



Two overarching questions are identified in the 2003 Strategic Plan for “Observing and Monitoring the Climate System” and “Data Management and Information”. These questions continue to offer guidance to these elements of the program:

- How can we provide active stewardship for an observation system that will document the evolving state of the climate system, allow for improved understanding of its changes, and contribute to improved predictive capability for society?
- How can we provide seamless, platform-independent, timely, and open access to integrated data, products, information, and tools with sufficient accuracy and precision to address climate and associated global changes?

Federal activities related to these questions are coordinated by a USGCRP Interagency Working Group on Observations, together with the coordination provided by the U.S. Group on Earth Observations.

High-quality, long-term observations of the global environment are essential for defining the current state of the Earth’s environmental system, its history, and its variability. This task requires both space- and surface-based observation systems. Climate observations encompass a broad range of environmental observations, including (1) routine weather observations, which are collected consistently over a long period of time; (2) observations collected as part of research investigations to elucidate processes that contribute to maintaining climate patterns or their variability; (3) highly precise, continuous observations of climate system variables collected for the express purpose of documenting long-term (decadal to centennial) change; and (4) observations of climate proxies, collected to extend the instrumental climate record to remote regions and back in time. The increasing volume of data from remote-sensing and in situ observing systems presents a continuing challenge for USGCRP agencies to ensure that data management systems are able to handle the expected increases.

