

DUNNO, CARLY HERTZ, Ph.D. Measuring Social Vulnerability To Natural Hazards: An Examination Of The United States Virgin Islands. (2011).
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This study measures social vulnerability in the United States Virgin Islands while testing the applicability of a Social Vulnerability Index that was developed for the United States. The main focus was to develop an understanding of the underlying social processes that cause certain people and places to be more vulnerable than others. Using subdistrict level data derived from the 2000 United States Census of Island Areas, a Principle Components Analysis was conducted that identified eight components of vulnerability that accounted for 93.42% of the variance among vulnerability indicator variables in the dataset. The component scores were summed using an additive model to create an index score of vulnerability for each subdistrict within the islands of St. Croix, St. John and St. Thomas. A comparative assessment of social vulnerability among subdistricts was conducted in a Geographic Information System. By mapping both the Social Vulnerability Index scores and the component scores, the most and least vulnerable subdistricts were identified and the underlying social processes contributing toward this vulnerability emerged. Because of the prevalence of less affluent minority groups, St. Croix was found to be the most vulnerable island, whereas St. John was found to be the least vulnerable island due in part to its affluence and cultural homogeneity. In general, subdistricts with densely built environments, large population densities, and a prevalence of low income minority groups and large concentrations of elderly and/or children were found to be more vulnerable than those with smaller population distributions and more affluent, racially and ethnically homogenous communities. A combination of all indicators of social vulnerability, rather than just one indicator, was necessary to define social vulnerability in the US Virgin Islands.