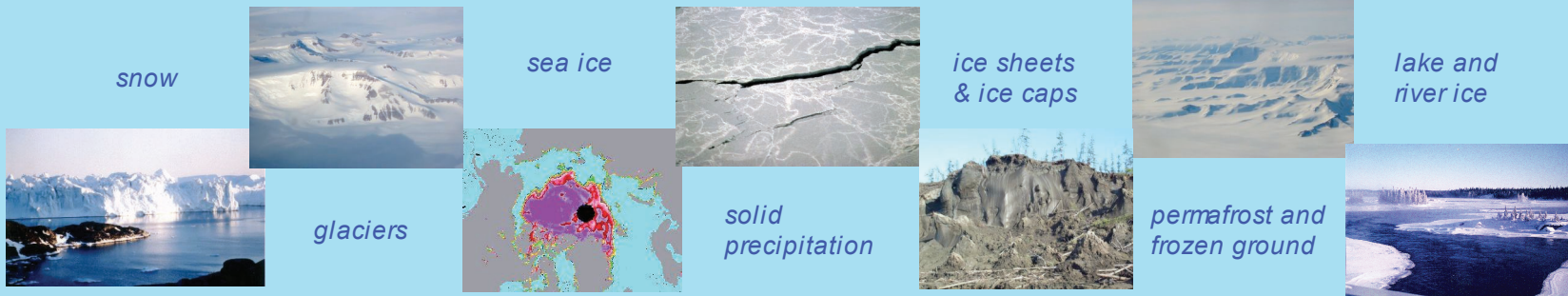




IGOS Cryosphere Theme



The cryosphere is an integral part of the global climate system, modulating surface energy and moisture fluxes, clouds, precipitation, hydrology, and atmospheric and oceanic circulation. Variability in the cryosphere has broad ranging socio-economic impacts, including land and sea transportation, water resources, sea level change, wildlife, and recreation. The Cryosphere Theme was established by the Integrated Global Observing Strategy (IGOS) Partners in 2004.



OBJECTIVES

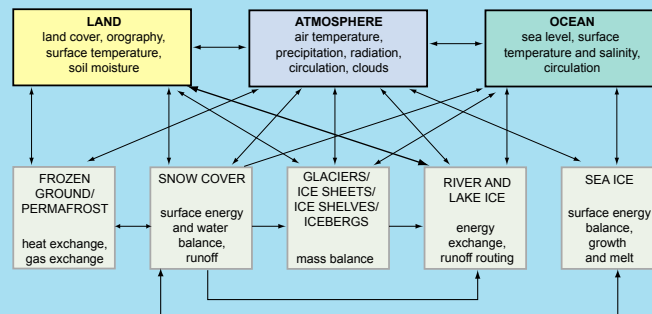
The Cryosphere Theme addresses observations of snow, solid precipitation, lake and river ice, sea ice, glaciers, ice caps, ice sheets, permafrost, and seasonally frozen ground. The Theme will create a framework for improved coordination of observations collected by research, long-term monitoring, and operational programmes, achieve better availability and accessibility of cryospheric information for operational services and research, strengthen national and international institutional structures responsible for cryospheric observations, and increase resources for ensuring the transition of research-based observing projects into sustained observations and practical applications.



Challenge

The challenge of the Cryosphere theme is to determine how observations should be coordinated and developed, and to enhance the observation and monitoring of the cryosphere in support of process studies, model evaluation, and change detection.

Cryosphere-Climate Interactions



Lists in upper boxes indicate important state variables.
Lists in lower boxes indicate important processes involved in interactions.
Arrows indicate **direct** interactions.

BENEFITS

The Theme will contribute to assessments of the socio-economic and environmental impacts of changes in the cryosphere by providing scientific input to national and international policy makers.

FURTHER INFORMATION

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