

## Enabling Discovery: A New Registry of Polar Observing Networks (RoPON)

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A fundamental challenge exists for optimizing the study of climate and environmental change in the polar regions. Observing-related infrastructures and activities – such as monitoring sites, mobile platforms, research projects, field campaigns, and observing programs – are deployed in a diverse and distributed fashion across numerous efforts. At this time, it is difficult to strategically assess status, overlap, and gaps because most inventories of such “observing assets” are limited in scope, making it difficult to obtain a comprehensive perspective. To help address this challenge, a new Registry of Polar Observing Networks (RoPON; <https://polarobservingregistry.org/>) has been released. This is a catalog of systems or organizations that conduct or coordinate observation and monitoring at high latitudes, typically with data management, research stations, platforms, and instrumentation. RoPON also displays portals or initiatives that are not observing networks *per se*, but which compile and share structured information about observing activities and infrastructure. Users can browse, search, or filter for discovery-level details: Network description, observational scope, spatial extent, data or metadata access, and links to more information. The network-level metadata model underpinning the registry’s database has also been released (<https://polarobservingassets.org/resources>). RoPON was created by the Arctic Portal (<https://arcticportal.org>) in collaboration with the SAON Polar Observing Assets Working Group (POAwg, <https://www.polarobservingassets.org>), which has a goal of making asset-level metadata more findable, accessible, interoperable, and reusable. RoPON has been released as a phase 1 version for demonstration purposes. Contingent on additional funding, the registry will be improved, and feedback is appreciated. RoPON is designed to help: Co-locate and optimize limited resources; better inform local communities of activities nearby; guide network assessment & planning; clarify best practices for asset-level metadata sharing; and establish a basis for information exchange through harvesting, aggregation, & federated search.