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NOAA's National Climate Model Portal (NCMP)

Justin Hnilo[+]; Jeff Budai; D. Michael Grogan; Glenn Rutledge; David Actur
[+] NCDC/CICS-NC, USA
Leading author: jay.hnilo@noaa.gov

NOAA's National Climate Model Portal (NCMP) is being designed with emphasis on distributed access to NOAA's reanalysis datasets. These observational estimates will be examined and directly compared to statistically downscaled IPCC data. This portal will also allow for interoperability using format neutral open web based standards and tools where users at all level of expertise can gain access and understanding of many of NOAA's climate, weather model and reanalysis products. NCMP will closely coordinate with and reside under the emerging NOAA Climate Service Portal (NCSP) and the emerging National Climate Projections and Predictions Portal (NCPP). NCMP, in its role as an extension and expansion of the existing NOAA/National Model Archive and Distribution System (NOMADS), will broaden the reach of its data holdings, both in terms of technology and stakeholders. While NOMADS has historically provided a technology stack targeted to scientific users of traditional Atmospheric Information Systems (AIS), NCMP will push NOMADS' distributed & interoperable access methods into the realm of Geographic Information Systems (GIS), data formats and web service standards as from the Open Geospatial Consortium (OGC) typically employed outside the climate sciences. In addition to developing interactive visualization tools for decision makers, NCMP will enhance the understanding of climate model data by climate sensitive economic and industry sectors via targeted outreach & education, enhanced data discovery & search capabilities, and a prototype climate and weather model helpdesk. Currently NOMADS provides access to over 400TB of gridded model data, from numerical weather prediction models, such as the Global Forecast System (GFS), to new reanalysis datasets such as the Climate Forecast System. Many new, multi-terabyte gridded data sets are planned for archival and access. The NCMP leverages existing resources to provide a unified and consistent suite of climate information to users at all levels so that they can make better decisions about their specific management needs. Information will be provided on time scales from days to months (forecasts), seasonal to inter-annual (predictions), and decadal to centennial and longer (climate variability and change - projections). Existing and new climate model reanalysis products will total over 1PetaByte (PB) (1,000 Terabytes) of data and will include: - Coupled Climate Forecast System Reanalysis and Reforecast (CFSRR) dataset, a modern era reanalysis, a coupled 30 year global reanalysis of the atmosphere, ocean, land, and cryosphere (snow/ ice). - Climate Prediction Center Reanalysis (CPCR), a long time series historical upper-air reanalysis (1850 to Present) also known as CFSR "lite". - The 20th Century Reanalysis Project a surface pressure historical reanalysis running at NOAA's Earth System Research Laboratory (ESRL). - NCEP/NCAR and NCEP/DOE reanalysis data At NCMP we also support a reanalysis clearinghouse to host consensus datasets for the next series of NOAA reanalysis. Reanalysis.Org has already been initiated and NCMP will advance and support this effort. We also are initiating the development of a diagnostic toolset for reanalysis data.