



CGMS-39 NOAA-WP-28
Prepared by NOAA
Agenda Item: IV/1
Discussed in WG IV

**IMPROVED ACCESS TO CLIMATE OBSERVATIONS
AND PRODUCTS IN NOAA**

In response to CGMS action 38.49

Action/Recommendation proposed: None.



IMPROVED ACCESS TO CLIMATE OBSERVATIONS AND PRODUCTS IN NOAA

1 INTRODUCTION

The National Climatic Data Center (NCDC) is the world's largest active archive of weather and climate data with more than 2.5 petabytes of archived data. Our mission is to provide access and stewardship to the Nation's resource of global climate and weather related data and information, and assess and monitor climate variation and change. This effort requires the acquisition, quality control, processing, summarization, dissemination, and preservation of a vast array of climatological data generated by the national and international meteorological services. During 2011, over 1 petabyte of data were downloaded by users from NCDC's online access services. NCDC's mission is global in nature and provides the U.S. climate representative to the World Meteorological Organization, the World Data Center System, and other international scientific programs.

2 IMPROVED ACCESS

Establishing standard data formats such as NetCDF has improved data access through open source protocols such as Open-source Project for a Network Data Access Protocol (OPeNDAP) and Thematic Realtime Environmental Distributed Data Services (THREDDS) server. NCDC has implemented Open Geospatial Consortium (OGC) Web Feature Services, Web Map Services, and Web Coverage Services (WFS/WMS/WCS) to improve interoperability and provide GIS-map based access to data – see <http://gis.ncdc.noaa.gov/>. Also, data discovery capabilities have been implemented which utilize Federal Geographic Data Committee geospatial metadata standards along with ISO 19115 as a basis for information discovery. These activities are fully incorporated into the NCDC data access planning and the overall web architecture.

NCDC is one of the lead agencies for the NOAA Climate Services Portal (<http://www.climate.gov>). The long-range goal for the Portal is to become the "go-to" website for NOAA's climate data, products, and services for all users. For its initial prototype, the focus is on developing the infrastructure and capacity to showcase a wide breadth of climate information to our users. Other activities hosted by NCDC include the Drought Portal (<http://www.drought.gov>), which focuses on water resource data and information; the Global Observing Systems Information Center (<http://www.gosic.org/>); and the World Data Center for Meteorology, Asheville (<http://www.ncdc.noaa.gov/oa/wdc/index.php>).

Another avenue for improving data access through data sharing and mirroring is underway. Recent discussions with EUMETSAT established a partnership to facilitate sharing and mirroring of highly sought after data such as Climate Data Records and satellite observations. Data sharing and mirroring promotes data use by a wider audience.



3 CONCLUSIONS

NCDC is the world's largest active archive of weather and climate related data with a mission to preserve and provide access to these national resources. Progress in data access includes interoperability through implementation of open source protocols, international standards and data formats. Additionally NCDC is partnering with EUMETSAT for data sharing and mirroring of highly sought after CDRs and satellite data.