A study of surface temperatures has been undertaken, using the AR5 Climate Model Mapper. Only the CCSM4 model was selected in order to maintain consistency and the data was chosen to be the two year (given year ± one year) averaged annual mean surface temperature, at 5 year intervals, over the period 1950 to 2010 (13 samples in all).

After having downloaded all the sample maps, the anomalies were calculated and the subsequent maps interrogated individually, and as a slide show/movie. The result was rather surprising.

The table below shows the findings. Temperatures are approximate.

Year ± 1	Warmer		Cooler	
	Sea	Land	Sea	Land
1950	datum sample			
1955	Denmark Straight/ Norwegian Sea +4ºC	N USA +4ºC	Siberian Arctic Ocean, NW Pacific/Korean, S Ocean/S Atlantic -3ºC	-
1960	-	-	Siberian Arctic Ocean, S Ocean /S Atlantic -4ºC	S USA -4ºC
1965	W of Antarctic Peninsula +4°C	-	Arctic Ocean -5⁰C	-
1970	W of Antarctic Peninsula +3°C	N USA +3ºC	Arctic Ocean -4⁰C	-
1975	W of Antarctic Peninsula +5°C	-	Arctic Ocean -3⁰C	N USA -2ºC
1980	W of Antarctic Peninsula +4°C	N USA +3⁰C	N Pacific/Arctic Ocean	S USA -4ºC
1985	Barents Sea +5°C	N USA +5⁰C	Large proportion of the globe ~ -2°C	
1990	N Pacific Arctic Ocean, S Ocean +3ºC	N/S USA +3⁰C	Siberian Arctic Ocean/ N Atlantic Arctic Ocean -3°C	Mid USA -2ºC (!)
1995	Denmark Straight +3⁰C	N USA, Canada +4⁰C	Siberian Arctic Ocean, Norwegian Sea, Equatorial Pacific -3⁰C	Equatorial Africa, S Arabia -3ºC
2000	Arctic Ocean, S Ocean +3ºC	Antarctica, N USA /Canada +3ºC		Iceland -2ºC
2005	Globally ~ +2/3°C	Globally ~ +2/3°C N USA/Canada +5°C	Barents Sea/ Svalbard -2ºC	-
2010	Arctic Ocean, S Ocean +5⁰C	Antarctica, S America, Eurasia, Africa +3ºC Australia +5ºC N USA/Canada +6/7ºC	NW Pacific/ Korean, isolated patch, mid S Atlantic -2ºC	US Gulf area -2ºC

## Discussion

Generally speaking, the surface temperature variations over the last 60 years depict more or less equal swings in both directions, i.e. both warmer and cooler years, without any striking features.

However, there are clearly some events that *do* stand out, such as the USA in 1990, where the north and south both experienced warmer anomalies, whilst the mid USA had a cold anomaly. In 1995, equatorial regions were notably cool.

From 2000 on, apart from minor cool areas, there appears to be a significant rise in surface temperatures.

## Conclusion

Whether any real conclusions can be drawn is difficult to say, the general temperature swings would appear to balance each other out over the decades. But if this model is representative of a trend from the data over recent years, then alarm bells should be ringing all over the planet!