



Arctic Phenology Research and Education Network

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APREN planned for the International Polar Year (IPY), integrates polar research and education using methods established in GLOBE (www.globe.gov), an international science and education program involving scientists, pre-college students, their teachers and other educators in earth system science studies. APREN is part of the University of the Arctic IPY cluster. The University of the Arctic: Providing Higher Education and Outreach in the International Polar Year Program has been given approval by the IPY Joint Committee.

The educational objective is to engage primary and secondary students in scientific research that will enhance learning of science, understanding of climate variations and vegetation phenology, and appreciation of their local environments and their global linkages. The research integrates: (1) vegetation phenology observations; (2) automated weather stations; (3) phenology metrics derived from satellite data; and (4) historic climate data. In each country, GLOBE students will monitor the vegetation phenology at or near their schools and will establish and maintain centrally located automated weather stations. Scientists will work closely with these schools and derive phenology metrics from AVHRR and MODIS vegetation indices to link to students' phenology measurements and weather data. When available, historic phenology data from other sources will be used for climate variations that occurred prior to the collection of satellite and student data. GLOBE students have been collecting phenology data since 1999 and more than two decades of AVHRR data exists.

APREN will contribute to increased understanding of the current state and changes in the polar arctic region and its global linkages and interactions. APREN will also help

develop the next generation of scientists, engineers and scientifically literate decision makers that include underrepresented groups and minorities e.g. Alaskan Natives, by engaging primary and secondary students in arctic vegetation phenology research and facilitating discussions on climate change issues relevant to their communities. Outreach to the public in this multinational project will be enhanced through information-sharing over websites, newsletters and active involvement of school-age children who will be the pathways to their parents and other community members.

APREN will be carried out through an international network of scientists, educators, graduate students, and GLOBE schools from Canada, Finland, Iceland, Norway, Russia, Sweden, and United States. Students from developing nations will also be invited to participate in the research and education activities. Additional collaborators are being sought for this project.