Northern Hemisphere (NH) Snow Cover Extent (SCE) CDR and Applications

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CDR visualization

Mean Spring SCE (1981–2010)

NH SCE week ending Jan 29, 2007

NH SCE CDR percent of days snow covered

CDR description

Specifications
- Binary (snow / no snow) over NH land surface
- 88 × 88 Cartesian grid on polar stereographic projection
- 190.6 km resolution at 60°N
- Weekly temporal resolution
- October 4, 1966–present

Inputs to CDR
- Oct 1966–May 1999: primarily visible satellite imagery from multiple instruments
- After May 1999: Interactive Multisensor Snow and Ice Mapping System (IMS)
- SCE derived from multiple sources by trained analysts

Current uses and applications based on the CDR

Examples
- U.S. Global Change Research Program (GCRP), 2014 National Climate Assessment
- Bulletin of the American Meteorological Society (BAMS), State of the Climate in 2014
- U.S. Environmental Protection Agency (EPA), Climate Change Indicators in the United States
- NOAA Global Climate Dashboard
- Snow ablation characteristics and melt–discharge relationships in the Columbia River Basin
- National Snow and Ice Data Center (NSIDC) Satellite Observations of Arctic Change
- News media stories

Future improvements and anticipated applications

50 years of NH SCE satellite monitoring
- Mark the 50th anniversary of the longest satellite-based record of any environmental variable
- Highlights of plans include redesigned website
- Improved production system for weekly updates
- Change Request (CR) pending to further refine netCDF and bring NH SCE CDR to v01r02

17 years of operational IMS output
- Operational since November 1998
- 24 km resolution at 60°N
- Daily temporal resolution
- Bring IMS SCE output up to CDR standards

50 years
1966
2016

IMS Jan 29, 2007

Rutgers University Global Snow Lab  ※ Snowcover.org
NOAA Climate Data Record Program

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