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**Climate Change and Sea Level Rise, Lessons from the Past and Models of the Future**

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Recent observations of the polar ice sheets show an accelerating rate of fresh water input to the global ocean, yet the dynamic behavior of the ice sheets and the potential rate and magnitude of future sea level rise remain difficult to predict. New geological discoveries from the Arctic and Antarctic indicate a highly sensitive polar climate system, and far greater variability of the ice sheets than previously suspected. Here, we'll review some of these recent findings in the context of new climate and ice sheet modeling studies, providing a geological perspective on climate sensitivity and the potential response of the ice sheets to a warming world.