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Circumpolar Local Environmental Observer Network

The eyes, ears and voice of environmental change and pollution

Our world is changing rapidly, and local observers can detect subtle changes in weather, landscapes and seascapes, and in plant and animal communities. The Alaska Native Tribal Health Consortium (ANTHC) developed the Local Environmental Observer (LEO) Network in 2009, recognizing the value of traditional and local knowledge (TLK) and the need for a tool to document and share environmental observations, including information on potential contaminants. The purpose was to increase awareness of vulnerabilities to the impacts of climate change, and to connect community members with technical experts. LEO uses web-accessible maps to display observations of unusual or unique environmental events which are then shared with LEO members, and will encourage actions to reduce emissions and other releases of pollutants. The maps contain event descriptions, photos, expert consultations and links to information resources. LEO has grown to include hundreds of participants and is helping to increase understanding of the emerging effects of climate change.



During the U.S. Chairmanship of the Arctic Council, the Arctic Contaminants Action Program (ACAP) and its Expert Group the Indigenous Peoples' Contaminants Action Program (IPCAP) are working to expand the existing LEO Network in order to create a foundation for a Circumpolar Local Environmental Observer (CLEO) Network. They are working with partners and communities in Canada to establish new LEO Network observer communities and regional hubs, leading to a North American regional CLEO Network.

Following the successful development of a CLEO chapter in North America, project partners will develop a framework for expanding into other areas of the Arctic. In a workshop planned for June 2016, experienced observers and technical experts from North America will examine TLK community-based observation systems in the U.S. and in Finland. They will explore mechanisms to connect TLK to outside technical experts, and work with communities in Fenno-Scandia to develop a framework for expansion into that region.

In 2017, the project partners expect to (1) announce the establishment of the first CLEO hub in the Canadian Arctic, and (2) deliver a framework for expansion that describes future opportunities to expand CLEO across the Arctic.

LEO Reporter

The LEO Network is excited to announce the launch of LEO Reporter, a new mobile app for handheld devices. LEO Reporter is a global map and data interface that allows observers to post observations through text and imagery. LEO Reporter was designed and tested in rural Alaska to provide robust field reporting capabilities even in the most remote areas. Observations taken from locations outside mobile service will be automatically uploaded once a connection has been reestablished. The app includes interactive maps, a search engine to explore the LEO observation database, and optional observations updates from the Network. LEO Reporter puts powerful, user-friendly, mobile technology in the hands of the user, enabling real-time observations on the front lines of climate change and pollution. The LEO reporter is now available for both iOS and Android.

Consultations: Building TLK bridges

Two types of experts provide consultations: community experts and technical experts. Community experts provide the traditional and local knowledge component of a consultation. They validate observations in their areas and provide consultation based on traditional and local knowledge. Technical experts provide the science component of a consultation. They are usually located in government agencies, academic institutions or organizations that house subject-matter experts.

The observers, community experts and technical experts participating in specific topic posts become a “community of practice” that collaborates on monitoring, research, publications and other types of outreach.

LEO hubs are the regional coordination centers for the LEO Network that can, for example, review posts, select posts for a formal consultation, facilitate communication with community and technical experts and provide technical assistance. Hubs may also choose to provide other services such as hosting webinars, publishing e-journals and providing updates to LEO and other groups, organizations and networks.

These tools and models, which have been successfully tested and deployed in the Alaska-based LEO Network, will serve as a template for the construction of the CLEO Network. To learn more, please visit www.leonetwork.org.

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