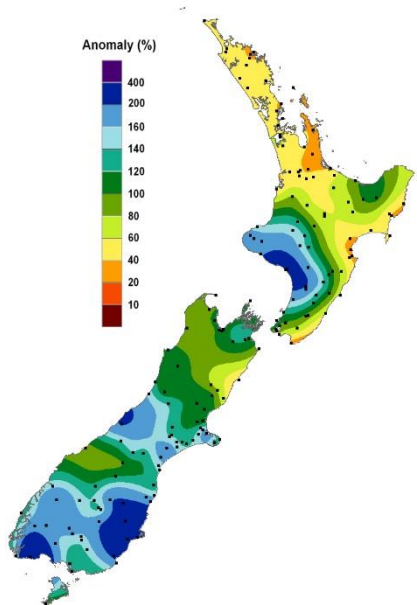


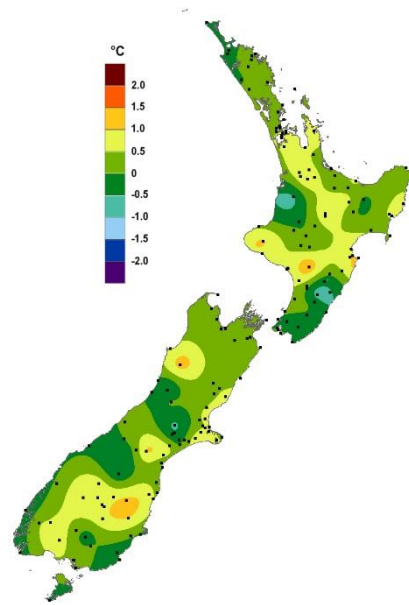
New Zealand Climate Update No 193, July 2015

Current climate – June 2015

June 2015 was characterised by a strong south-westerly flow anomaly with higher than normal pressures over the North Island extending over the Tasman Sea, and lower than normal pressures over the South Island extending to the south and east of the island. This flow anomaly brought numerous storms to New Zealand during the month.

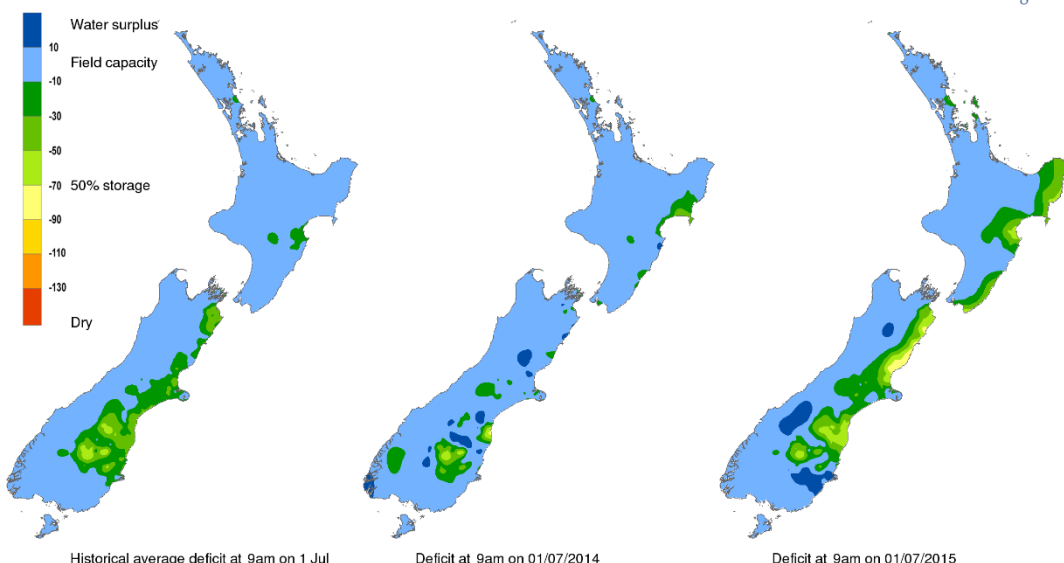


Percentage of normal rainfall for June 2015



Departure from average air temperature for June 2015

Soil moisture deficit (mm) at 9am on 01/07/2015



Historical average deficit at 9am on 1 Jul

Deficit at 9am on 01/07/2014

Deficit at 9am on 01/07/2015

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

Rainfall: Rainfall was above normal (120-149%) or well above normal (> 149%) for much of the Manawatu-Whanganui, Taranaki, Westland, Tasman, Nelson, Marlborough, Canterbury, Otago, and Southland regions. Rainfall was well below normal (< 50%) or below normal (50-79%) for parts of Northland, Auckland, Waikato, Bay of Plenty, Gisborne, Hawke's Bay, and north Canterbury.

Air temperature: June temperatures were near average across much of the country (within 0.5°C of June average). Below average temperatures were recorded in inland Canterbury, Wairarapa, western Waikato (0.5-1.2°C below June average) and above average temperatures experienced in northern, eastern, and western parts of the North Island and northern, western, and south-central parts of the South Island (0.5-1.2°C above June average). A polar outbreak in late June led to the 4th-lowest temperature ever recorded in New Zealand.

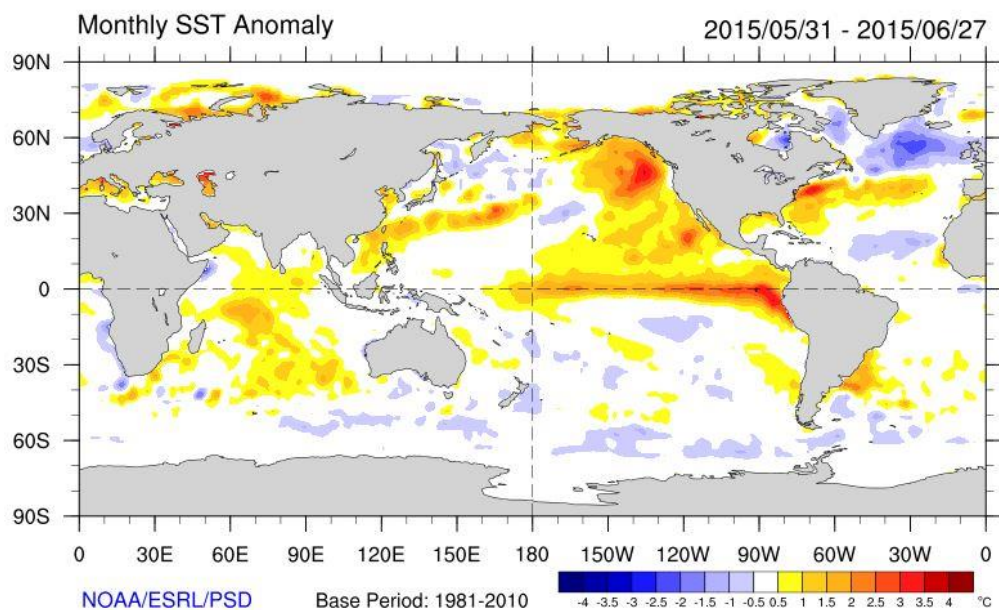
Sunshine: Well above normal (>125%) or above normal (110-125%) sunshine was recorded in Northland, Auckland, western Waikato, Wellington, Marlborough, north Canterbury, and Central Otago. Near normal sunshine (within 10% of normal) was recorded elsewhere, except in Franz Josef and Tauranga where below normal sunshine was recorded.

Global setting

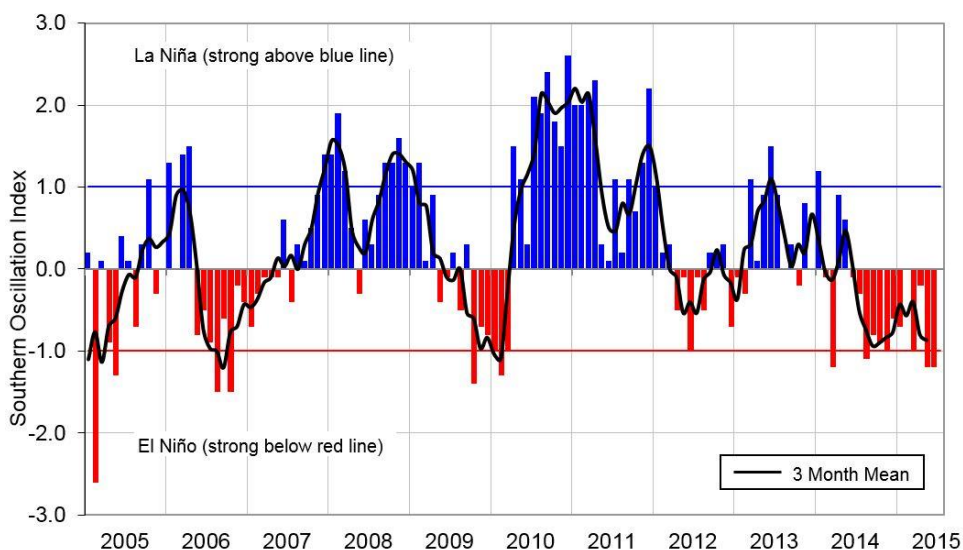
An El Niño event is under way in the tropical Pacific. Sea surface temperatures have continued to warm across many areas of the eastern and central Tropical Pacific. Cloudiness, rainfall and convection activity near, and to the east of, the International Date Line has also intensified. These oceanic and atmospheric features are indicative of consolidating El Niño conditions.

International guidance indicates that El Niño conditions will continue through winter and spring, and into summer 2015/16.

During July – September 2015, above normal pressures are forecast to the west of New Zealand, with below normal pressures expected well south, and northeast, of the country. This mixed pressure pattern is likely to be accompanied by anomalous southerly-quarter wind flows, which is typical of El Niño conditions during the winter season in New Zealand.



Differences from average global sea surface temperatures for 31 May to 27 June 2015. Map courtesy of NOAA Climate Diagnostics Centre (<http://www.cdc.noaa.gov/map/images/sst/sst.anom.month.gif>)



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 preliminary mean values: June SOI -1.2; April to June average -0.9.

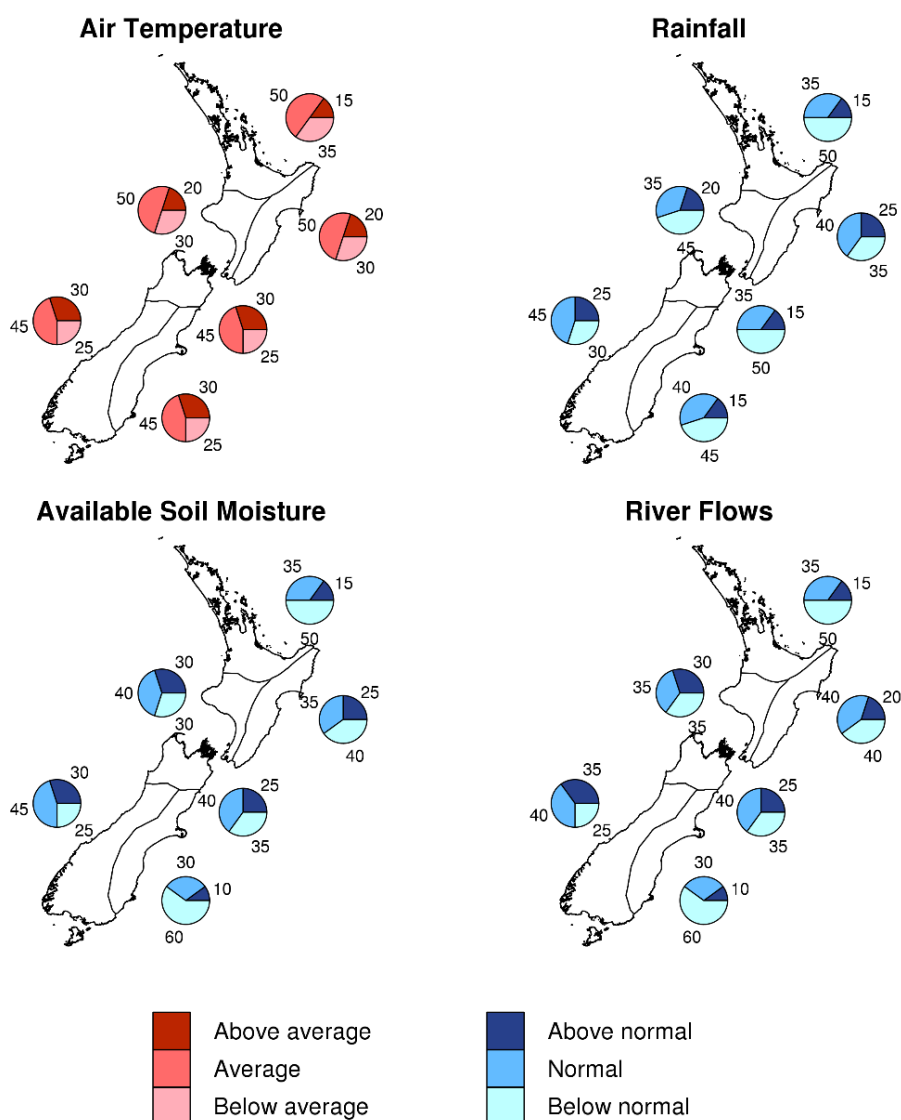
Outlook – July to September 2015

Temperatures are most likely to be near average in all regions of New Zealand.

Rainfall is equally likely to be in the below normal range for the north of both Islands and the west of the North Island, and about equally likely to be in the near normal or below normal range for the east of both Islands. Near normal rainfall is most likely for the west of the South Island.

Soil moisture levels and river flows are most likely to be below normal in the north of the North Island and the east of the South Island and about equally likely to be in the below normal or near normal range in the east of the North Island and the north of the South Island. Below normal or near normal river flows are also equally likely for the west of the North Island. In the west of the South Island, river flows are about equally likely to be in the near normal or above normal range. Near normal soil moisture levels are likely are forecast for the west of both Islands.

Outlook for July - September 2015



Graphical representation of the regional probabilities, Seasonal Climate Outlook, July - September 2015.

The climate we predicted (April - June 2015) and what happened

Predicted rainfall: April – June 2015 rainfall is about equally likely to be in the near normal or above normal range in the west of the North Island. Rainfall totals for the season are about equally likely to be in the near normal or below normal range for the north and east of the North Island and the east of the South Island. In the north and west of the South Island, rainfall is most likely to be in the near normal range.

Outcome: Actual rainfall was well above normal in the west of both the North and South Island as well as in the Whakatane, Christchurch and Dunedin districts. Rainfall was below normal in the east of the North Island, Kaipara, Whangarei, the Far North, Kaikoura, Hurunui and Waimate.

Predicted air temperature: April – June 2015 temperatures are most likely to be in the above average range in the east and north of the North Island. For all remaining regions of New Zealand temperatures are about equally likely to be in the near average or above average range. As autumn progresses, cold snaps and frosts can still be expected from time to time in some parts of the country.

Outcome: Actual temperatures were above average in the west of the North Island, east of the South Island Whangarei, Waikato, Thames-Coromandel, Taupo, Buller, Central Otago and parts of the Southland. Temperatures were near normal elsewhere.

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

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