Data and Tools for Integrating Climate AdaptationAssessments and Hazard Mitigation Plans

Cutter, Susan, Christopher Emrich, and Melanie Gall

Hazards and Vulnerability Research Institute, University of South Carolina

This presentation introduces a suite of tools that have been used in hazard mitigation planning and climate adaptation assessments at the local to national level: SoVI®, SHELDUS™, and BRIC. The Social Vulnerability Index (SoVI®) provides census tract to county-level data on social vulnerability to hazards (including climate-sensitive ones) for the entire nation. The index illustrates the comparative levels of social vulnerability between places using census tracts, counties, or other geographies. SoVI® has routinely been used in hazard mitigation plans to show the locations of the most vulnerable populations. It has also been used to target recovery resources after the 2015 South Carolina floods. SoVI® is part of NOAA's Digital Coast product and Climate Central's Surging Seas. SHELDUS™ is a county-level data base of hazard events and losses covering the period from 1960-to the present. It contains 18 different hazard types as well as loss information on deaths/injuries, property losses, and crops losses. SHELDUS™ enables the production of loss profiles by hazard (floods, droughts), time period, or for specific places (counties), and is widely used in hazard and risk assessments. Another tool is the Baseline Resilience Indicators for Communities (or BRIC) index. BRIC measures six facets of community resilience --social, economic, institutional, environmental, infrastructure/housing, and community capital --compiled from national datasets. The index establishes the baseline for communities that can then be used to measure the effectiveness of interventions to enhance resilience. Efforts are currently underway to downscale BRIC to sub-county geographies as part of the National Research Council's Resilient America Roundtable pilot communities project. Each of these tools is briefly illustrated with examples from the region.