

Assessing the Feasibility of Incorporating Green Infrastructure into Colonial-Era Buildings in the Caribbean

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Abstract : Climate change has produced a crisis that particularly threatens small island states in the Caribbean. Developers and climate enthusiasts alike are now forced to find new and sustainable ways of building. Focus on existing buildings is particularly needed in Trinidad and Tobago, like other islands, especially as these countries are vulnerable to climate threats and geographic locations with close proximity to a hurricane. Additionally, since many colonial-era style buildings still exist, the idea that they are energy inefficient is at the forefront of the work of policy-makers. The question that remains is can these buildings be retrofitted to reflect the modern era while considering climate resilience. This paper aims to investigate the energy efficiency of colonial-era buildings in Port of Spain and whether these buildings in Trinidad and Tobago, if found to be energy inefficient, can be more energy efficient and sustainable. This involves collecting surveys from building management in colonial-era buildings and researching literature on colonial architecture in the Caribbean and modern innovations in green building designs. Additionally, the data and experiences from the Town and Country Planning Division in the Ministry of Planning and Development of Trinidad and Tobago will inform the paper. This research will aid in re-envisioning how green infrastructure can be applied to urban environments with older buildings and help inform planning policy as it relates to sustainability and energy efficiency.

Keywords : spatial planning, climate resilience, energy efficiency, sustainable development

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