COA›SHOWCASE

Social vulnerability (SV) is an important but hard to measure concept. SV was established to better understand the relationship between socioeconomic characteristics and differences in how an individual or community is able to prepare for, withstand, and recover from one or more hazard events. Within the natural hazards community, SV indices—which combine multiple characteristics—help decision-makers allocate resources in ways that will reduce disparities in post-hazard outcomes. Within the United States (US), almost all SV indices utilize the US Census Bureau's data, which provides multi-year and generalizable population estimates for the country. The easily accessible and widespread availability of data makes it possible to generate a SV index that fits the needs of individual communities or projects. While there are a few widely used SV indices, a multitude of indices exist that build on a diverse set of indicators, geographic scales, and formulations. Often, the underlying assumptions and limitations inherent in all SV indices are not explicitly addressed by the SV modeler or end-user. An understanding of these assumptions and limitations will help improve the validity of SV indices within the hazards community. This poster sets out to clearly state basic assumptions that must be considered before generating a SV index. We explore how these assumptions play out within Southeast Texas, a five-county coastal region with exposure to flooding and air pollution. Our findings highlight the limitations of assumptions and the need for community engagement in identifying socially vulnerable areas.

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