



Climate of 2006 - November in Historical Perspective

National Climatic Data Center

18 December 2006

Global Highlights:

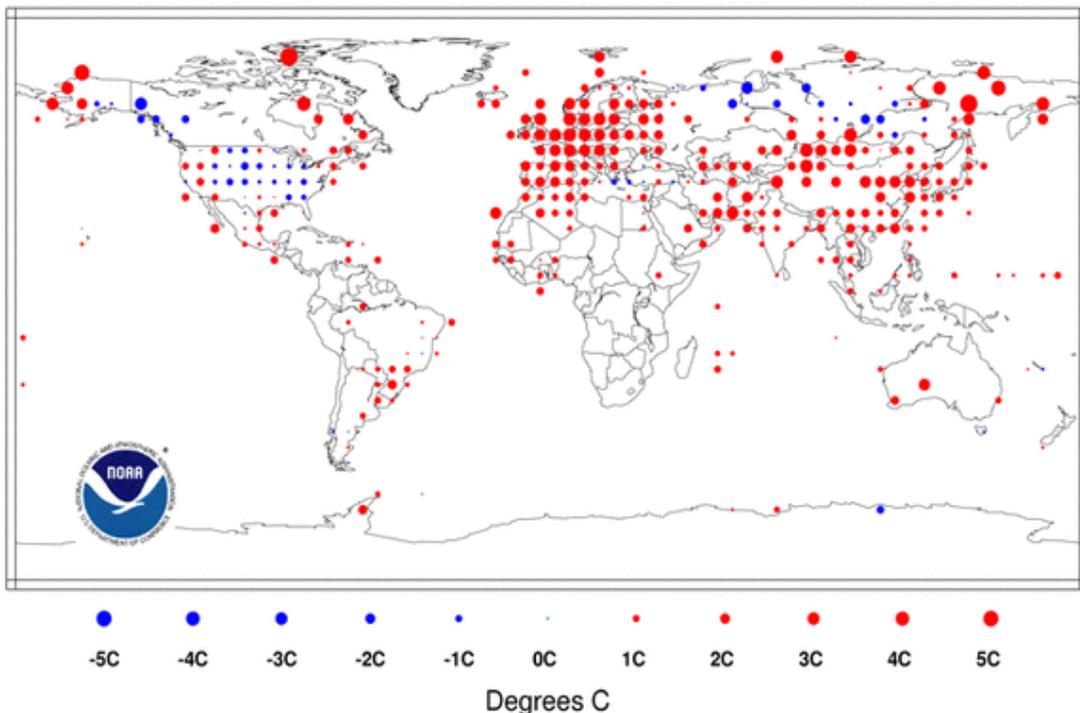
Based on preliminary data, globally averaged combined land and sea surface **temperature** was fourth warmest on record for November 2006 as well as for boreal fall (September - November 2006) and sixth warmest for January-November year-to-date.

September - November temperatures were above average in **Europe**, southern Asia, eastern Russia, and western Alaska. Cooler-than-average conditions occurred in Siberia, the central U.S., and western Canada.

Sep-Nov Temperature Anomalies 2006

(with respect to a 1961-1990 base period)

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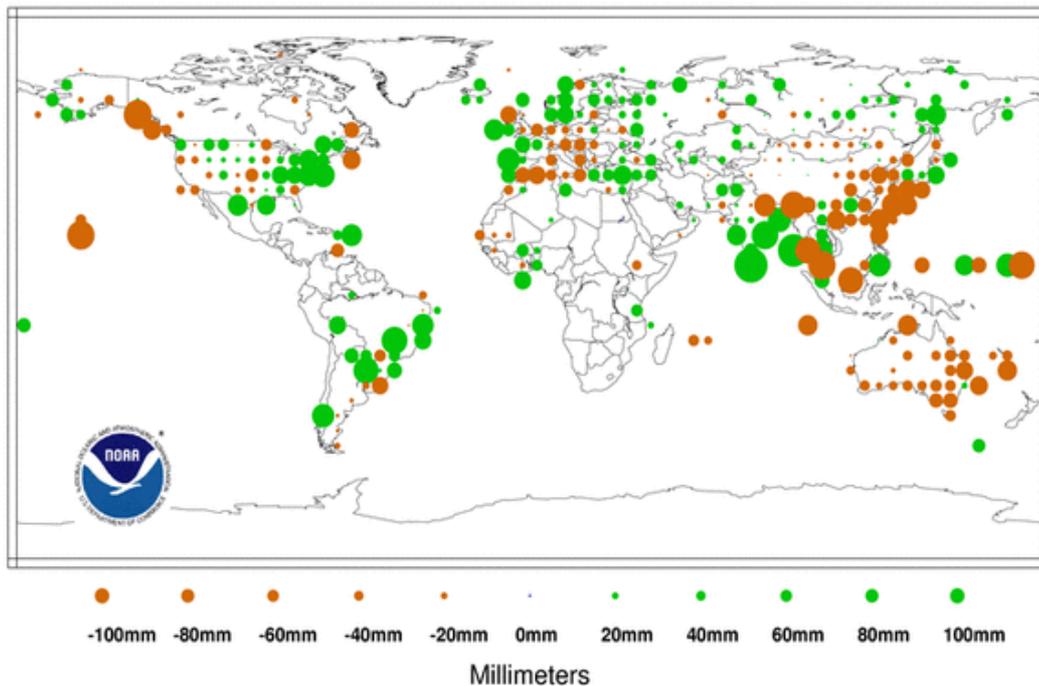


Precipitation during [September - November](#) was above average in western Alaska, the eastern U.S., **most parts of Europe**, southern parts of South America, and southern India. Drier than average conditions were observed in eastern Asia, **central Europe**, eastern Australia and the west coast of Canada.

Precipitation Anomalies Sep-Nov 2006

(with respect to a 1961-1990 base period)

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Introduction

Temperature anomalies for September - November and November 2006 are shown on the dot maps below. The first dot map, below, provides a spatial representation of anomalies calculated from the [Global Historical Climatology Network \(GHCN\) data set](#) of land surface stations using a 1961-1990 base period. The second dot map, below, is a product of a merged land surface and sea surface temperature anomaly analysis developed by [Smith and Reynolds \(2005\)](#). Temperature anomalies with respect to the 1961-1990 mean for land and ocean are analyzed separately and then merged to form the global analysis.

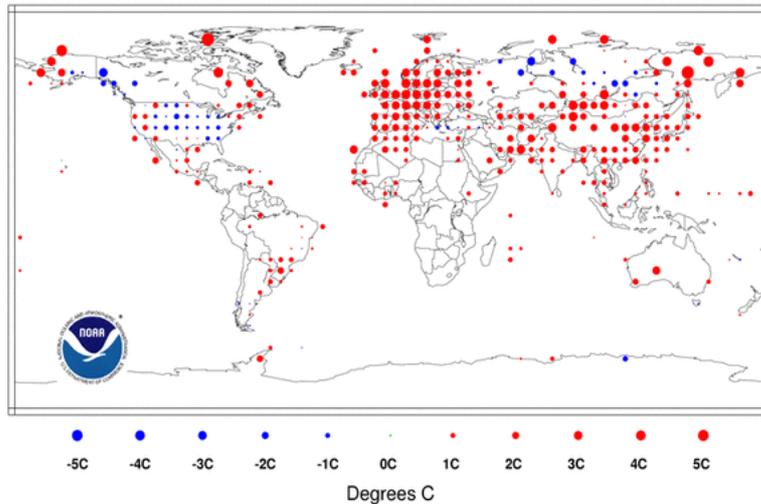
Anomalously warm temperatures have covered much of the globe throughout the year. The [January-November 2006](#) year-to-date map of temperature anomalies shows the presence of warmer than average temperatures across all land areas except central Russia. Warmer than average SSTs occurred in the North and South Atlantic, North Pacific and the South Indian Ocean, with cooler than average conditions observed in the South Pacific.

During boreal fall, temperatures were above average across the entire globe, with the exception of Siberia, the central U.S., and western Canada, where cooler than average temperatures were observed. Warmer than average SSTs were observed across all oceans except in the South Pacific where cooler than average SSTs were observed.

Sep-Nov Temperature Anomalies 2006

(with respect to a 1961-1990 base period)

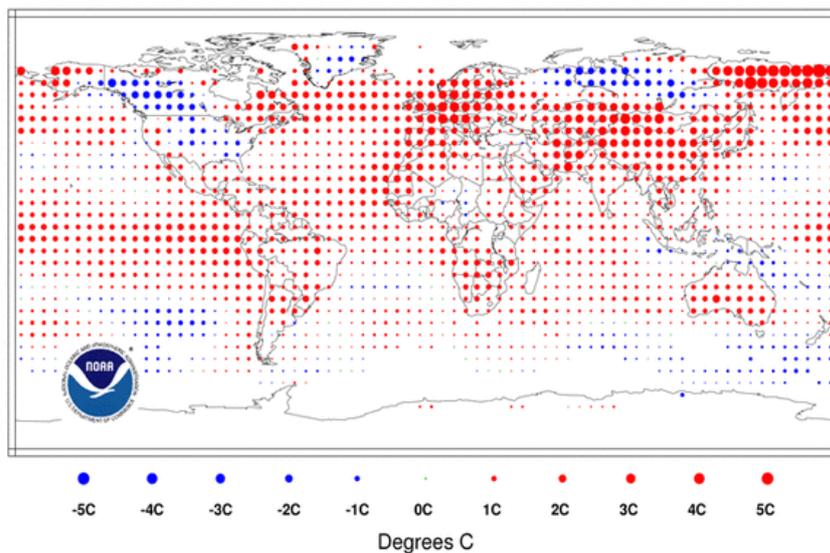
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Sep-Nov Temperature Anomalies 2006

(with respect to a 1961-1990 base period)

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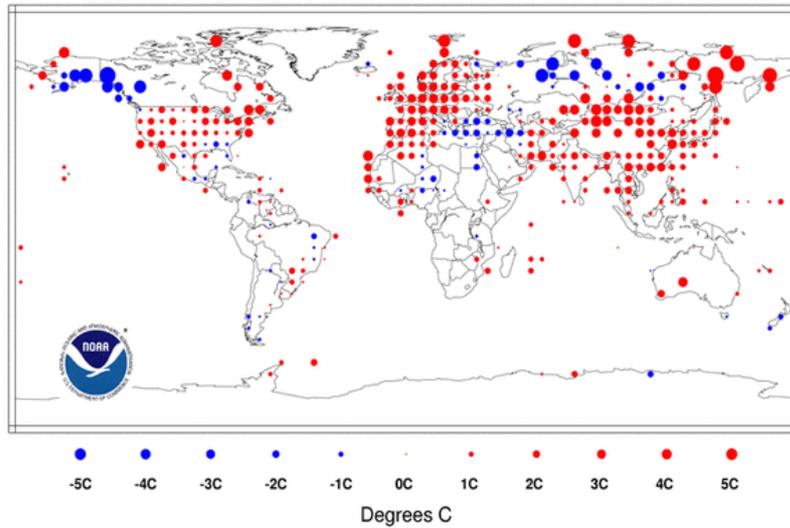


During November, there were above average temperatures across the U.S., Europe, southern Asia, and eastern Russia. Cooler than average temperatures were observed in Siberia, Turkey, southern Alaska, and western Canada.

Temperature Anomalies November 2006

(with respect to a 1961-1990 base period)

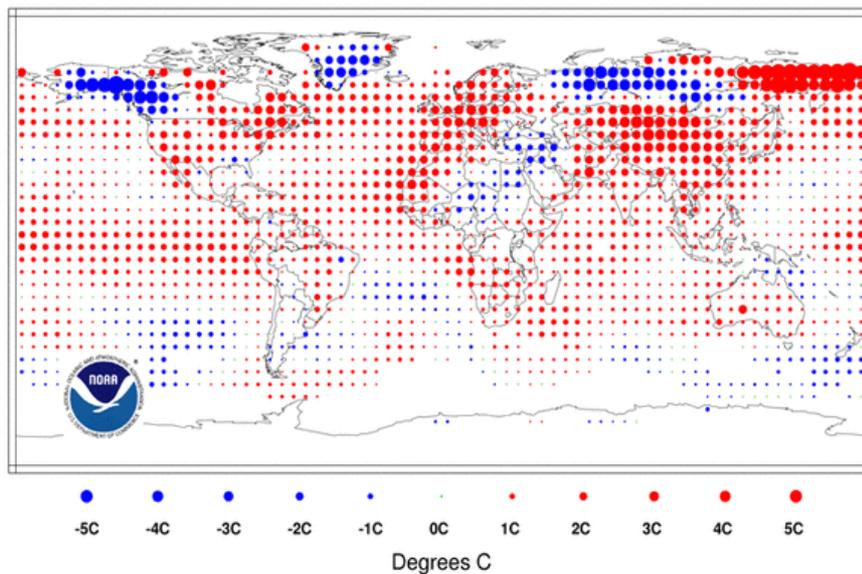
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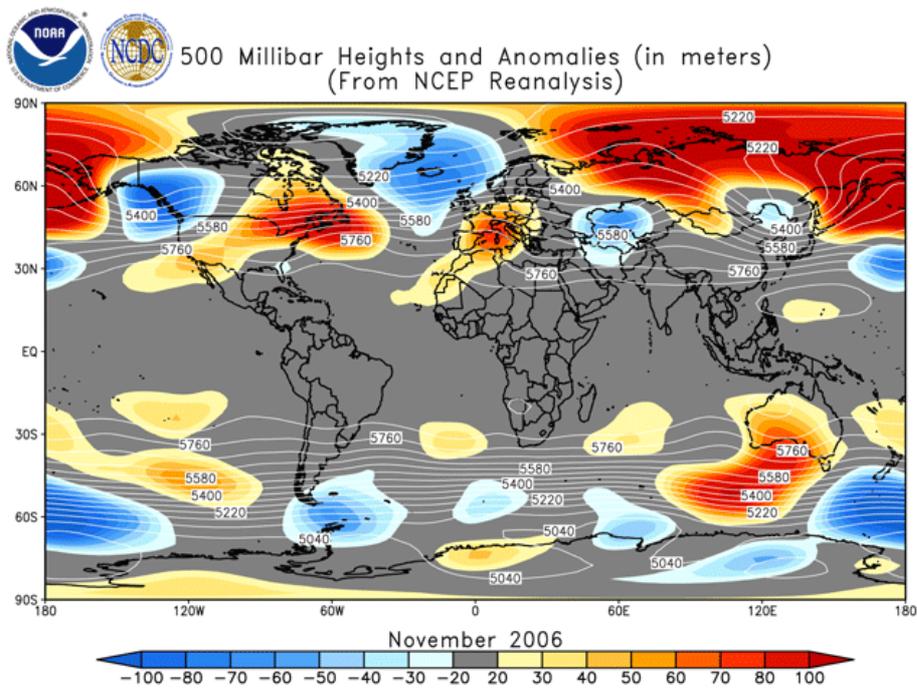
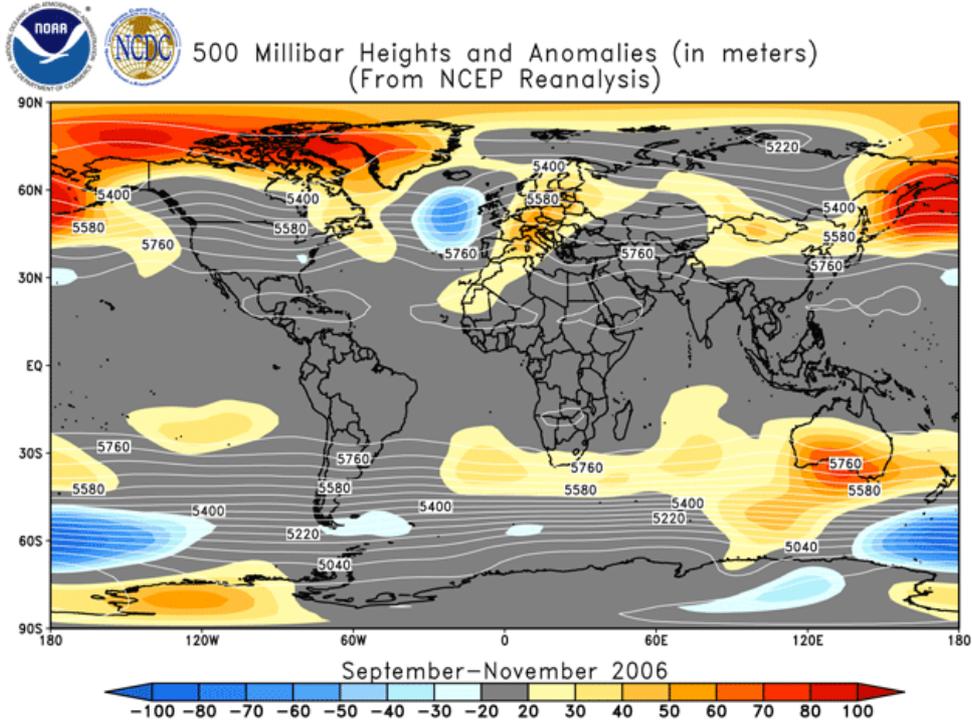
Temperature Anomalies November 2006

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The mean position of upper level ridges of high pressure and troughs of low pressure (depicted by positive and negative 500-millibar height anomalies on the [September - November 2006 map](#) and the [November map](#)) are generally reflected by areas of positive and negative temperature anomalies at the surface, respectively.

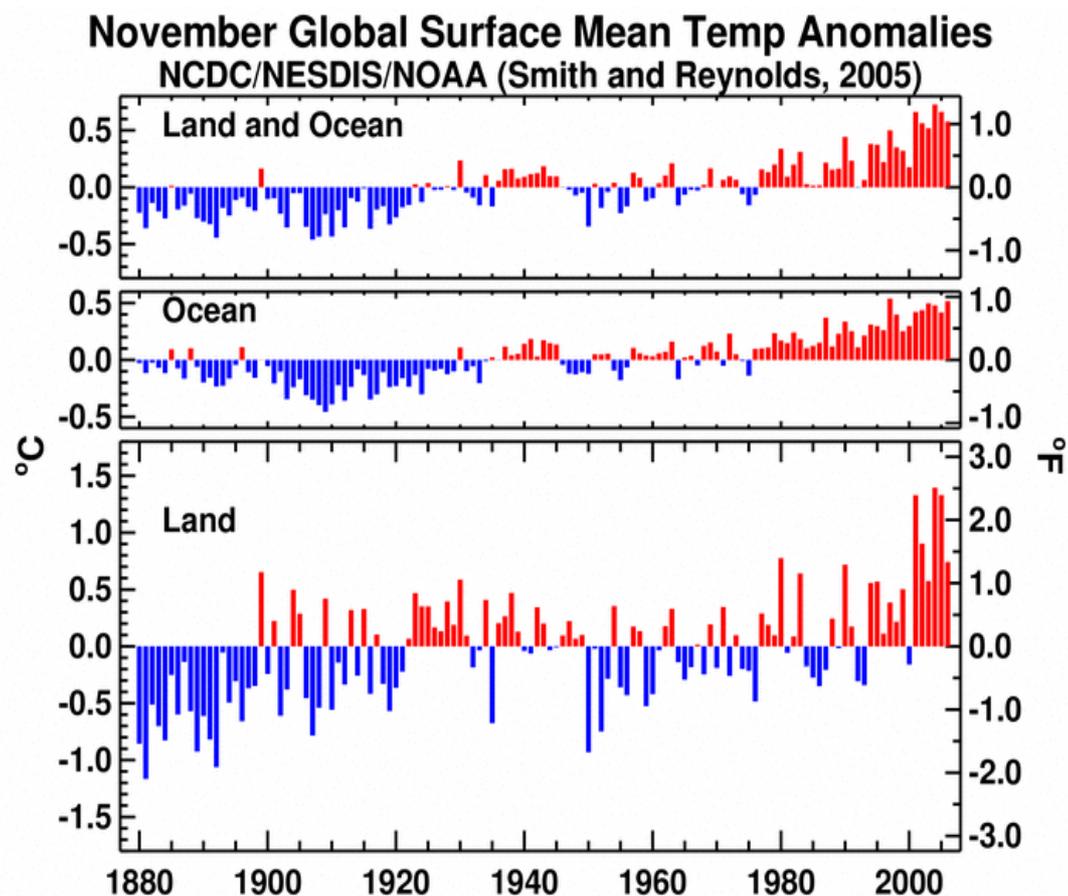


Temperature Rankings and Graphics

November:

November 2006 was the 4th warmest November since global surface records began in 1880 for global land and ocean surface temperatures. November land surface temperatures were 6th warmest, while ocean surface temperatures were 2nd warmest in the 127-year record behind 1997 in which a very strong 1997/1998 El Niño event was developing.

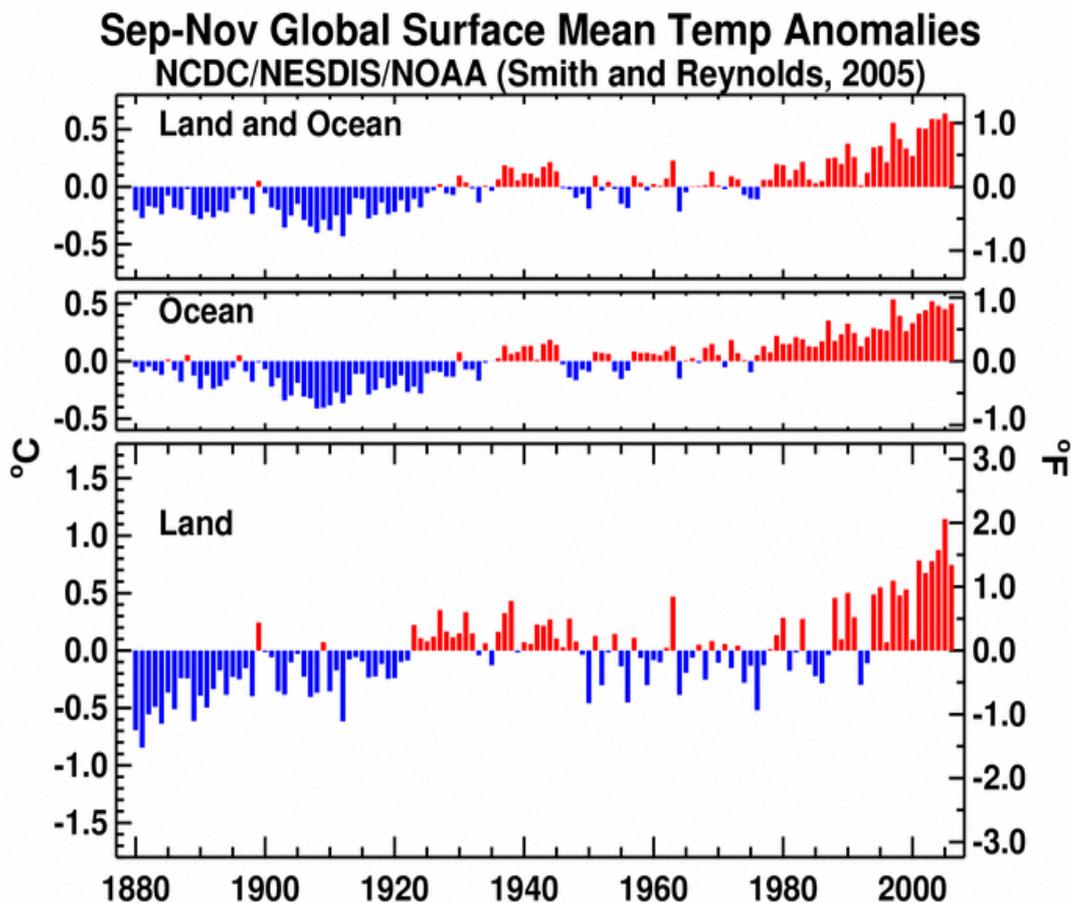
November	Anomaly	Rank	Warmest Year on Record	
<i>Global</i>				
Land	+0.74°C (+1.33°F)	6th warmest	2004	(+1.40°C/2.52°F)
Ocean	+0.52°C (+0.94°F)	2nd warmest	1997	(+0.54°C/0.97°F)
Land and Ocean	+0.58°C (+1.04°F)	4th warmest	2004	(+0.73°C/1.31°F)
<i>Northern Hemisphere</i>				
Land	+0.81°C (+1.46°F)	7th warmest	2001	(+1.73°C/3.11°F)
Ocean	+0.66°C (+1.19°F)	1st warmest	2004	(+0.59°C/1.06°F)
Land and Ocean	+0.72°C (+1.30°F)	4th warmest	2004	(+0.96°C/1.73°F)
<i>Southern Hemisphere</i>				
Land	+0.56°C (+1.01°F)	9th warmest	1982	(+1.45°C/2.61°F)
Ocean	+0.40°C (+0.72°F)	7th warmest	1997	(+0.55°C/0.99°F)
Land and Ocean	+0.42°C (+0.76°F)	9th warmest	1997	(+0.58°C/1.04°F)



September - November:

For September - November 2006, the global land and ocean surface temperatures were 4th warmest on record. Land surface temperatures ranked 5th warmest, while ocean surface temperatures ranked 3rd warmest for the boreal fall. The year-to-date (January - November 2006) land and ocean combined temperature was tied for 6th warmest on record.

September-November	Anomaly	Rank	Warmest Year on Record	
<i>Global</i>				
Land	+0.75°C (+1.35°F)	5th warmest	2005	(+1.15°C/2.07°F)
Ocean	+0.50°C (+0.90°F)	3rd warmest	1997	(+0.54°C/0.97°F)
Land and Ocean	+0.57°C (+1.03°F)	4th warmest	2005	(+0.64°C/1.15°F)
<i>Northern Hemisphere</i>				
Land	+0.74°C (+1.33°F)	5th warmest	2005	(+1.27°C/2.29°F)
Ocean	+0.64°C (+1.15°F)	1st warmest	2003	(+0.63°C/1.13°F)
Land and Ocean	+0.68°C (+1.22°F)	4th warmest	2005	(+0.82°C/1.48°F)
<i>Southern Hemisphere</i>				
Land	+0.75°C (+1.35°F)	6th warmest	1997	(+0.85°C/1.53°F)
Ocean	+0.39°C (+0.70°F)	6th warmest	1997	(+0.55°C/0.99°F)
Land and Ocean	+0.44°C (+0.79°F)	5th warmest	1997	(+0.59°C/1.06°F)



Precipitation

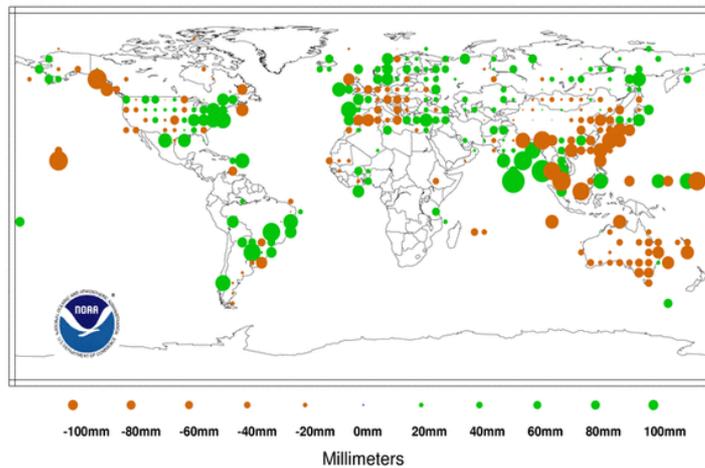
The maps below represent anomaly values based on the GHCN data set of land surface stations using a base period of 1961-1990. During September - November 2006, above average precipitation was observed in Scandinavia, Turkey, eastern Europe, southern India, western Alaska, eastern U.S., and southern parts of South America. Below average precipitation was observed in areas including eastern Australia, eastern Asia, central Europe, and the west coast of Canada.

During November 2006, above average precipitation fell over areas that included northeastern and northwestern U.S., eastern Brazil, most parts of Scandinavia, and eastern Asia. Heavy rain and flooding occurred in the Greater Horn, where it is said to be the worst in 50 years. Iraq, Afghanistan, and the Northwest U.S. have as well experienced heavy rain and flooding. Below average precipitation was observed in eastern Australia, where the effects of long term drought continue. Southern Europe and central U.S. were also drier than average.

Precipitation Anomalies Sep-Nov 2006

(with respect to a 1961-1990 base period)

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Precipitation Anomalies November 2006

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