

Creating a high resolution social vulnerability map in support of national decision makers in South Africa

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Abstract. The core objective of this study was to create a social vulnerability map based on generally accepted variables that are indicative of drivers of social vulnerability, capturing the unique attributes of South African communities. The paper explains the need for an index to measure the social vulnerability of various communities throughout South Africa and looks at international literature as the base for the study. Such an index is deemed essential in decision making specifically in reducing the susceptibility of various communities to the risks associated with multiple stressors. Fourteen unique (South African specific) variables were chosen and a principal component analysis was performed to build an appropriate index to measure social vulnerability across South Africa. This index is essential and required by the South African National Disaster Management Centre in terms of the National Disaster Management Framework of 2005.

Keywords: Social vulnerability, spatial decision support, composite indicators, PCA.