Great River Deltas as Keystone Arctic Ecosystems and Recent Changes in the Mackenzie Delta

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Recent results have revealed that winter air temperatures in the Mackenzie Delta of the western Canadian Arctic have warmed considerably since 1960. However, warmer springs rather than warmer winters have been driving more rapid ice breakup in the Mackenzie River Delta because winter snow depths have also declined over the same period. These results are counterintuitive to effects expected in the Arctic from an intensifying hydrological cycle, driven by warming temperatures.

This presentation will explore the importance of these findings for Mackenzie Delta and its role as a keystone ecosystem of the greater Arctic region.