Projecting local sea level rise

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NR and UW
IPCC approach

Steric sea level rise directly from CMIP5 model projections
Eustatic slr from temperature projections forcing land ice melt models
3 models in CMIP5 calculate slr (one reports all zeros)
Semi-empirical approach

Relate historical sea level (change) to historical temperatures

Apply this relationship to projected temperatures

RCP 4.5

IPCC 33-68
Local downscaling

Relate local sea level to global sea level

Glacial isostatic adjustment

Oslo

![Graph showing adjusted and unadjusted local sea level changes](image-url)
Results for Oslo
Another possibility

Relate global mean sea level to historical temperature model runs instead of observed temperatures

RCP 8.5

From observations

From models
What about extremes?

Worst case =
Mean sea level
+ (highest high tide – msl)
+ storm surge

Storm surge GEVD with location dependent on msl

Will hht change relative to msl?