

Figure II.53
Maps of a) vector mean
surface winds, and b)
anomaly of outgoing
longwave radiation over
the South-West Pacific
Ocean from December
1997 to February 1998.
(NOAA/CDC, USA)

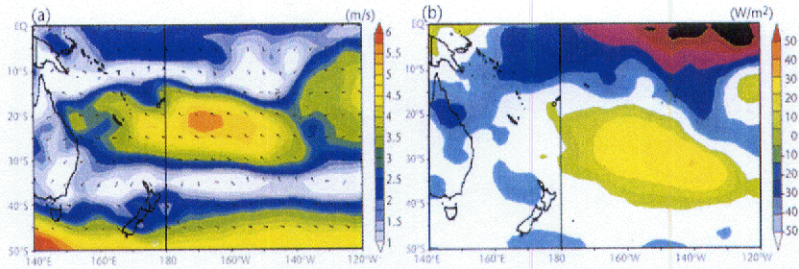


Figure II.54
Composite of monthly
rainfall from 21
representative sites over
New Caledonia during
the period January 1997
to May 1998 relative to
average.
(Météo-France)

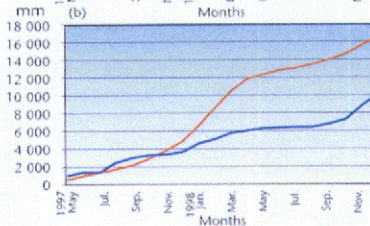
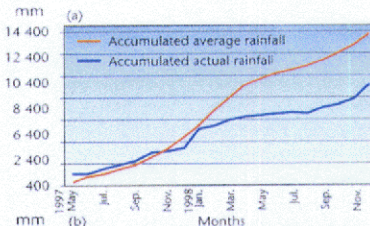
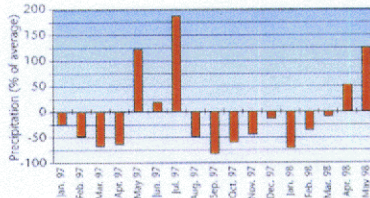


Figure II.55
Accumulated monthly
rainfall over representative
stations at a) northern and
b) western Fiji for the
period May 1997 to
December 1998
compared to normal.
(Fiji Meteorological Service)

Three “off-season” cyclones affected Fiji during 1997. Tropical cyclone *June*, only the fourth cyclone on record since 1840 to threaten Fiji during the off-season, affected the northwestern parts in early May. Damaging winds up to 100 km/h and some heavy rain were reported. Tropical cyclone *Keli*, the first cyclone reported in June, passed about 450 km northeast of Fiji. Tropical cyclone *Lusi* passed near western Fiji during mid-October with wind gusts to 93 km/h and widespread rain.

Over southeastern Australia the blocking high pressure systems pushed the wintertime mid-latitude cyclones further southward. Consequently, very few cold fronts or cyclones passed over the region and winter rainfall was below average (Decile range 2 or 3) and very much below

average (Decile range 1 — in the lowest ten percentile) over large areas (Figure II.52). Over the Coral Sea and North Tasman Sea the strengthened pressure gradient caused the prevailing southeasterly winds to be stronger than normal.

During the Southern Hemisphere spring, as the El Niño was developing towards its mature phase, sea level pressure remained higher than normal over Australia and southeast winds were strong over the Coral Sea and the South-West Pacific Ocean. Also, persistent west-southwest winds were experienced along the mountainous west coast of New Zealand. In the high atmosphere the subtropical jetstream winds continued to be located further eastward than normal over the central South Pacific Ocean.

Despite the continued blocking high pressure systems over southeastern Australia a number of rain systems were able to move over central and eastern Australia such that much of the country received average to above average spring rainfall totals.

December 1997–May 1998

Higher than normal sea level pressure continued to be experienced over Australia and the South-West Pacific Ocean while the El Niño event was at its mature phase during the Southern Hemisphere summer of 1997–98. The tendency for high pressure systems to block was maintained but the focus moved from southeast Australia to the South Pacific Ocean east of New Zealand. Enhanced subsidence associated with the blocking high pressure systems resulted in relatively dry air, clear skies and stronger than normal southeasterly winds over the subtropics and the islands of the South-West Pacific Ocean. Four episodes of strong wind over Fiji, lasting in total about 20 days, disrupted sea transport. The drier air and clear skies affected temperatures over the islands. A number of record low minimum