



Annual sea surface temperature difference from normal, 2009

Title	Annual sea surface temperature difference from normal, 2009
Creator	Environmental Reporting, Ministry for the Environment and Statistics New Zealand
Date	2015-10-21
Description	<p>"The ocean waters surrounding New Zealand vary in temperature from north to south. They interact with heat and moisture in the atmosphere and affect our weather. Long-term changes and short-term variability in sea-surface temperatures can affect marine processes, habitats, and species. Some species may find it hard to survive in changing environmental conditions. This layer shows annual sea-surface temperature difference from normal for 2009 as part of the data series for years 1993 to 2013. "Normal" is defined as the average sea-surface temperature for 1993–2013. NIWA's sea-surface temperature archive is derived from the Advanced Very High Resolution Radiometer (AVHRR) satellite data it receives from the National Oceanic and Atmospheric Administration. The archive provides high spatial (approximately 1km) and high temporal (approximately 6-hourly in cloud-free locations) resolution estimates of sea-surface temperatures over the New Zealand region, dating from January 1993. Uddstrom and Oien (1999) and Uddstrom (2003) describe the methods used to derive and validate the data. This dataset relates to the "Annual average sea-surface temperature" measure on the Environmental Indicators, Te taiao Aotearoa website. Geometry: grid Unit: percent Further information can be found in: Uddstrom, MJ (2003). Lessons from high-resolution satellite SSTs. Bulletin of the American Meteorological Society, 84(7), 896–897. Uddstrom, MJ, & Oien, NA (1999). On the use of high resolution satellite data to describe the spatial and temporal variability of sea surface temperatures in the New Zealand region. Journal of Geophysical Research (Oceans) 104, chapter 9, 20729–20751. "</p>
Source	<p>Source: National Institute for Water and Atmospheric Research Method: "The yearly average temperature at the surface of the ocean as inferred from satellite data. The NIWA sea surface temperature archive (NSA) is derived from NOAA satellite Advanced Very High Resolution Radiometer (AVHRR) data received by NIWA. It provides high spatial (approximately 1km) and high temporal (approximately 6 hourly in cloud free locations) resolution estimates of sea surface temperatures over the New Zealand region, dating from January 1993. The methods used to derive and validate the NSA are given in Uddstrom and Oien (1999), and Uddstrom (2003). The New Zealand region includes our exclusive economic zone (EEZ), the Chatham Rise, northern subtropical waters, sub Antarctic waters, and the Tasman Sea. It goes from around 30S to 55S, 160E-170W. This data set has been selected as it is representative of the New Zealand region, and the spatial variability of temperature around New Zealand's waters. Globally, oceans have absorbed 30 Units: percent of the warming caused by global greenhouse gas emissions. The accuracy of the data source is of high quality. The data was supplied as a point grid created in Lambert conformal projection and converted to a 0.02 degree raster. "</p>
Coverage	-52.8264482098 155.07776855 -28.8664482098 -168.24223145
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Subject

CLIMATE-AND-WEATHER

Subject

CLIMATE-AND-WEATHER-Climate-change

Subject

CLIMATE-AND-WEATHER-Temperature

Subject

environment