

**ABSTRACT****MANAGING THE EFFECTS OF CLIMATE CHANGE ON  
COASTAL COMMUNITIES: A CARIBBEAN PERSPECTIVE**

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Coastal zones are exposed to the adverse effects of climate change, in particular to sea-level rise, to a great degree (Mimura 2007; Kalogirou 2010). The Caribbean region comprises of developing states whose cities were built in close proximity to rivers and oceans for transportation, agricultural and economic purposes. However as sea level rise and storm surges increase in severity and frequency, this natural geographic advantage is now a primary contributor to its vulnerability (World Bank 2010). Hence, the pressing need to address the issue of climate change and its attendant effects from the perspective of affected populations in selected Caribbean coastal communities. The objective of this thesis is to analyse the perceptions of risk associated with climate change of Georgetown residents, to assess the socio-economic vulnerability to sea-level rise of Georgetown and to analyse the determinants of climate change awareness in Georgetown, Guyana and San Pedro, Belize. Exploratory Factor Analysis, Multiple linear regression and Ordered Probit regression methods are applied in analyzing the perception of Georgetown residents to risk associated with climate change, analyzing factors that influence the selection of adaptation strategies by residents of Georgetown to address sea level rise, analyzing factors that influence climate change awareness and whether climate change awareness is influenced by the means by which climate change information

and knowledge are accessed by residents of Georgetown and San Pedro whilst a variant of the Livelihood Vulnerability Index Model (Hahn et al 2009) is calculated to determine the socio-economic vulnerability of Georgetown to sea-level rise at both the city and ward level. Geographical information System (GIS) techniques are used to assist our analysis. The study revealed that perceptions of risk influenced attitudes to adaptation; the adaptive capacity of Georgetown was higher than its exposure to sea- level rise and that experience of climate change extreme events by residents of Georgetown and San Pedro respectively, significantly influenced their climate change awareness.

**Keywords:** Climate Change, Sea-level rise, Perception of risk, Vulnerability, Adaptation Strategies, Climate Change Awareness.