

## **ECOLES: a Citizen Observers network engaging communities to map climate change at the local level**

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Engaging people in environmental studies is an important way to bring across awareness of expected future climate changes, and also a way to measure environmental change in ways that are better or complementary to remote sensing methods. With a hands-on approach, people are more likely to embrace the idea that climate change is occurring, and with modern technologies it is possible to collect quite stunning amounts of relevant data.

We suggest several national activities tailored to conditions in each of the participating countries and also to existing national CO-projects. The project focuses on gathering data on biological changes, on weather, and on snow-pack information in Nordic countries as well as Greenland and Canada. Data will be gathered with existing equipment (mobile phones and internet-connected weather stations) and the project provides the means for collation of data into a database for dissemination and quality control. Numerical data collected by small non-professional weather stations or mobile phones with sensors are not directly useful quantitatively for e.g. numerical weather prediction without validation of data quality, but with validation there is a huge untapped potential due to the number of observers. Students are a central part of the project, which also seeks to engage people out and about in nature, and people with their own weather stations or other environmental data-collection activities, as well as passive data collection from mobile phone data sensors in people's bags and pockets. Appropriate software, educational and training materials will be designed with end-users in mind; school-age materials will be produced in the appropriate languages (e.g. Kalaallisut for COs of school age in Greenland).