

## **About LEO**

### **The Local Environmental Observation Network**

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Alaskans live close to the land, and the health of communities is closely related to the conditions of the environment. Many Alaska Natives possess intimate knowledge of the weather, seasons, land, and natural resources; and this equates to superb skills in detecting subtle environmental changes and their impacts. The Local Environmental Observer (LEO) Network was originally designed as a tool to help collect and share the increasing number and wide range of unusual events witnessed by residents in rural Alaska communities. In recent years, these events have been captured in social media, like Facebook, which is very popular across Alaska. But Facebook focuses on immediate events rather than on ways to achieve long term learning and understanding. LEO Network focuses on creating a safe and respectful place for sharing knowledge, protection of privacy, archiving content for long term use, and providing technical assistance by connecting observers with topic experts.

LEO Network is part environmental observation field tool, part publishing platform, and part social network. It was developed by the Alaska Native Tribal Health Consortium in 2012, for the primary use of people in or working with rural Alaska communities. With the relaunch of the platform in 2015, enrollment was open to *anyone*; this has resulted in rapid growth in use and membership. To date there are 2,528 members in 588 communities and 50 countries around the world. The platform contains event-related local observations (1017) and news articles (1682) that are geo-coded, date-coded, tagged by topic, and linked to other content in the system. Examples include observations about unusual weather, seasonal change, wildlife, plants, infrastructure, invasive species and erosion.

LEO Network is not focused on being a quantitative monitoring system, but rather as a way for members to share qualitative, media-rich information about their changing environments. Where monitoring systems, citizen science projects, or research partners are available, LEO Network assists in connecting members with topic-relevant programs and participatory science opportunities.

Some of the guiding principles behind LEO Network include respect and engagement of different knowledge systems, including indigenous, local and scientific knowledge. LEO posts are permanently available to LEO members, and the original observer is attributed as lead author. Consultants, secondary observers, and other subject-matter experts are attributed as co-authors. All authors of an individual post are given the opportunity to review and provide final comment prior to publication. Recognition of participants in the system is emphasized with profiles and maps for every member and community, and the ability to apply the content in the system towards personal projects. Direct communication between members is encouraged and facilitated by the system, but in a way that protects the privacy of the members.

The LEO Network is designed with an emphasis on ease-of-use, availability everywhere, and language that is accessible to all. Translation of the platform into Arctic languages has encouraged growth and the potential of a broader dialog between members. A mobile application is available for Apple and Android for posting observations in the field, and the LEO Network website provides features both for posting observations as well as exploring the observations and individuals that make up the Network.

The value of the LEO Network is based on the quality and usefulness of the information for its members. As such, an important principal of LEO is to be highly responsive to the questions and information shared by the observers. LEO Network has a specific workflow design that supports timely editorial and consultative services to support the contributions of the members.

LEO Network has been successful in Alaska, and as a platform is experiencing circumpolar and global expansion. Through this platform, sharing between knowledge systems has increased, as has community involvement, and awareness among service providers and researchers about current events that are shaping activities and lives at the community level.