

Promoting Worldwide Climate Monitoring and Assessment Capabilities: The WMO/CCI OPACE2 Experience

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The World Meteorological Organization (WMO)/ Commission for Climatology (CCI) Open Panel of CCI Experts on Climate Monitoring and Assessment ((OPACE2)) aims at stimulating, promoting, coordinating and implementing international activities that enhance climate monitoring and assessments in support of sustainable socio-economic development and environmental protection. Therefore, it is focused on assessing climate monitoring systems involving frequent updates on climate trends, variations and related weather and climate extremes that have significant societal impacts. This includes assessment and making recommendations on methodologies and standards to define extreme weather and climate events, developing standards for creating global, regional and national databases on extreme weather and climate events, improving the WMO Climate System Monitoring and the implementation of Climate Watch Systems at the regional and national levels, with the provision of guidance on the content, dissemination and related early-warning systems. OPACE2 structure includes the Joint CCI/CLIVAR/JCOMM Expert Team on Climate Change Detection and Indices (ET-CCDI), the Rapporteurs on World Records of Weather and Climate Extremes, the Task Team on National Climate Monitoring Products and the Task Team on the Definitions of Extreme Weather and Climate Events. The Rapporteurs on World Records of Weather and Climate Extremes have as objectives to develop guidelines and appropriate mechanisms for the verification of global, hemispheric and continental weather extremes, to further develop and maintain the database of extreme records (<http://wmo.asu.edu/>) and in document such events (e.g. in peer-reviewed scientific papers). The Task Team on National Climate Monitoring Products assesses the existing national climate monitoring products and determines which of these products have major interest from scientific and social perspectives, as well as considers national capabilities within developing countries to produce climate monitoring products in a seamless and timely manner. The Task Team on the Definitions of Extreme Weather and Climate Events provides guidance on methodologies and standards for clearer definition of extreme weather and climate events and advises on adequate computational tools for such an assessment and providing recommendations on the development of inter-operable databases for climate extreme events with a focus on regional and national levels.