



Sea level projections with new generation of scenarios for climate change

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Four new Representative Concentration Pathways radiative forcing scenarios are used to estimate sea level rise of 0.57-1.10 m by 2100, with confidence limits of 0.36 - 1.65 m. Sea level will continue to rise for several centuries after stabilization of radiative forcing for all except RCP2.5PD scenario, reaching of 1.84 – 5.49 m eventually. Most rise is expected after stabilization of forcing, due to the long response time of sea level. For all scenarios, except RCP2.5PD, the rate of sea level rise would be positive for many centuries, requiring 200-400 years to drop to the 1.8 mm/yr 20th century average. For the medium emission scenario (RCP6) the rate of sea level rise would reach 10 mm/yr by 2080, 5 times faster than the rate of the 20th century sea level rise, with a maximum rate of 20 mm/yr simulated for the high emission RCP8.5 scenario in the 22nd century. Policy and adaptation strategies at widely discussed at present envisage only sub-meter sea level rises up to 2100, but should include provision for multi-century and multi-meter rises in coastal infrastructure planning and socio-economic development.