Decision making under uncertainty: the case of sea level rise adaptation

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Abstract

There are several levels of uncertainty involved in making adaptation decisions to protect against sea level rise: the uncertainty in sea level rise projections, the uncertainty in flooding costs, the change in flooding costs as sea level rises etc. It is essential to take into account each of these uncertainties, as replacing uncertainties with, say, median values, easily can lead to substantial underestimation of the total costs with and without adaptation. We illustrate the issues with a case study from Norway.