## Examining future Caribbean climate extremes from the ECHAM-driven PRECIS regional model

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This study seeks to investigate changes in Caribbean climate extremes for 2071-2100 relative to 1961-1990 under the IPCC SRES A2 and B2 emission scenarios using output from the ECHAM-driven PRECIS regional model. The PRECIS model is evaluated to determine how well temperature and rainfall extremes are represented over a 1973-1990 period for which temperature and precipitation observations are available. The indices investigated include consecutive dry days, consecutive wet days, very cold days, very cold nights, very hot days, very hot nights, maximum five-day precipitation, wet days and extreme rainfall. Results show a simulated warming trend across the Caribbean with evidence of very warm days and nights increasing and cool days and nights decreasing. The signal is particularly strong over the Eastern Caribbean. This is consistent with temperature observations. There is evidence of an increase (decrease) in the number of simulated consecutive dry (wet) days and an increase in maximum five-day rainfall. Simulations appear to underestimate the magnitude of the changes in rainfall though the sign of the changes are captured over most of the basin and are consistent with observed extremes for the region. Distribution of future extremes across the basin is also examined. Results have implications for economic sectors across the Caribbean that are sensitive to climate variability and change.