

## Global temperature for 2012 to be ranked 8th on record (preliminary)

The annual anomaly of the global average surface temperature for the year 2012 (i.e., the combined average of the near-surface air temperature over land and the sea surface temperature) is estimated at +0.15°C\* above the 1981-2010 average, likely to become the 8th warmest record since 1891 (Figure 1).

\* Note that this figure (hence its rank in the record, either) is still subject to change, because at the moment of this announcement it is only a preliminary result that was calculated based on temperature observations for the period of January to November in 2012.

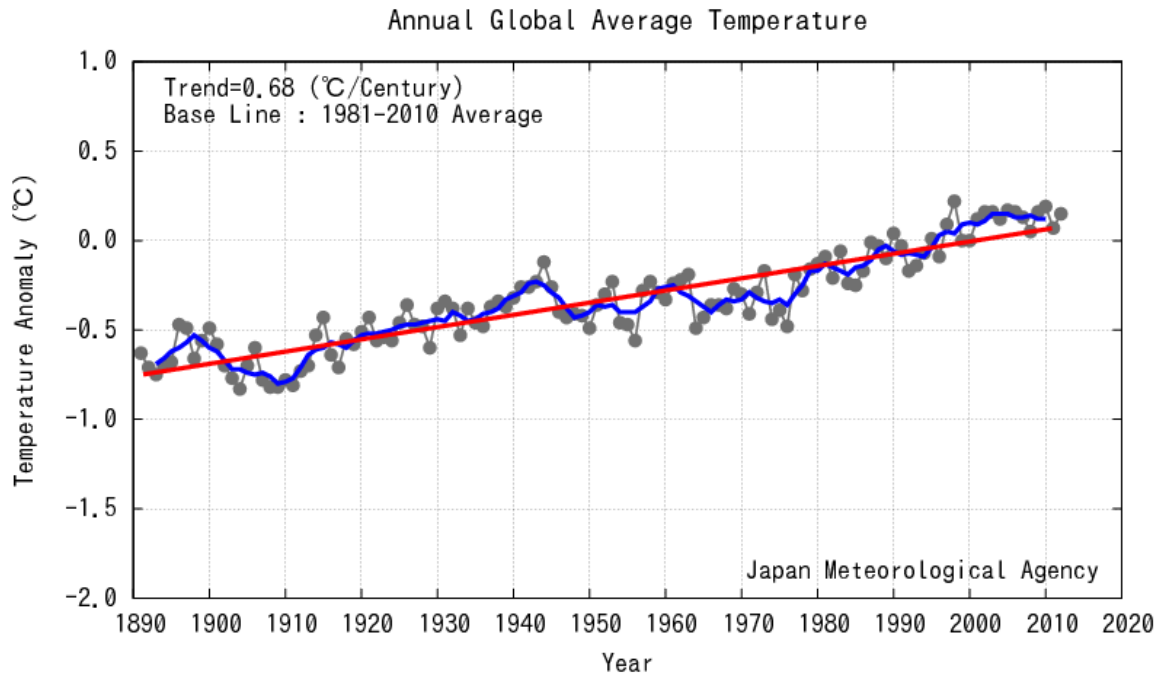
Warm temperature deviations are seen around North America, western Russia through to the Mediterranean, the Indian Ocean, and the central part of the North Pacific Ocean (Figure 2).

On a longer time scale, the annual global average surface temperature has been rising at a rate of about 0.68°C per century.

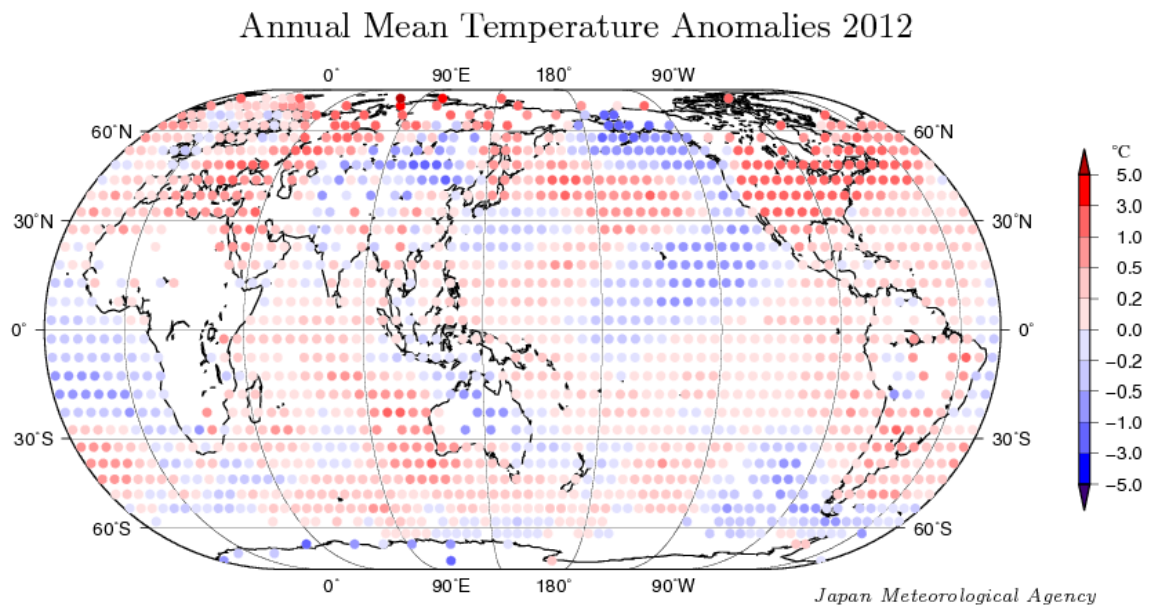
The average temperature over land alone is +0.31°C above the 1981-2010 average, likely to become the fourth warmest record since 1891.

The 14 warmest years on record have all occurred in the past 16 years. The recent high temperatures are thought to be explained by the combined effect of the global warming trend due to increase in anthropogenic greenhouse gas concentrations including carbon dioxide, and decadal natural fluctuations.

The final report on the global temperature for 2012 is scheduled to be published early in February 2013.



**Figure 1 Long-term change in annual mean surface temperature anomalies over the globe**  
 The black line with filled circles indicates anomalies of surface temperature in each year. The blue line indicates five-year running mean, and the red line indicates a long-term linear trend. Anomalies are represented as deviations from the 1981-2010 average.



The circles indicate temperature anomalies from 1981-2010 baseline averaged in 5° x 5° grid boxes.

**Figure 2 Annual mean temperature anomalies in 2012**  
 The circles indicate anomalies of surface temperature averaged in 5° x 5° grid boxes. Anomalies are deviations from the 1981-2010 average.

### Ranking of annual global mean temperatures

Rank	Year	Temperature Anomaly
1	1998	+0.22
2	2010	+0.19
3	2005	+0.17
4	2009	+0.16
	2006	+0.16
	2003	+0.16
	2002	+0.16
8	<b>2012</b>	<b>+0.15 (Preliminary value)</b>
9	2007	+0.13
10	2004	+0.12
	2001	+0.12
12	1997	+0.09
13	2011	+0.07
14	2008	+0.05
15	1990	+0.04