

Sea-Level Rise – Tide Gauges/Satellites - Different Linear Measures, Inconsistent Results, & Apparently Unaffected by Recent CO₂ Increases.

T. H. Wysmuller

Member, NASA “The Real Climate Stuff (TRCS) Climate Research Group, Johnson Space Center, Houston Texas. A group of independent, and mostly Apollo Era NASA veterans unaffiliated with the US Government. E-mail: tom@colderside.com

Global Oceanic Water Levels are not meeting alarming projections (UN-IPCC, US Army Corps of Engineers, US National Climate Assessment) for their rise, and are unlikely to do so. Current measurements for Sea-Level rise are all linear, currently unaccelerating on an overall basis, and mostly inconsistent with each other. Each fundamental measure has associated flaws, some systemic, others geographic, and yet others a function of technology limitations.

The retreat of the great North American Laurentide Ice sheet parallels the rise in Sea-Levels over the past 18,000 years. Sea-Level rise began flattening out when the last non-seasonal remnants of the Laurentide disappeared 5,000 years ago, with the remaining recent rise attributable to Oceanic warming and associated thermal expansion. Local Sea-Level effects are now dominated by tectonic land uplift and subsidence factors, graphically and brilliantly demonstrated over the years by renowned ocean experts [^{1,2}].

Measuring these changes has been difficult. Even averaging the traditional Tide Gauges leads to error, as their locations quantitatively favor areas of subsidence, as those zones have greater concern than land uplift regions.

The promise of global coverage by satellites (Topex/Poseidon/Jason) [³] has been reneged, somewhat as a result of inadequate radar resolution and subsequent correction and adjustment of ensuing uncertainties that themselves are amplified by orbital tracking errors. Improved instrumentation (e.g. ENVISAT) has not lived up to its potential.

CO₂ and Sea-Levels have tracked consistently for the past 2,000 years. The recent 38% spike in CO₂ from 290 ppm (in 1880) to 400 ppm at present (2015) has not had a validated measurable influence on Sea-Level rise by any metric available, and will provide an uncomfortable inconvenience at the Paris Climate talks [⁴].

1 Mörner, N.-A., (Winter 2010/2011) “There Is No Alarming Sea Level Rise!”, 21st Century Science & Technology

2 Mörner, N.-A., (2015) Glacial Isostasy: Regional—Not Global. *International Journal of Geosciences*, 6, 577-592. [<http://dx.doi.org/10.4236/ijg.2015.66045>]

3 Nerem, R. S., *et al*, (2015) CU Sea Level Research Group, U. of Colorado, [<http://sealevel.colorado.edu>]

4 Paris COP21/CMP11 [<http://www.cop21.gouv.fr/en>]