



Anthropogenic forcing dominates sea level rise since 1850

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The rate of sea level rise and its causes are topics of active debate. Here we use a delayed response statistical model to attribute the past 1000 years of sea level variability to various natural (volcanic and solar radiative) and anthropogenic (greenhouse gases and aerosols) forcings. We show that until 1800 the main drivers of sea level change are volcanic and solar radiative forcings. For the past 200 years sea level rise is mostly associated with anthropogenic factors. Only 4 ± 1.5 cm (25% of total sea level rise) during the 20th century is attributed to natural forcings, the remaining 14 ± 1.5 cm are due to a rapid increase in CO₂ and other greenhouse gases.