



Data Curation in Climate and Weather: our ability to improve predictions through global knowledge sharing

C. Jacobs (1), S. Worley (2), and J. Comeaux II (2)

(1) National Science Foundation, Division of Atmospheric Sciences, Arlington, United States (cjacobs@nsf.gov), (2) National Center for Atmospheric Research, Boulder, CO, United States (worley@ucar.edu), (joey@ucar.edu)

Climate and Weather are of increasing interest to the scientific community and the general public. Data curation and stewardship are essential building blocks in the science community's quest to better understand how natural climate and weather systems behave and how activities of human civilization are altering the natural system. Rudimentary observations of the atmosphere and ocean have been collected for over one hundred years and proxy measurements of the climate can trace our planet's climatic history for millions of years. These observations coupled with the rapid advances in technology, such as powerful computers, rapid access to massive amounts of data, and satellite observations, have allowed innovative techniques to be used to understand and predict the planet's climate and weather.

Two global efforts, reanalysis of past observations and creation of a grand global ensemble, have accelerated our understanding of climate and weather. These efforts illustrate necessary elements required for sustainable data curation and access which include a funding, staffing, partnerships, and availability and thoughtful use of technology.