

Reassessment of the potential sea-level rise from a collapse of the West Antarctic Ice Sheet

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Theory has suggested that the West Antarctic Ice Sheet may be inherently unstable. Recent observations lend weight to this hypothesis. We reassess the potential contribution to eustatic and regional sea level from a rapid collapse of the ice sheet and find that previous assessments have substantially overestimated its likely primary contribution. We obtain a value for the global, eustatic sea-level rise contribution of about 3.3 meters, with important regional variations. The maximum increase is concentrated along the Pacific and Atlantic seaboard of the United States, where the value is about 25% greater than the global mean, even for the case of a partial collapse.