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Measuring the Severity of Dry Seasons in the Grenadines

Everson J. Peters

Department of Civil and Environmental Engineering, The University of the West Indies, St. Augustine, Trinidad and Tobago, West Indies; E-mail: Everson.Peters@sta.uwi.edu

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Abstract: To reduce the negative consequences of extended dry seasons, particularly on islands that have relatively low annual rainfall and depend primarily on rainwater harvesting, it requires better understanding of the drought and dry season hazard and the factors that influence the islands' vulnerability to this hazard. This paper analyses dry season rainfall for the Grenadines and proposes a new methodology for measuring the severity of dry seasons and droughts for the islands. The proposed severity index is based on the well-established standardised precipitation index. The application of the new index to dry seasons over past 80 years shows that the 2009/2010 Drought was one of the worst in the history of the Grenadines. The results also showed that in the last decade dry seasons are becoming more pronounced.

Keywords: Dry season severity index, Grenadines, 2010 Drought