

# NOAA State of the Climate Report: Get Ready for a Warming World

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The National Oceanic and Atmospheric Administration's just-released 2009 State of the Climate [report](#) bears few surprises for those who follow climate science--the past decade was the warmest on record, and the Earth has slowly been heating up for the past 50 years.

The difference between this and every other climate report, however, is that NOAA gathered research from 300 scientists in 48 countries to produce a compelling document that covers every aspect of our planet's climate. The report is, according to NOAA, the first to bring together "multiple observational records from the top of the atmosphere to the depths of the ocean."

NOAA's report uses 10 features to measure global temperature changes. Seven of the features (air temperature over land, sea-surface temperature, air temperature over oceans, sea level, ocean heat, humidity, and tropospheric temperature in the "active-weather" layer of the atmosphere) are rising significantly, while three (Arctic sea ice, glaciers, and spring snow cover in the Northern hemisphere) are declining.

It's a fairly discouraging situation, according to the NOAA:

The report emphasizes that human society has developed for thousands of years under one climatic state, and now a new set of climatic conditions are taking shape. These conditions are consistently warmer, and some areas are likely to see more extreme events like severe drought, torrential rain and violent storms.

Does this mean we should seriously start considering [geoengineering](#)? Maybe, but it's just as important to focus on mitigating the consequences of the coming set of climatic conditions. A combination of geoengineering and solid preparation for a warming world may be the best solution (if it can be called a solution) that we have available.