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## A global analysis of subsidence, relative sea-level change and coastal flood exposure

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Climate-induced sea-level rise and vertical land movements, including natural and human-induced subsidence in sedimentary coastal lowlands, combine to change relative sea levels around the world's coast. Global-average coastal relative sea-level rise was 2.5 mm/yr over the last two decades. However, as coastal inhabitants are preferentially located in subsiding locations, they experience an average relative sea-level rise up to four times faster at 7.8 to 9.9 mm/yr. This first global quantification of relative sea-level rise shows that the resulting impacts, and adaptation needs are much higher than reported global sea-level rise measurements would suggest. Hence, coastal subsidence is an important global issue that needs more assessment and action. In particular, human-induced subsidence in and surrounding coastal cities can be rapidly reduced with appropriate policy measures for groundwater utilization and drainage. This offers substantial and rapid benefits in terms of reducing growth of coastal flood exposure due to relative sea-level rise.