BioOne COMPLETE

Discussion of: Baart, F.; van Koningsveld, M., and Stive, M., 2012. Trends in Sea-Level Trend Analysis. Journal of Coastal Research, 28(2), 311–315

Authors: Houston, James R., and Dean, Robert G.

DISCUSSION & REPLY

Discussion of: Baart, F.; van Koningsveld, M., and Stive, M., 2012. Trends in Sea-Level Trend Analysis. *Journal of Coastal Research*, 28(2), 311–315.

James R. Houston[†] and Robert G. Dean[‡]

[†]Engineer Research and Development
Center
U.S. Army Corps of Engineers
Washington, DC 20314-1000, U.S.A.
james.r.houston@usace.army.mil

[‡]Department of Civil and Coastal
Engineering
University of Florida
Gainesville, FL 32611, U.S.A.
dean@coastal.ufl

Baart, van Koningsveld, and M. Stive (2012) are commended for a stimulating discussion of sea-level trend analysis.

We were surprised by the reaction to Houston and Dean (2011) because we reached conclusions in agreement with several earlier studies and made no attempt to project sea-level rise into the 21st century. The issue is not whether data show a small acceleration (as found by Church and White, 2011) or deceleration (as we and others found) of sea level in the 20th century. In either case, the values are so close to zero that the trend is essentially linear. Woodworth *et al* (2009) note, "However, little evidence has been found in individual tide gauge records for an ongoing positive acceleration of the sort suggested for the 20th century itself by climate models." This mirrors the conclusion in the seminal article by Douglas (1992) that said, "There is no evidence for an apparent acceleration in the past 100+ years that is significant either statistically, or in comparison to values associated with global warming." Houston and Dean (2011) highlight the lack of understanding of 20th century sea-level rise and the challenge this offers to projecting into the 21st century.

LITERATURE CITED

Baart, F.; van Koningsveld, M., and Stive, M., 2012. Trends in sea-level tend analysis, *Journal of Coastal Research,* 28(2), 311–315.

Church, J.A. and White, N.J., 2011. Sea-level rise from the late 19th to the early 21st century. *Surveys in Geophysics,* 32(4–5); doi: 10.1007/s10712-011-9119-1 (accessed April 12, 2011).

Douglas, B.C., 1992. Global sea level acceleration. *Journal of Geophysical Research,* 97(C8), 12699–12706.

Houston, J.R. and Dean, R.G., 2011. Sea-level acceleration based on U.S. tide gauges and extensions of previous global-gauge analysis. *Journal of Coastal Research,* 27(3), 409–417.

Woodworth, P.L.; White, N.J.; Jevrejeva, S.; Holgate, S.J,; Church, J.A., and Gehrels, W.R., 2009. Review, Evidence for the accelerations of sea level on multi-decade and century timescales, *International Journal of Climatology,* 29: 777–789.