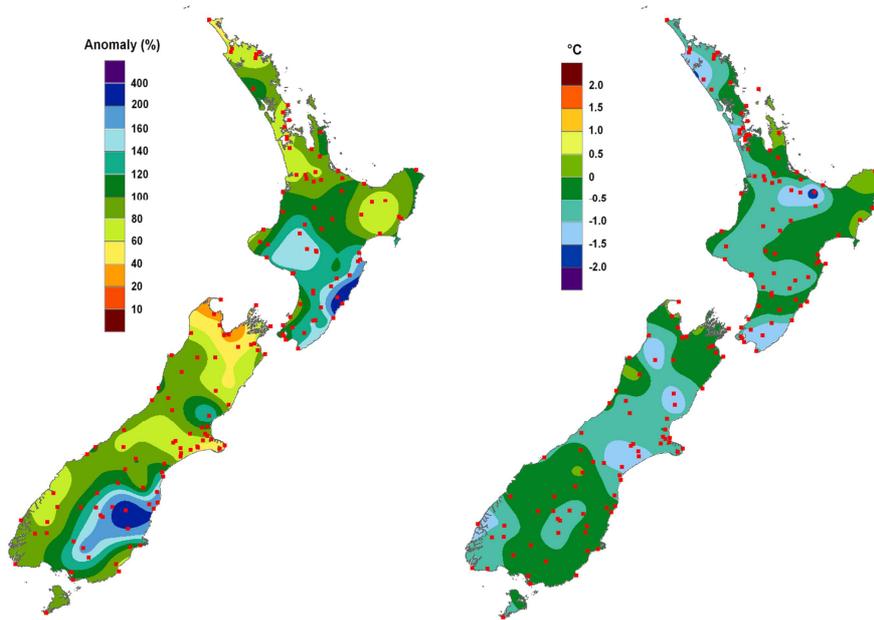


## New Zealand Climate Update No 152, February 2012

### Current climate – January 2012

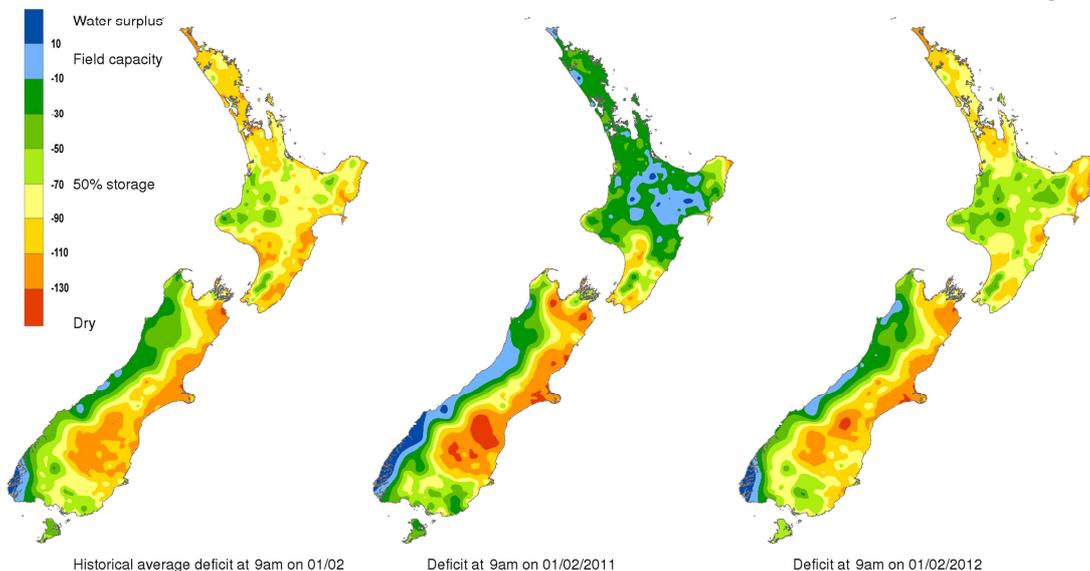
The first half of January was characterised by easterly and northerly winds, which produced wet and windy weather for areas exposed to the northeast. In contrast, the second half of the month was very cool, with frequent southerly winds which brought unusually cool air over the country. For the month as a whole, lower pressures than normal prevailed over New Zealand, as well as to the north and east of the country, producing a rather cool, windy, and unsettled month overall.



Percentage of normal rainfall, January 2012

Departure from average air temperature for January 2012.

Soil moisture deficit (mm) at 9am on 01/02/2012



End of month water balance in the pasture root zone for an average soil type, where the available water capacity is 150mm.

## Rainfall

Well below normal January rainfall totals (less than half of January normal) were observed in the greater Nelson region, as well as in Blenheim, and on Banks Peninsula. In contrast, it was an extremely wet January from Gore to Queenstown, and across much of the southern half of the North Island. For the Hokianga, and much of Auckland, Coromandel, and the Waikato, as well as coastal Bay of Plenty, rainfall was close to normal (ranging between 80 and 119 percent of January normal). Elsewhere, rainfall totals were mostly below normal (between 50 and 79 percent of January normal). Soil moisture levels for most of the country were close to normal, for this time of year. Significant soil moisture deficit (more than 110 mm of deficit) was observed by the end of January in eastern areas of the South Island, the Mackenzie basin, central Otago, and parts of the Gisborne region.

## Air temperature

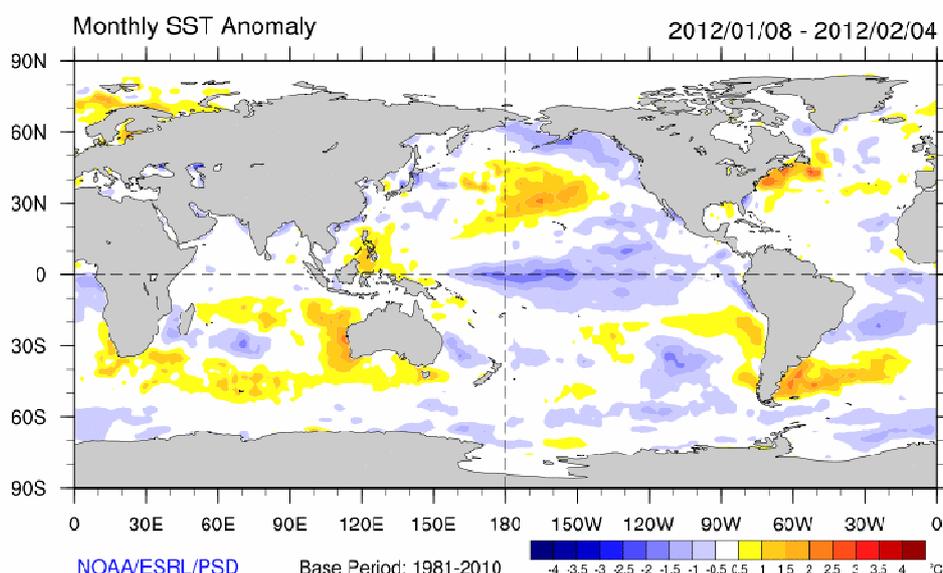
Below average temperatures (between 0.5°C and 1.2°C below average) were generally experienced across western regions of the North Island, as well as inland Bay of Plenty, inland Hawkes Bay, Wellington and the Wairarapa, Canterbury, and across most of Fiordland, Westland and Buller. Elsewhere (generally in the northeast of both islands), mean temperatures for January were close to average (within 0.5°C of the January average). The nationwide average temperature in January was 16.4°C (0.7°C below the 1971–2000 January average), using NIWA's seven-station temperature series which begins in 1909.

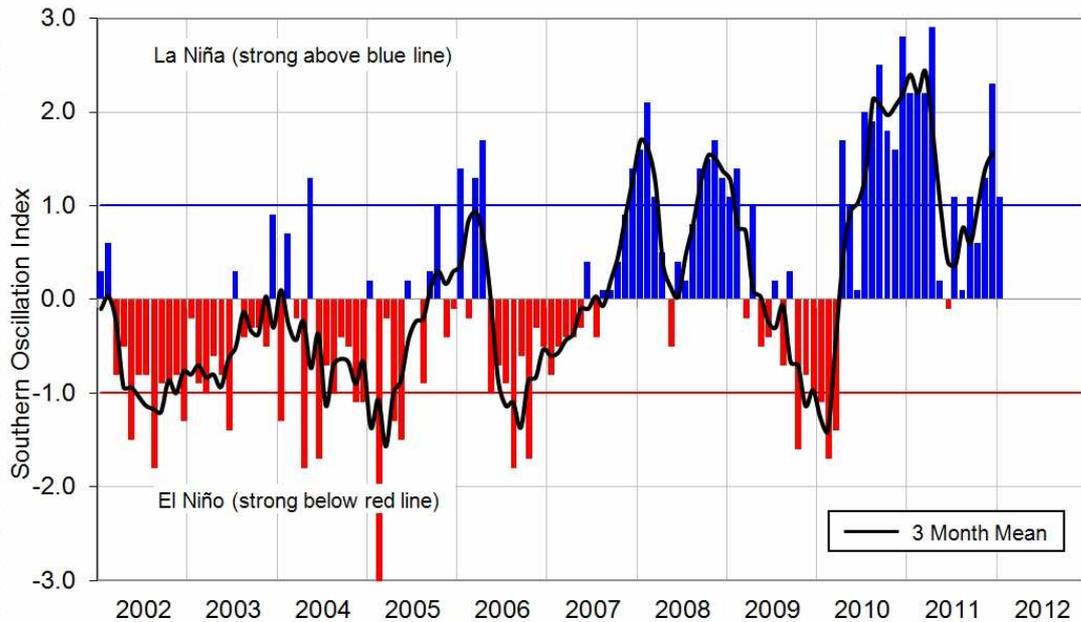
## Sunshine

It was a rather cloudy January for the north and west of the North Island, with below normal sunshine totals (between 75 and 90 percent of January normal). In contrast, it was sunny over the southern half of the South Island, with above normal sunshine totals (between 110 and 125 percent of January normal). Elsewhere, sunshine totals were generally in the near-normal range.

## Global setting

A moderate La Niña is in place in the tropical Pacific and should persist into autumn 2012. Mean sea level pressures for early autumn are likely to be above normal south and southeast of the country, but below average to the north of New Zealand.





Monthly values of the Southern Oscillation Index (SOI), a measure of changes in atmospheric pressures across the Pacific, and the 3-month mean (black line). SOI mean values: January SOI +1.1; November to January average +1.6.

## Outlook February to April 2012

A moderate La Niña is in place in the tropical Pacific and is likely to persist into mid-autumn 2012.

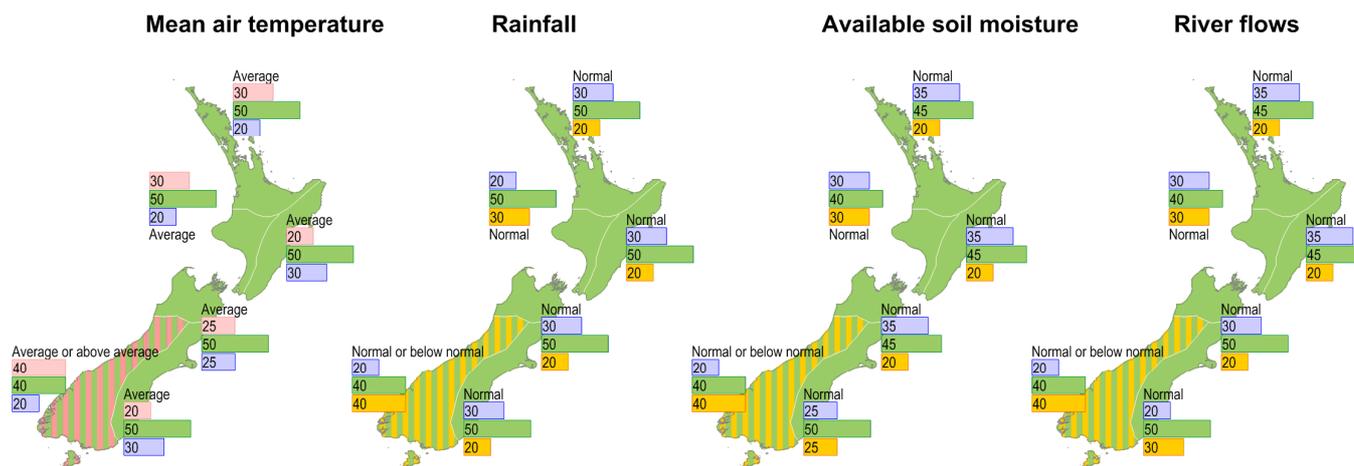
**Temperatures** are likely to be average in most areas but average or above average in the western South Island.

**Seasonal rainfall** is likely to be near normal for most regions, but normal or below normal in the west of the South Island.

**Soil moisture levels** and river flows are likely to be near normal in most regions, but normal or below normal in the western South Island.

For the remainder of the **tropical cyclone** season through to May, around the normal number of cyclones is expected overall (January to March is typically the most active part of the cyclone season). On average, at least one ex-tropical cyclone passes within 500km of New Zealand in 9 out of 10 cyclone seasons.

# Outlook for February-April 2012



Key to maps (example interpretation)

**Below normal**  
 Upper tercile: 20% chance of above normal 20  
 Middle tercile: 30% chance of normal 30  
 Lower tercile: 50% chance of below normal 50

In this example the climate models suggest that below average conditions are likely (50% chance of occurrence), but, given the variable nature of the climate, the chance of normal or above normal conditions is also shown (30% and 20% respectively).

## The climate we predicted (November to January) and what happened

**Predicted rainfall:** Rainfalls are likely to be near normal in all regions of the country.

**Outcome:** Above normal rainfall fell over the majority of the North Island apart from parts of Northland, south Auckland, the Coromandel, eastern Bay of Plenty, the Gisborne District, parts of the central North Island and parts of the east coast south of Napier where normal rainfall was observed. For the South Island, above normal rainfall fell over the Tasman, Buller, Nelson and Marlborough districts as well as over south Canterbury. Below normal rainfall was observed in the south and west of the South Island and normal rainfall fell elsewhere.

**Predicted air temperature:** Air temperatures are likely to be near average over the North Island and average or above average over the South Island.

**Outcome:** For most of the North Island average temperatures were observed, with the exception of parts of Northland, Waikato, Hawkes Bay, Manawatu, south Taranaki and eastern Wellington regions where below average temperatures occurred. Near average temperatures were observed for much of the South Island. However, below average temperatures occurred along the east coast of the South Island from South Canterbury to the Marlborough district and above average temperatures occurred over western Otago and Southland regions.

**For more information about NIWA's climate work, visit:**

[www.niwa.co.nz/our-science/climate](http://www.niwa.co.nz/our-science/climate)