Spatial and Temporal Changes in Snow Cover and Frozen Ground across the Eurasian Continent

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Conference Room, 3/F, Mong Man Wai Building



The past climate change was greater in cold regions than elsewhere and during cold seasons than the other seasons. As a result, changes in snow cover and frozen ground were also substantial over the past several decades. In this

presentation, we will present evidence of changes in snow cover and frozen ground across the Eurasian continent since the 1950s. The primary results indicate that snow cover duration became shorter, snow depth become thicker while precipitation showed no or little change. Permafrost temperatures and active layer thickness have increased, while the depth of seasonally frozen ground has decreased. Changes in snow cover and frozen ground may have dramatic impact on carbon cycles in cryospheric regions. Permafrost degradation since the last glacial maximum may explain in part of atmospheric carbon content increase during the last 20K years.



