. At the project level, CDW affects the profitability and reputation of stakeholders while significantly influencing project efficiency and performance. On a national scale, CDW has the potential to create environmental challenges, both domestically and globally, while also placing a financial burden on governments as they strive to address CDWrelated issues. This Special Issue compiles the most recent research aimed at tackling solid CDW. It encompasses strategies for waste reduction and recovery, as well as the implementation of measures at either the project or broader levels. The overarching goal is to align the construction industry with the UN Sustainable Development Goals and accelerate the adoption of such practices in government policies and industry standards on a global scale.

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Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

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