



# 10 Surprising Facts About Sea Level Rise

that will impact individuals, organizations and communities

1. The latest sea level rise (SLR) forecasts range from 2 – 6 feet by the end of this century. As glaciers worldwide and the Greenland and Antarctic ice sheets continue to melt at unprecedented rates, the projections could be raised even higher. Actual sea level rise has been exceeding projections for decades, showing that the models are conservative.
2. Sea level has been hundreds of feet higher than today, naturally moving up and down with the ice age cycles, roughly every 100,000 years. For the last 6,000 years, sea level and the shoreline have been fairly stable, creating the perception that they do not change. Over the last century, the oceans have warmed one and a half degrees (F), guaranteeing that the ice will melt for centuries, raising sea level.
3. Just one foot of SLR, possibly by mid-century, is estimated to move the shoreline more than 300 feet inland, as a global average--the length of a football field. As a result vast assets and infrastructure are highly vulnerable. It's not just coastal cities that are vulnerable. Rising sea levels will flood low-lying areas far inland and far up tidal rivers. For example, Washington DC, Hartford CT, Sacramento CA and London (UK) are far from the ocean, but are fully exposed to SLR.
4. The melting Arctic polar ice cap does NOT contribute to sea level rise. Since it is *floating sea ice*, its melting does not raise the ocean level (similar to ice melting in a glass). Nonetheless it does prove the unusual level of warming as the sea around the North Pole has generally been frozen for three million years. It is now melting so quickly that it will almost certainly be ice-free during the warmer months, within the next decade or two.
5. Sustainability and being “green” cannot *stop* rising sea level, though they can slow it. We have passed the tipping point. Sea level will continue to rise for centuries regardless of efforts to reduce greenhouse gas (GHG) emissions. The efforts to slow the warming are incredibly important, however, to prevent truly catastrophic rates of ice melting and SLR.
6. Adapting to rising sea level is very different than preparing for a storm surge. Storms hit the shoreline and recede. Extreme monthly high tides (“king tides” or spring tides) also quickly recede. Slowly rising sea level will not recede for centuries, making it effectively permanent flooding.
7. SLR varies greatly by location, due to land subsidence or uplift and geologic structure. For example; New Orleans has had 30 inches of SLR over the past century while Los Angeles has only had four inches. The evaluation of assets at risk needs to be done regionally and in some places, site specific.
8. Billions of dollars of real estate and assets will be devalued, in some cases gradually and in others suddenly. Beyond corporate assets, this will impact communities, financiers, insurers, and our economy. It poses untested legal issues and will challenge protocols of finance, risk and accounting.
9. It's not just global average sea level rise (SLR) that creates business risk. It's the complex interplay between rising sea levels, local geology, powerful storms, and extreme tides. *Superstorm Sandy* and *Typhoon Haiyon* illustrated the potential costs of the resulting impacts. Assets, infrastructure, and global supply chains are potentially at risk.
10. Good three to five year strategic planning should incorporate a 30-year view, as major adaptation strategies must be considered for particular assets as well as the surrounding community. Seeing what lies ahead can reduce risk and identify opportunities. The sooner we face the new reality the better we can adjust, innovate, and protect assets.

---

To learn more about how sea level rise can impact your organization and what you can do now to build a more resilient future visit [www.johnenglander.net](http://www.johnenglander.net) or contact John Englander at 561-299-5920 or [info@johnenglander.net](mailto:info@johnenglander.net).