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**Sea level changes as documented in nature instead of horror scenarios**Nils-Axel Morner  
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In geology we have a long-term tradition to base our statements and conclusions on observational facts in nature itself and physical laws documented in actual processes in our terrestrial system. This is especially important when it comes to predictions and mitigation of different hazards (seismic, volcanic, climatic, coastal, etc.). In recent decades, climate modeling-ignoring observational facts, basic scientific knowledge accumulated over time and even physical laws, have drastically changed this modus operandi providing a number of horror scenarios for the near future. One of those model scenarios is a rapidly rising sea level threatening to flood low-lying coasts and islands around the world. Already by 2100, sea level is claimed to rise by about 0.5 m up to a couple of meters, which indeed would be disastrous, had it been not correct. By analyzing available geological facts with respect to observed and measured changes in sea level and the boundary conditions of changes of different sea level parameters, a quite different picture emerge. This is evident from the following 5 points: (1) +1.14 mm/year, the mean of 184 tide gauge records scattered all over the globe selected by for their global sea level analyses. This value is too high, however, because many sites used represent subsiding delta sites, (2) +1.0 ±0.1 mm/year, the eustatic component the North Sea, Kattegatt and Baltic region, (3) +0.55 ±0.10 mm/year, the revised satellite altimetry values, (4) +0.25 ±0.19 mm/year, the mean of 170 tide gauge stations having a length of more than 60 years and (5) ±0.0 mm/year, the value obtained from many global test sites; the Maldives, Bangladesh, Goa in the Indian Ocean, Tuvalu, Vanuatu, Kiribati, Majuro in the Pacific, Surinam-Guyana in NE South America, Venice in the Mediterranean. In conclusion, this implies variations between 0.0 and 1.0 mm/year or +0.5 ±0.5 mm/year. Global sea level is not at all in a rapidly rising mode, only changing by about 0.5 ±0.5 mm/year. By year 2100 sea level is likely only to change by +5 cm±15 cm, which poses no problems.

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