

## **El Nino of 1997-1998 and Indian Monsoon**

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**ABSTRACT.** El-Nino of 1997-1998 was accompanied by severe global weather anomalies, which generated widespread interest at all levels in the world. As a result, United Nations General Assembly passed a resolution (52 / 200) urging International co-operation to reduce the adverse impact of El-Nino on human society and Environment. The El-Nino (Warm Phase) commenced around April – May 1997, reached peak intensity around December 1997 and ended around May 1998. La-Nina (Cold Phase) started around this time, reached its peak in January 1999, weakened around June - July 1999 and has continued in its weak phase at the time of writing, August 1999.

Development and decay of the El-Nino are illustrated through SST, SOI and sea-water temperature below the sea-surface. Features during peak period of El-Nino are illustrated through SST, sea-level pressure, surface wind, OLR, and Walker Circulation. There is clear evidence of west-to-east propagation of OLR anomaly, 850 hPa zonal wind anomaly and sea-level pressure anomaly. SST anomaly pattern did not give strong evidence of this type of zonal progression.

El-Nino is global in nature.

El-Nino / La-Nina years during the 120-year period 1871-1990 are tabulated along with All India Summer Monsoon Rainfall (AISMR) anomalies. There is evidence of El-Nino years tending to become years of deficit rainfall and La-Nina years being years of excess rainfall over India. El-Nino / La-Nina events, which can be predicted 6-12 months in advance, can be used and are being used as part of the prediction formulae, in the issue of official monsoon rainfall forecast by India Meteorological Department. Based on El-Nino considerations alone, it has been feared, in some quarters, that 1997 might become a year of extreme deficit summer monsoon rainfall. However, the actual rainfall over India during June – September 1997 was 2 % above normal. India Meteorological Department had predicted "normal" rainfall (+/-10% of the rainfall).

**Key words** – El Nino, Monsoon of India, La Nina, ENSO, U. N. Concern, Climate predictability, Climate variability.