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### **Krossfjord-Kongsfjord system Investigates impacts of climate change on the environment**

Scientists of the Ministry of Earth Sciences, Government of India have explored the Krossfjord-Kongsfjord system situated on the west coast of Svalbard archipelago and published an article on the impact of climate change on the environment. The variations in the metal abundance were attributed largely to the glacial activity along with the influence of Atlantic water mass in western Spitsbergen.

Krossfjord-Kongsfjord system situated on the west coast of Svalbard archipelago is an ideal location to investigate the impacts of climate change on the environment. As a consequence of global warming, metal concentrations in the Arctic region are increasing due to permafrost melting and changes in biological processes. The Krossfjord–Kongsfjord system is a glacial fjord (a fjord is a long, narrow, deep inlet of the sea between high cliffs, typically formed by submergence of a glaciated valley), balancing the Atlantic, Arctic, Barine and freshwater inputs, which are potential indicators of environmental changes. The influx of particulate metals in the fjord and their transport through oceanic circulation and sedimentation processes determines their distribution along the water column and sediment. Krossfjord-Kongsfjord system received sediment from the wreathing of rocks indicating system to be felsic rocks.

The result showed a high concentration of metals in the labile phases of sediments, which can detrimentally affect sediment-associated biota. Therefore, there is a need to monitor the mobility, bioavailability and potential toxicity of metals and protect the ancient environment.

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