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Title: *Indigenous Monitoring of Arctic Environmental Change: What Can We Learn from Local Observers*

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Several projects of the recently completed International Polar Year 2007–2008 produced extensive records of Indigenous observations of Arctic environmental change. Thanks to IPY 2007–2008, we have accumulated substantial datasets of daily and monthly logs, charts, snow and ice measurements, photographs, maps, GPS-based and other electronic readings generated by dozens of dedicated monitors across the North. For the first time, we may use multi-year records, often of several years (2006–2012) produced by the same observers from the same sites. The key strategy of indigenous monitoring is to look carefully for many signals and indicators of change, often beyond person’s everyday focus or needs. From a local observer’s perspective, any of these indicators—the status of sea ice and the ocean, wind direction, bird and animal behavior, condition of the surf area or the tundra ground—has its meaning as a potential signal of unexpected change. People’s main concern is not the statistical reliability of what they see but, rather, personal and communal safety, that is, the very practical and functional monitoring of their ecosystem. This is why local observers’ records are filled with references to heavy winds, thinner ice, changes in sea currents, approaching storms, snow thaws, etc., that are hard or impossible to register via instrumental observations. The key strength of indigenous monitoring is in its ability to track numerous changes in the land/sea/ice-scape and to point to the connections that scientists cannot read or are not aware of. It is this ‘high resolution’ of the indigenous reading of change that makes indigenous record a crucial source of information to the scientists’ models on global, circumpolar, and regional scales. The paper will explore these points using IPY SIKU project monitors’ records from 2006–2012.