

Title: A Probable Maximum Loss Study of Critical Infrastructure in Three Caribbean States – Dominica, St. Lucia, St. Kitts and Nevis

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Hazard examined: Hurricanes, tropical storms

Study emphasis: Economic development and disaster preparedness and mitigation strategies.

Summary: Offers a methodology for estimating structural damage and monetary losses from hurricanes. Information is useful to participating governmental organizations and financial institutions in that it provides a basis for review of issues relating to insurance coverage for critical infrastructure that is at risk to damage from hurricanes.

Vulnerability Indicators: Estimate of losses (\$\$)

Economic Development, Disaster Preparedness, Disaster Response and/or Disaster Reconstruction Application: Economic Development, Disaster Preparedness

Data Requirements: Detailed information on infrastructure characteristics (age, design, quality of construction, replacement costs), damage functions for building types represented, impacts from maximum credible events.

Output: Cost estimates for damages and losses from credible natural hazard events. In this study, the only hazard considered was tropical storms. In addition to the final cost estimates, the infrastructure information that was collected locally for this study is useful for local management of the countries' public infrastructure.

Results of Application at Case Study Site: The aim of this case study was to produce a reasonable estimate of potential financial losses from a hurricane event, for use by participating governments and regional financial institutions to review issues of insurance coverage for critical infrastructure that is at risk to damages from hazard events.

Lessons Learned: When undertaking multi-jurisdictional studies such as this one, it is important to ensure that the local data collection and cost estimation procedures are

consistent across jurisdictions. In this study, loss estimates for the individual countries cannot be compared directly, due to some differences in the local data collection procedures.