# **More Information**

Indices definitions and open-source software to calculate the ETCCDI indices, as well as key guidance documentation on extremes are available from the ETCCDI website:

http://wcrp-climate.org/etccdi

# Expert Team on Climate Change Detection and Indicies (ETCCDI)



Sponsors: WMO Commission for Climatology (CCI)

> WCRP Climate Variability and Predictability Project (CLIVAR)

WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM)





WMO



# Expert Team on Climate Change Detection and Indices (ETCCDI)

ETCCDI provides international coordination on climate change detection and indices for the research community and WMO National Meteorological and Hydrological Services (NMHSs).



Limited international exchange of long-term daily data prevents the full global analysis of changes in weather and climate extremes.

#### **Promoting Data Exchange**

A fundamental principle of the World Meteorological Organization (WMO) is the commitment by nations to broaden and enhance the free and unrestricted international exchange of meteorological and related data and products.

ETCCDI advocates that sharing daily climate data has become essential for research studies and projects supporting the development and the implementation of strategies for climate change assessment and adaptation. **ETCCDI two-pronged solution:** Develop a suite of climate change indices from daily data and hold workshops that teach participants how to analyze their data while calculating these indices.

## Monitoring Changes in Climate Extremes

ETCCDI has defined a benchmark suite of internationally agreed indices of climate extremes calculated from daily temperature and precipitation data.

The coordinated use of indices enables any part of the world to conduct and compare analyses of changes in climate extremes.



## **Regional Workshops**

Regional workshops are aimed at regions of the world where data availability is limited to improve the global view and to increase capacity in local specialists in data analysis for climate monitoring. These workshops increase regional research synergies by sharing insights between neighboring countries, and foster greater appreciation for data rescue and data archeology.



**Results:** Internationally exchanged indices revealing global changes in extremes while the continuing series of workshops is enhancing the capacity of countries to extract important climate change information from their long-term daily data.

## Climate Change Detection and Attribution

Detection and attribution studies seek to identify changes in climate and attribute the changes to causes; are changes in trends the result of multidecadal variations in the Earth's climate, volcanic eruptions or human-induced emissions of greenhouse gases?