

Center for a Sustainable Coast – “Solar Energy is Essential to Our Future.”

Like all coastal areas, Georgia’s coast is exposed to increasing hazards brought by climate change. In addition to increasing intensity and frequency of major storms, sea level rise caused by warming global temperature presents major threats to both developed and natural areas. Based on our analysis of information sources such as the article below, we believe it is essential that Georgia and the nation take steps to rapidly reduce emission of greenhouse gases. This makes it vital that low-impact, emission-free energy technologies such as solar and wind are implemented as quickly as possible. It is estimated that Georgia has the potential to generate more than 5.5 million gigawatts of power by using existing solar technology. (*Source: U.S. Energy Information Administration.*) We also believe that providing solar power options can be a major benefit to consumers by reducing the price of electricity and providing more choices in the marketplace. Furthermore, we are extremely concerned about the hundreds of millions of gallons taken from Georgia’s rivers daily by conventional power-plants. These profligate practices compound coastal problems caused by drought. Replacing wasteful coal and nuclear power plants with solar and wind technology can help eliminate those problems.

Study: Sea Levels Rising 60% Faster Than Projected, Planet Keeps Warming As Expected

By [Joe Romm](#) on Nov 28, 2012 at 4:14 pm



A new study, “[Comparing climate projections to observations up to 2011](#),” confirms that climate change is happening as fast — and in some cases faster — than climate models had projected. The [news release](#) explains:

The rate of sea-level rise in the past decades is greater than projected by the latest assessments of the IPCC, while global temperature increases in good agreement with its best estimates. This is shown by a study now published in the journal *Environmental Research Letters*. Stefan Rahmstorf from the Potsdam Institute for Climate Impact Research (PIK) and his colleagues compare climate projections to actual observations from 1990 up to 2011. That sea level is rising faster than expected could mean that the Intergovernmental Panel on Climate Change's (IPCC) sea-level rise projections for the future may be biased low as well, their results suggest.

As Dr. Rahmstorf notes, "the new findings highlight that the IPCC is far from being alarmist and in fact in some cases rather underestimates possible risks."

***** The oceans are rising 60 per cent faster than the IPCC's latest best estimates, according to the new research. *****

The researchers compared those estimates to satellite data of observed sea-level rise. "Satellites have a much better coverage of the globe than tide gauges and are able to measure much more accurately by using radar waves and their reflection from the sea surface," explains Anny Cazenave from LEGOS. While the IPCC projected sea-level rise to be at a rate of 2 mm per year, satellite data recorded a rate of 3.2 mm per year.

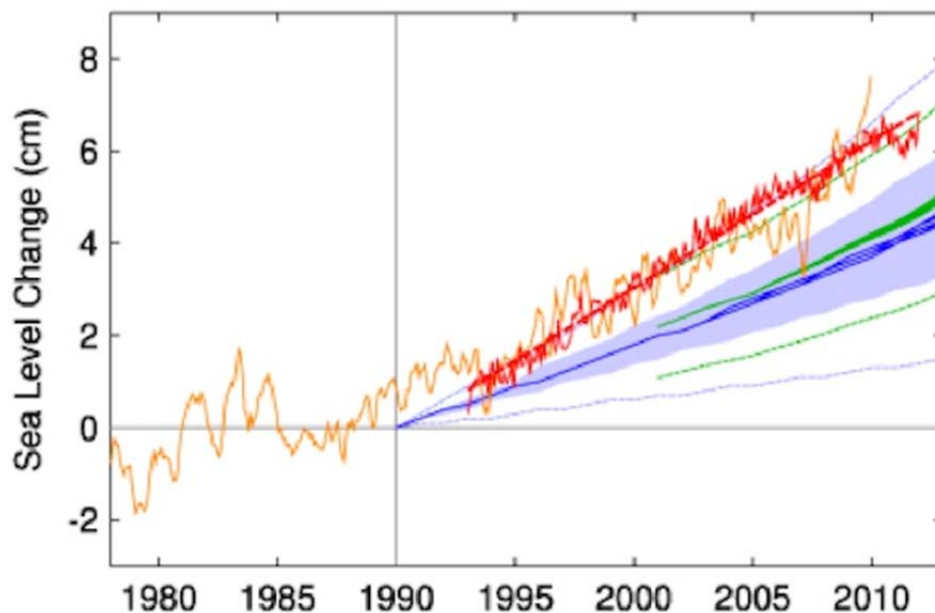


Figure: Sea level measured by satellite altimeter (red with linear trend line) ... and reconstructed from tide gauges (orange, monthly data from Church and White (2011)).... The scenarios of the IPCC are shown in blue (third assessment) and green (fourth assessment); the former have been published starting in the year 1990 and the latter from 2000.

The release notes, "The increased rate of sea-level rise is unlikely to be caused by a temporary episode of ice discharge from the ice sheets in Greenland or Antarctica or other internal variabilities in the climate system, according to the study, because it correlates very well with the increase in global temperature."

As sea level rises, storm surges worsen, coastal populations are put at risk, and salt water infiltrates rich deltas. For more on likely future sea level rise, see [“New Studies on Sea Level Rise Make Clear We Must Act Now”](#) and [“JPL bombshell: Polar ice sheet mass loss is speeding up, on pace for 1 foot sea level rise by 2050.”](#)

On the subject of global warming, the release explains:

“Global temperature continues to rise at the rate that was projected in the last two IPCC Reports. This shows again that global warming has not slowed down or is lagging behind the projections,” Rahmstorf says. Five global land and ocean temperature series were averaged and compared to IPCC projections by the scientists from Potsdam, the Laboratoire d’Etudes en Géophysique et Océanographie Spatiales (LEGOS) in France and the US based Tempo Analytics. To allow for a more accurate comparison with projections, the scientists accounted for short-term temperature variations due to El Niño events, solar variability and volcanic eruptions. The results confirm that global warming, which was predicted by scientists in the 1960s and 1970s as a consequence of increasing greenhouse concentrations, continues unabated at a rate of 0.16 °C per decade and follows IPCC projections closely.

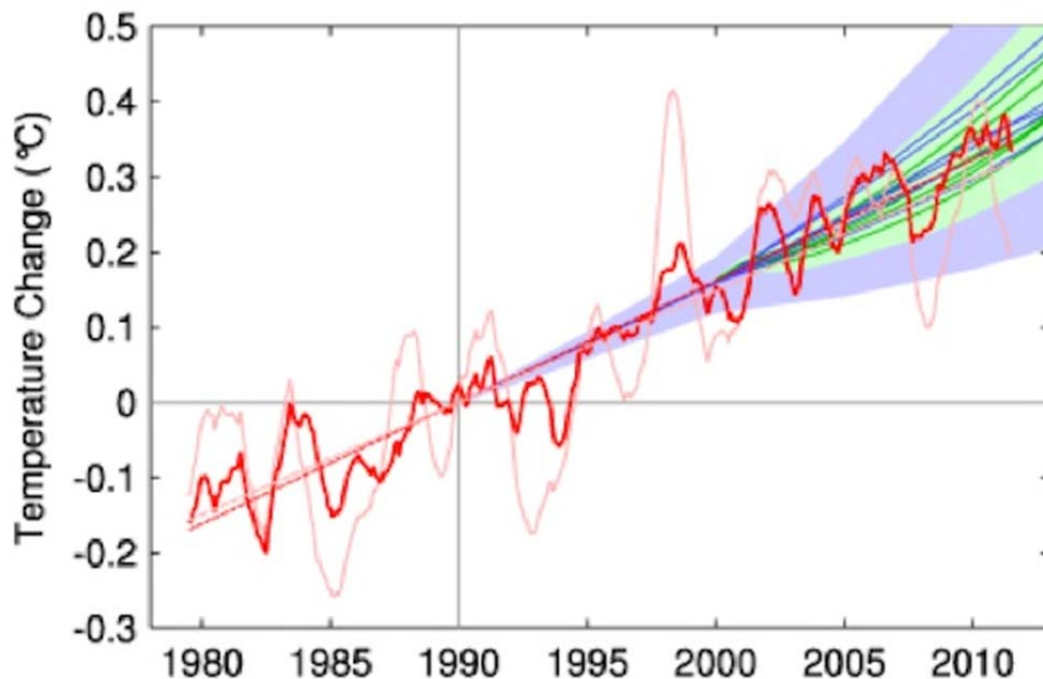


Figure. Observed annual global temperature, unadjusted (pink) and adjusted for short-term variations due to solar variability, volcanoes and ENSO (red) as in Foster and Rahmstorf (2011). 12-months running averages are shown as well as linear trend lines, and compared to the scenarios of the IPCC (blue range and lines from the third assessment, green from the fourth assessment report). Projections are aligned in the graph so that they start (in 1990 and 2000, respectively) on the linear trend line of the (adjusted) observational data.

Online link to this article: <http://thinkprogress.org/climate/2012/11/28/1249391/study-sea-levels-rising-60-faster-than-projected-planet-keeps-warming-as-expected/>