Resilience enhancement of constructed assets against multi-dimentional risks

Summary

With the increasing levels of global multi-dimensional risks and the pressing need to achieve the UN sustainable development goals, more and more attention is being given to the resilience of constructed assets when impacted by a wide range of natural and man-made disasters.

The proposed research aims at establishing a structured and efficient approach to assure the enhanced resilience of critical infrastructure and buildings that are needed for the functioning of modern societies. This approach includes an innovative resilience evaluation methodology that can be embedded at any stage of the lifecycle of various types of constructed asset systems. Real case studies from the transportation, water, energy, health, education, tourism, retail, and residential sectors will be covered.

The research outputs will be valuable for public and private organizations with responsibilities in managing infrastructure and building assets, such as governmental bodies, banks, insurance companies, construction project owners, and AEC professionals in general.

Keywords

Urban resilience, constructed assets, rating system, multicriteria decision analysis, risk management, GIS-spatial data.

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