Climate Change Challenges: Next Generation Solutions

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"Global warming is the greatest hoax ever perpetrated on the American people."
Senator James Inhofe

"We should feel a great sense of urgency because it is the most dangerous crisis we have ever faced, by far."
Vice President Al Gore
~ 390 ppmv today!
Global air temperature
2007 anomaly +0.40°C
(8th warmest on record)

Temperature anomaly (°C)

Year

Temperature baseline (1951-1980)
Anthropogenic warming and sea level rise would continue for centuries due to the time scales associated with climate processes and feedbacks, even if greenhouse gas concentrations were to be stabilised. {10.4, 10.5, 10.7}
Figure 1. California Historical & Projected July Temperature Increase 1961-2099

Source: Dan Cayan et al. 2009.
Figure 2: Replacement value of buildings and contents vulnerable to a 100 year coastal flood with 1.4 meters of sea level rise

Source: Pacific Institute, 2009

http://www.pacificinst.org/reports/sea_level_rise/maps/

Replacement value of buildings and contents (billions of dollars*)

- 0.1
- 1
- 10

Coastal County

Surface Water Runoff

- High latitude increases
- Decreases over some dry regions