

Potential Devastation in the US Virgin Islands by an 1867-Class Tsunami

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This report considers the impact that a tsunami of the magnitude of the 1867 Virgin Islands event would have if it occurred today, triggered in the same manner. Although property damage was great, the death toll from the tsunami that struck the Virgin Islands group in 1867 was low when compared to the 500 or more lives that had been lost in a hurricane two weeks earlier. The tsunami's major devastation was to vessels, stores and warehouses. Still, deaths from yellow fever and other disease continued into the next year. Significant political developments in the Danish West Indies as well as the economy and the social stability of the region were significantly disturbed. In 2004 the same communities are heavily developed and cruise ship tourism is a billion dollar industry. On a typical day in "high season", visitors disembark from no fewer than two vessels, with capacities averaging in the thousands. Thousand of passengers from these ships join the thousands of residents and airline visitors milling around a few feet above sea level in the towns of Charlotte Amalie, Christiansted and Fredericksted. These locations lie just 5-6 minutes tsunami travel time from the 1867 epicenter. Although an 1867-class tsunami is likely to wreck very expensive vessels along with the physical resources of these communities, loss of life could constitute the real tragedy. In this context, preparations for tsunami hazard require unique precision and realism.