



Vol. 44, No. 3, pp 314-320, 2016

Indian Journal of Soil Conservation

Online URL: <http://indianjournals.com/ijor.aspx?target=ijor:ijsc&type=home>



## Assessment of vulnerability to climate change: A case study of Karnataka

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### ARTICLE INFO

#### Article history:

Received : May, 2015  
Revised : March, 2016  
Accepted : April, 2016

#### Key words:

Adaptive capacity,  
Exposure,  
Karnataka,  
Sensitivity,  
Vulnerability Index

### ABSTRACT

Identification and assessing the extent of vulnerability to climate change is an essential pre-requisite for reducing climate change impacts. Drawing upon published literature on vulnerability assessment, a total of 27 environmental and socio-economic indicators were identified and analyzed to measure district-wise vulnerability status in Karnataka, which is one of the most drought prone states of country. Selected indicators were first normalized and then multiplied by appropriate weights to compute the exposure, sensitivity adaptive capacity and vulnerability indices. Scores of Exposure-Sensitivity Index (ESI) suggest that Bidar (rank first, 1.378) and Gulbarga (rank second, 1.203) are the most prone and susceptible districts to climate change whereas Dakshin Kannada is the least vulnerable district in the State. Three-fourths of the districts of northern Karnataka are categorized under very high to high degree of vulnerability. Around 51% of area of the state supporting 42% of the human population is highly vulnerable to climatic change. These prioritized areas, based on rank and degree of vulnerability, should be given immediate attention, and measures ought to be taken by internalizing region specific needs and by carrying out necessary changes in allocation of funds and resources to address the growing challenge of climate change.