USGEO-CGEO Bi-lateral Technical Workshop

Testbed and Drought Study Groups Status and Progress – Next Steps

Collaboration between the United States and Canada in the new context of the Group on Earth Observations (GEO) enables an expanded view of North America – as a single geographic space. This viewpoint has important implications for how we observe and monitor the environment continent-wide, and alters our perspective on what is required of our Earth observation systems and programs. Such collaboration will depend on the twin pillars of increased data sharing and improved interoperability of data systems. Under the auspices of the Canadian Group on Earth Observations (CGEO) and the United States Group on Earth Observations (USGEO), a bi-lateral workshop was held in the U.S. in October 2008 to generate recommendations for collaboration between the two countries in the domain of Earth observations for water resource management and water cycle research. In May 2009, a group of 30 technical experts from the United States and Canada had a follow-up meeting in Toronto to discuss key opportunities for transboundary cooperation. After extensive discussion, consensus emerged around establishing the following areas of cooperation:

1. Developing three international, interdisciplinary water-related monitoring testbeds, building on existing initiatives, along the U.S.-Canada border:
    a. The Great Lakes. The goal of this testbed activity would be to bring together the many initiatives to facilitate coordination both on water availability and water quality monitoring.
    b. The Prairie Region. The goal of this testbed activity would be to close gaps in critical Earth observation requirements for agriculture, specifically soil moisture, as they relate to drought and flooding extremes.
    c. The Rocky Mountains. This region was identified because of its role as a laboratory for cold-water processes, as well its importance as the source of many trans-boundary river systems.
2. Initiating two studies of drought in the context of hazards and extreme events:
    a. Surface Water Supply Index (SWSI) Study. The study will examine how SWSI, a popular and valuable index for drought management in the Western U.S., can be further refined and tested, including in Western regions of Canada.
    b. Drought Definitions and Indices. Consensus emerged around the need to improve the definition of drought for different climatic regions, and the need to develop new and improved indices for drought, including vegetation. Continent-wide study is needed for comparative analysis across regions, and close links to the testbed activities should be pursued to refine definitions and indices for specific regions.

The April 23 USGEO-CGEO Bi-lateral Technical Workshop will provide a gathering point for the three testbeds and two drought studies. Workshop goals include:

1. Report on the status and progress of each of the three testbeds and two drought studies.
2. Review and refine the testbed and drought study guidelines.
3. Provide an opportunity for communication between the testbeds and drought studies.
4. Provide recommendations to USGEO-CGEO Leaders on next steps and timelines for further development of the testbeds and studies, including resources and support required.