



Trends in Daily and Extreme Temperature and Precipitation Indices for the Countries of the Western Indian Ocean, 1975-2008

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In the framework of the project “Renforcement des Capacités des Pays de la COI dans le Domaine de l’Adaptation au Changement Climatique (ACCLIMATE)” (Comission de l’Ocean Indien, COI), a workshop on homogenization of climate data and climate change indices analysis was held in Mauritius in October 2009, using the successful format prepared by the CCI/CLIVAR/JCOMM Expert Team on Climate Change Detection and Indices.

Scientists from the five countries in Western Indian Ocean brought daily climatological data from their region for a meticulous assessment of the data quality and homogeneity, and for the preparation of climate change indices which can be used for analyses of changes in climate extremes. Although the period of analysis is very short, it represents a seminal step for the compilation of longer data set and allows us to examine the evolution of climate extremes in the area during the time period identified as the decades where anthropogenic warming es larger than natural forcings.

This study first presents some results of the homogeneity assessment using the software package RHtestV3 (Wang and Feng 2009) which has been developed for the detection of changepoints in climatological datasets. Indices based on homogenized daily temperatures and precipitations were also prepared for the analysis of trends at more than 50 stations across the region. The results show an increase in the percentage of warm days and warm nights over 1975-2008 while changes in extreme precipitations are not as consistent.