

Interactive comment on “On the differences between two semi-empirical sea-level models for the last two millennia” by M. Vermeer et al.

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We thank Dr James D. Annan for his comment.

The reviewer noted the absence of a long-term equilibrium sea level for semi-empirical models containing a 'perpetual' response component. This issue is already discussed in Rahmstorf (2007) who explains (Figure 1) that the infinite response time is an approximation to what in reality is a finite but very long response time or set of response times. It is therefore a formal device and the term perpetual or infinite response should not be taken too literally.

Similarly our criticism of the long-term sea-level equilibrium value used in G10 to explain the rate of sea-level rise was perhaps too strong. We should have charitably

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assumed (though one would not guess so from reading G10) that the equilibrium value was intended as a formal device, valid only in its intended domain and not to be taken literally.

Reference

S. Rahmstorf (2007), A Semi-Empirical Approach to Projecting Future Sea-Level Rise, *Science* 315, 368.

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