

Environmental Data Through Time – Extending The Climate Record

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ABSTRACT

NOAA's National Climatic Data Center (NCDC) is responsible for acquisition, archive, and dissemination services for climate and environmental data and information that fulfill much of the Nation's climate data requirements. This includes stewardship for *in-situ*, satellite and radar data and information. Over 4 petabytes of data reside in the archives and growth trends over the next several years are expected to increase tenfold. The Center also has a science role to describe the climate and provide scientific assessments. These include the Climate Change Science Program (CCSP), "State of the Climate" reports and National and Global Assessments.

Towards that end, NCDC has several programs that involve extending the climate record. For example NCDC is the lead for the Climate Database Modernization Program (CDMP). CDMP goal is to rescue and preserve historical climate and environmental data. To date, ninety seven CDMP projects are ongoing and millions of records have been processed, digitized and are available on-line. NCDC, in partnership with the Cooperative Institute for Climate and Satellites (CICS), are deriving Climate Data Records (CDR's) for atmosphere and terrestrial features using satellite data (Global Essential Climate Variables) that date back to the 1970's. The Center also performs research in Paleoclimatology. Paleoclimate data come from natural sources such as tree rings, ice cores, corals, and ocean and lake sediments and extend the archive of weather and climate information back hundreds to millions of years. The Center maintains the world's largest archive of climate and paleoclimate data.