Freeing data through The Polar Information Commons

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The polar regions are changing rapidly with dramatic global effect. Wise management of resources, improved decision support, and effective international cooperation on resource and geopolitical issues require deeper understanding and better prediction of these changes. Unfortunately, polar data and information remain scattered, scarce, and sporadic.

Inspired by the Antarctic Treaty of 1959 that established the Antarctic as a global commons to be used only for peaceful purposes and scientific research, we assert that data and information about the polar regions are themselves "public goods" that should be shared ethically and with minimal constraint. We therefore envision the Polar Information Commons (PIC) as an open, virtual repository for vital scientific data and information that would provide a shared, community-based cyber-infrastructure fostering innovation, improving scientific efficiency, and encouraging participation in polar research, education, planning, and management. The PIC will build on the legacy of the International Polar Year (IPY), providing a long-term framework for access to and preservation of both existing and future data and information about the polar regions.

Rapid change demands rapid data access. The PIC system will enable scientists to quickly expose their data to the world and share them through open protocols on the Internet. A PIC digital label will alert users and data centers to new polar data and ensure that usage rights are clear. The PIC will utilize the Science Commons Protocol for Implementing Open Access Data, which promotes open data access through the public domain coupled with community norms of practice to ensure use of data in a fair and equitable manner. A set of PIC norms is currently being developed in consultation with key polar data organizations and other stakeholders. We welcome inputs from the broad science community as we further develop and refine the PIC approach and move ahead with implementation.