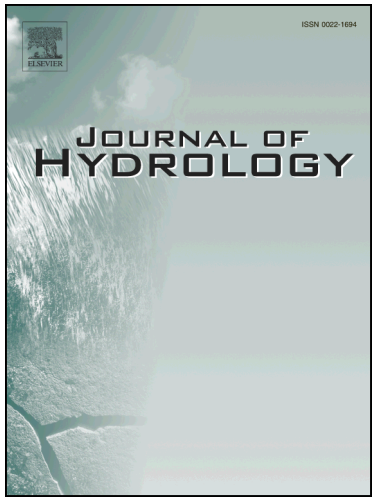

Research papers

Spatial connections in Regional Climate Model rainfall outputs at different temporal scales: Application of network theory

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Spatial connections in Regional Climate Model rainfall outputs at different temporal scales: Application of network theory

Ihsan Naufan[1], Bellie Sivakumar[1,2,*], Fitsum M. Woldemeskel[1], Srivatsan V. Raghavan[3], Minh Tue Vu[3,4], Shie-Yui Liong[3,5]

[1]School of Civil and Environmental Engineering, The University of New South Wales, Sydney, NSW 2052, Australia

[2]Department of Land, Air and Water Resources, University of California, Davis, CA 95616, USA

[3]Tropical Marine Science Institute, National University of Singapore, Singapore 119227, Singapore

[4]Glenn Department of Civil Engineering, Clemson University, Clemson, SC 29634, USA

[5]Willis Research Network, Willis Re Inc., London, EC3M 7DQ, United Kingdom

[*]Corresponding author: E-mail: *s.bellie@unw.edu.au*

Tel.: +61 2 93855072; fax: +61 2 93856139

Abstract

Understanding the spatial and temporal variability of rainfall has always been a great challenge, and the impacts of climate change further complicate this issue. The present study employs the concepts of complex networks to study the spatial connections in rainfall, with emphasis on climate change and rainfall scaling. Rainfall outputs (during 1961–1990) from a regional climate model (i.e. Weather Research and Forecasting (WRF) model that downscaled the European Centre for Medium-range Weather Forecasts, ECMWF ERA-40 reanalyses) over Southeast Asia are studied, and data corresponding to eight different temporal scales (6-