How fast is sea level rising?

Andrew Parnell¹

¹ University College Dublin, Ireland

Abstract

I will review the statistical approaches used to calculate rates of sea level change which are currently making the news worldwide. Many of the methods use Bayesian inference, require the merging of large, complex and messy data sets, and accounting for and presenting uncertainty is crucial. The statistical processes involved include errors-in-variables regression, smoothing approaches, derivative estimation, prior elicitation, and multinomial regression. I will outline some of the remaining challenges and how increased collaboration across subject boundaries might help solve them.