Global sea level could rise 15 meters by 2300, study says

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Sea-level rise varies over location and time, and scientists have developed a range of methods to reconstruct past changes and project future ones. But despite the differing approaches, a clear story is emerging regarding the coming decades: From 2000 to 2050, global average sea-level will most likely rise about 6 to 10 inches, but is extremely unlikely to rise by more than 18 inches. Beyond 2050, projections are more sensitive to changes in greenhouse gas emissions and to the approaches for projecting sea-level change.

"There's much that's known about past and future sea-level change, and much that is uncertain. But uncertainty isn't a reason to ignore the challenge," said study co-author Robert E. Kopp, a professor in the Department of Earth and Planetary Sciences at Rutgers University-New Brunswick and director of Rutgers' Institute of Earth, Ocean, and Atmospheric Sciences. "Carefully characterizing what's known and what's uncertain is crucial to managing the risks sea-level rise poses to coasts around the world."

Scientists used case studies from Atlantic City, New Jersey, and from Singapore to discuss how current methods for reconstructing past sea-level change can constrain future global and local projections. They also discussed approaches for using scientific sea-level projections and how accurate projections can lead to new sea-level research questions.

A large portion of sea-level rise in the 20th century, including most of the global rise since 1975, is tied to human-caused global warming, the study says.
