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## The CLIMDEX project: Creation of long-term global gridded products for the analysis of temperature and precipitation extremes

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The CCl/CLIVAR/JCOMM Expert Team on Climate Change Detection and Indices (ETCCDI) has developed a suite of indices derived from daily temperature and precipitation data with a primary focus on extreme events. These indices have been calculated at station locations using quality controlled data from international daily datasets e.g. daily Global Historical Climatology Network (GHCN-Daily) and the European Climate Assessment (ECA&D), with data sparse regions of the globe supplemented with data from targeted regional workshops. In order to account for the uneven global distribution of stations and in order to easily compare with the output from climate models, these indices were gridded onto a 3.75 longitude x 2.5 latitude grid to create the dataset HadEX. While HadEX made significant advances to our understanding of global changes in temperature and precipitation extremes and allowed evaluation of modelled extremes for the first time using state-of-the-art global climate models, it still suffers from a lack of coverage over large areas (particularly for precipitation extremes), only covers the period 1951-2003 and does not contain the measures of uncertainty required to fully assess the trends and variability in extremes. This presentation will introduce the "next generation" of global gridded extremes products (the ClimDEX project) which aim to improve our understanding of the variability of extremes, enhance detection and attribution studies and provide the highest quality observations for model evaluation. Advances over previous datasets include longer-term data availability, delivery via a web interface including near-real time updates, and an assessment of the uncertainty in the gridded products.