El Niño Monitoring and Outlook

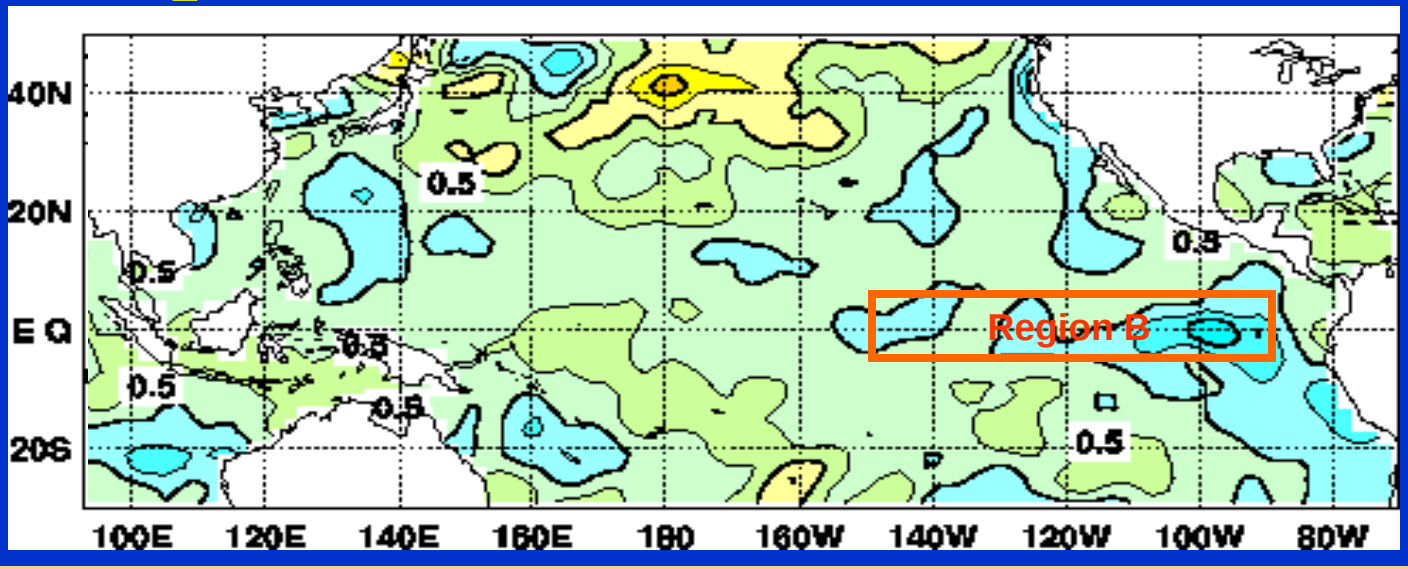
< URL: http://okdk.kishou.go.jp/products/elnino/index.html >

Climate Prediction Division

Japan Meteorological Agency

issued on 11 October 2005

Equatorial SST Anomalies and SOI

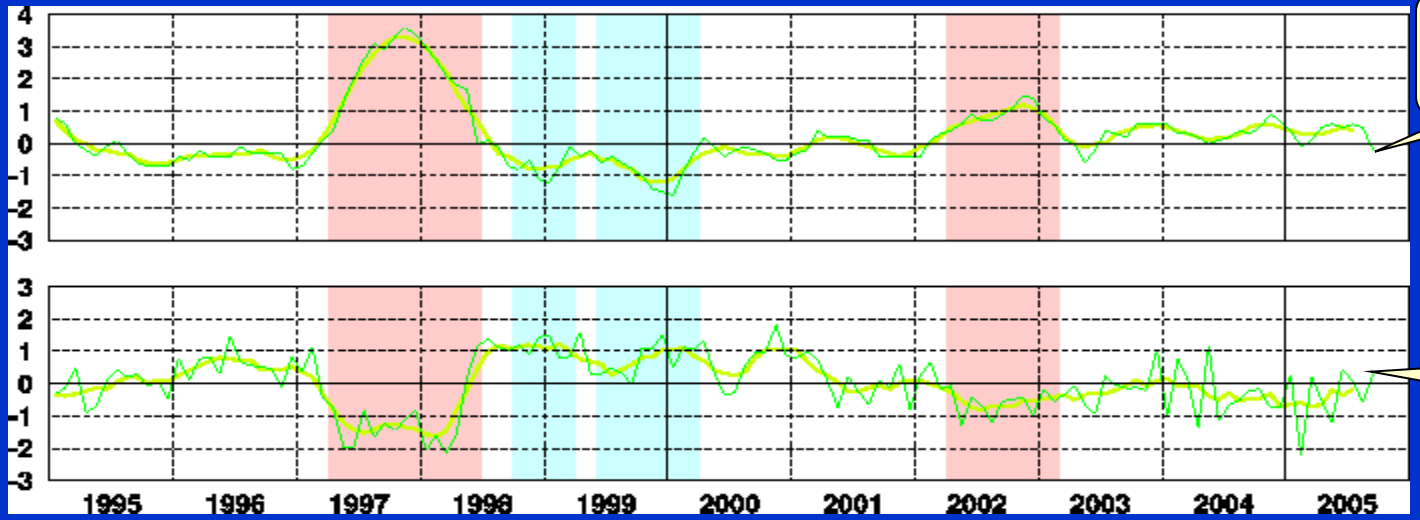


September 2005

Negative SST anomalies developed in the eastern equatorial Pacific, while positive SST anomalies persisted in the central part.

Region B SST deviation (150W-90W, 4S-4N)

SOI



SOI: Southern Oscillation Index

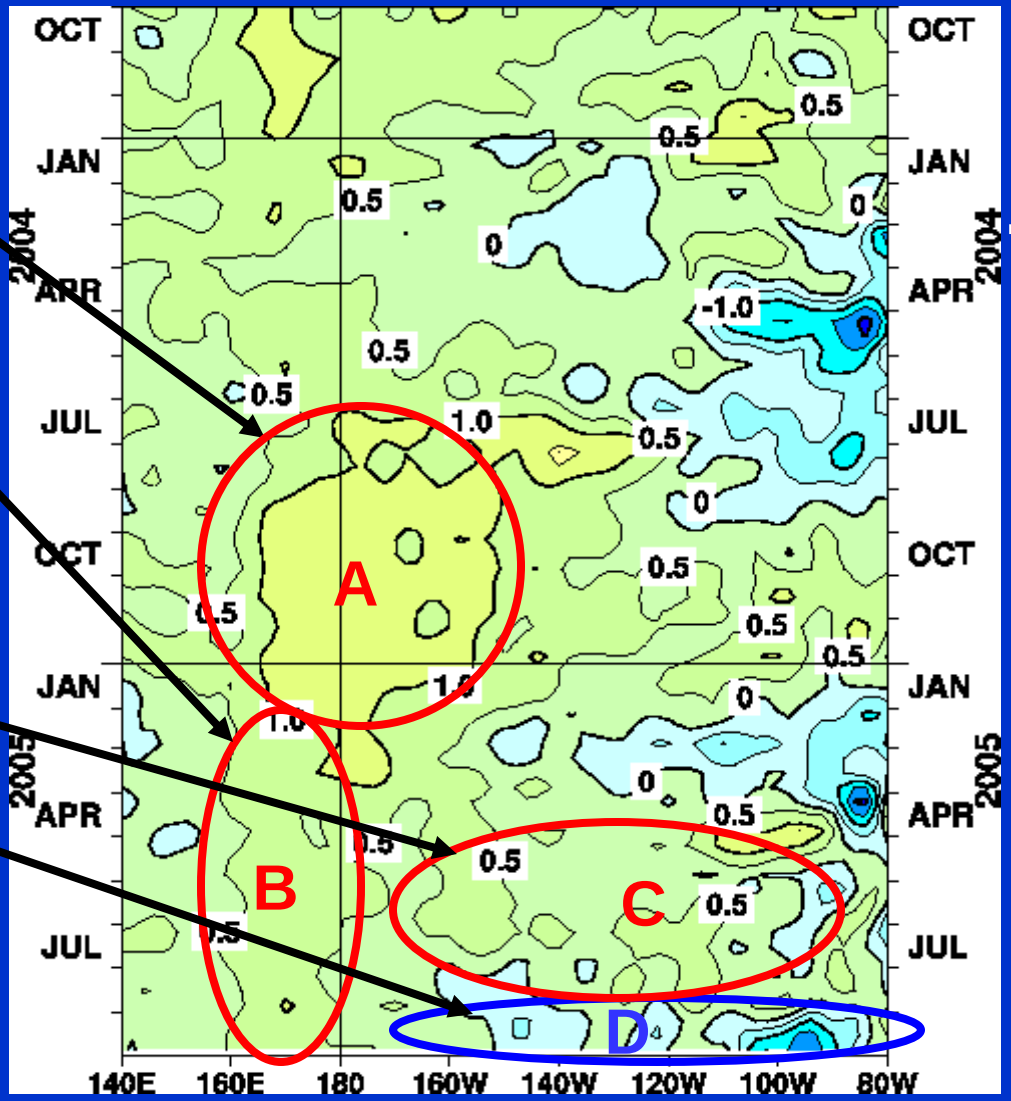
Recent evolution of the Equatorial Pacific SST Anomalies

A: Positive SST anomalies exceeding +1degC prevailed from mid-2004 to January 2005 in the central equatorial Pacific.

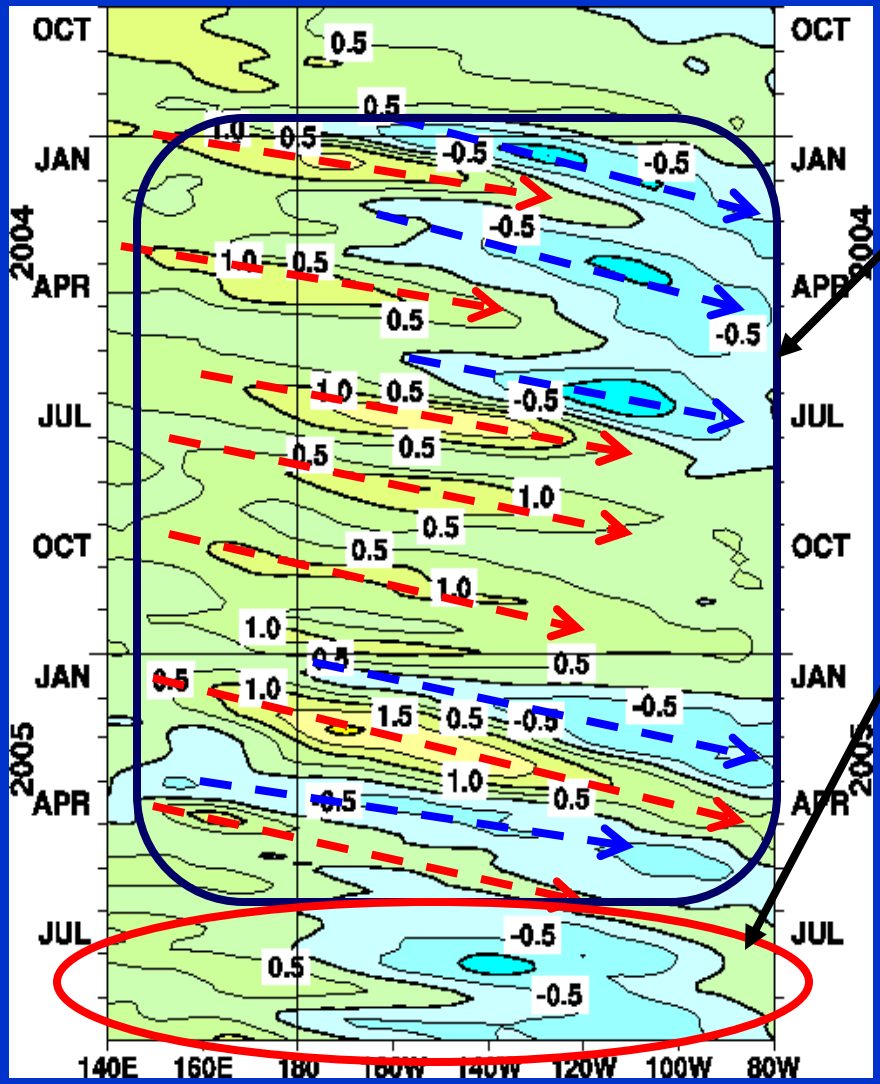
B: Afterwards positive SST anomalies exceeding +0.5degC persisted from 160E to the dateline in 2005.

C: Positive SST anomalies prevailed in the eastern equatorial Pacific from May to August 2005.

D: Negative SST anomalies developed in the eastern equatorial Pacific in September 2005.



Recent Evolution of Ocean Heat Content along the Equatorial Pacific



Positive and negative anomalies had successively propagated eastward associated with MJO activities from January 2004 to mid-2005.

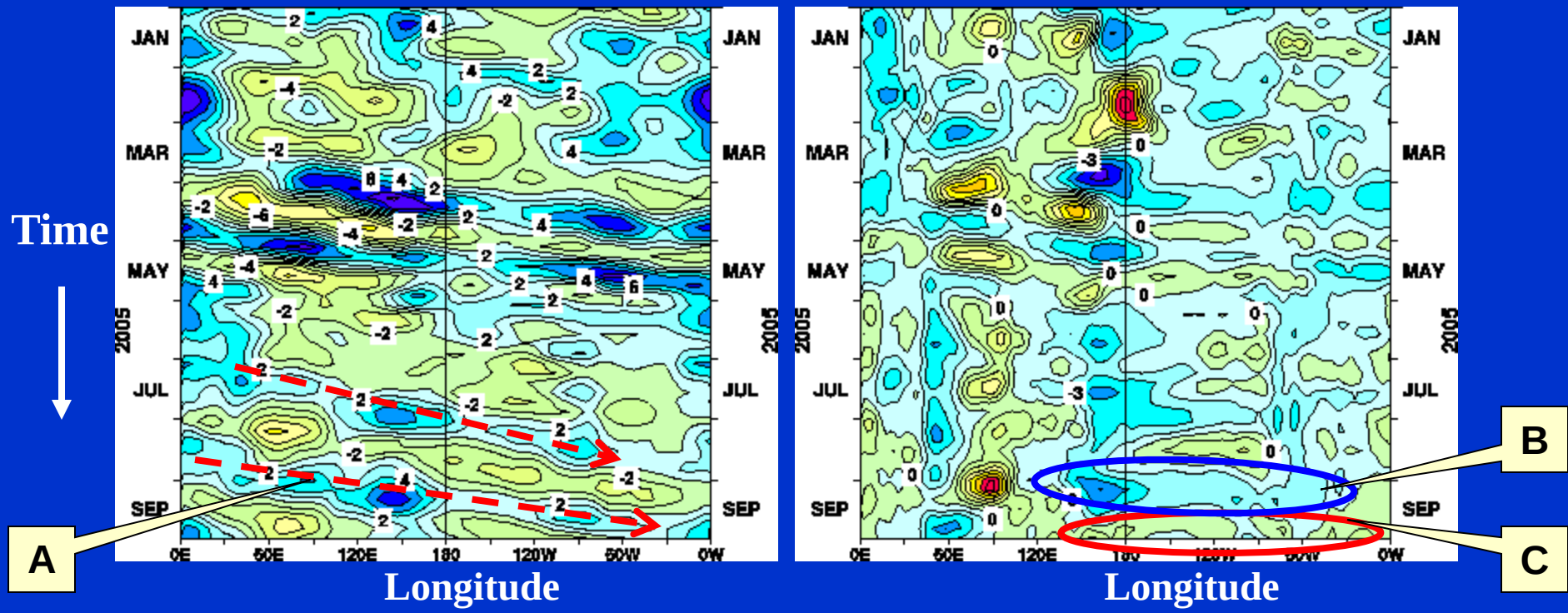
Though negative (positive) anomalies have prevailed east (west) of the dateline since July 2005, anomalies exceeding +1 degC (-1 degC) were scarcely found.

Ocean Heat Content (OHC) : vertically averaged temperatures in the top 260m.

Madden-Julian Oscillations (MJO)

Velocity Potential Anomalies at 200hPa

Zonal Wind Anomalies at 850hPa

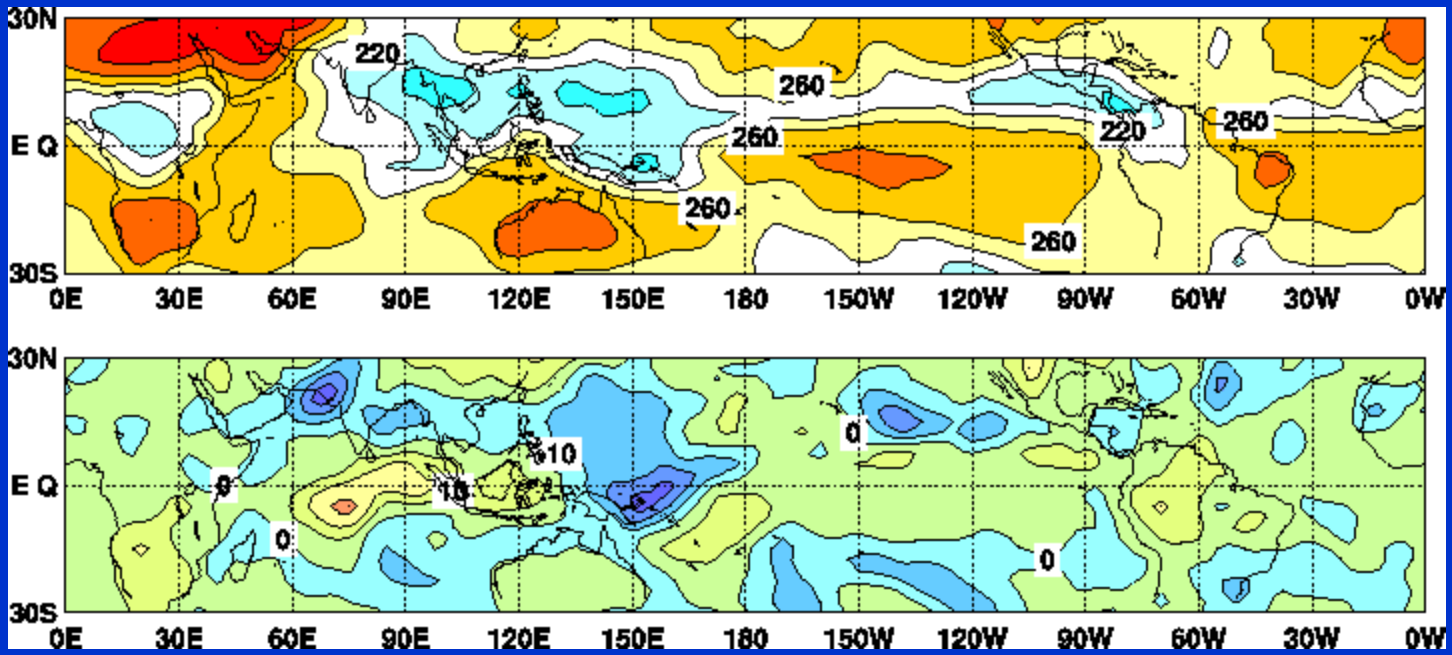


◆Associated with the passage of the convection due to MJO (A), easterly wind anomalies were dominant over much of the equatorial Pacific in the first half of September 2005 (B).

◆Weak westerly wind anomalies prevailed over much of the equatorial Pacific in the second half of the month (C).

Convective activities

Monthly mean outgoing longwave radiation (OLR) and anomalies in September 2005. Base period for normal is 1979-2000. Original data were provided by NOAA.

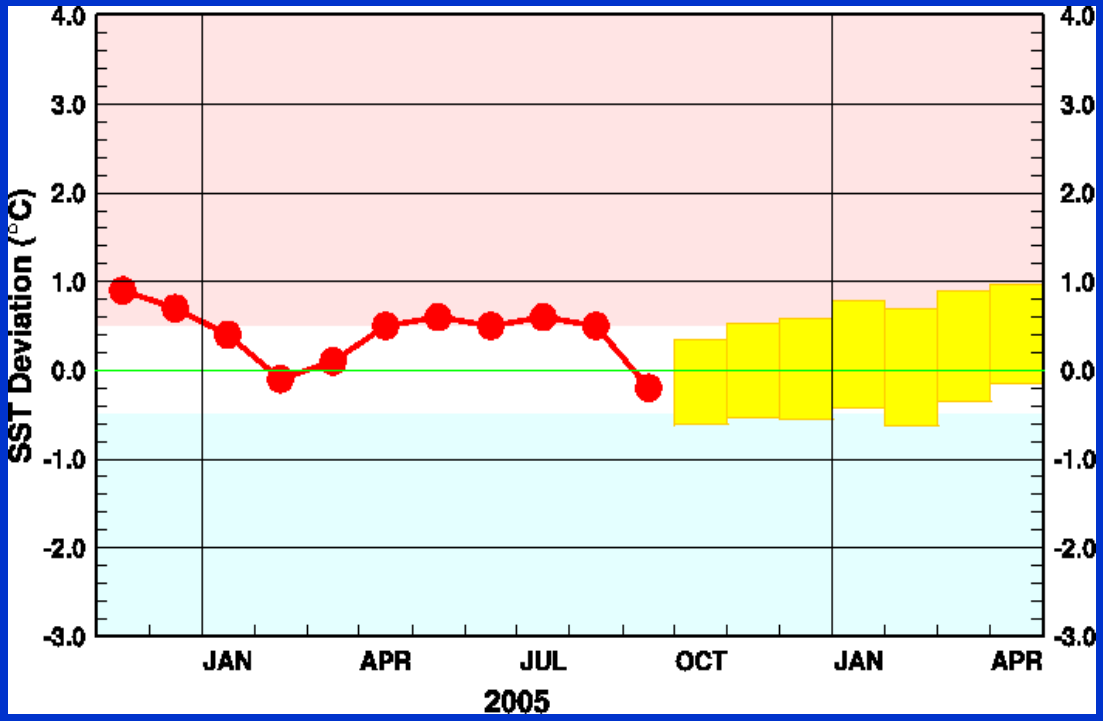


◆Convective activities were stronger than normal around 155E near the equator in September 2005.

Region B SST Forecast

by JMA El Niño Forecast Model

Outlook of the SST deviation for Region B (Niño.3) by the El Niño forecast model. This figure indicates a time series of the monthly sea surface temperature (SST) deviation for Region B (4N-4S, 150W-90W). Thick lines with closed circles show the observed SST deviation and boxes show the predicted one for the next six months by the El Nino forecast model. Each box denotes the range where the SST deviation will be included with the probability of 70%.



Region B SST will be around normal (1961-1990 mean) during autumn and winter.

Summary

Current Diagnosis

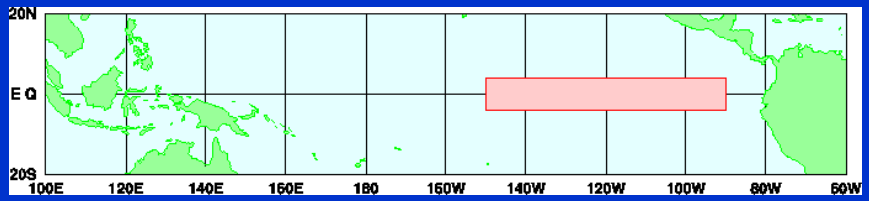
- Negative SST anomalies developed in the eastern equatorial Pacific, while positive SST anomalies persisted in the central part.
- Negative temperature anomalies were dominant in the eastern equatorial subsurface ocean.
- Easterly wind anomalies dominated over much of the equatorial Pacific in the first half of September.

El Niño Outlook

- The Region B (Niño 3) SST is likely to be around normal during autumn and winter .
- It is unlikely that El Niño or La Niña will develop during the prediction period.

JMA Definitions for El Niño and La Niña

- Based on five month running mean values of SST deviations from the 1961-1990 mean in the Region B (4S-4N, 150W-90W: *Region B is approximately the same as the Niño 3 region*)



El Niño: the value is greater than or equal to +0.5 degC continuously for six months or longer.

La Niña: the value is less than or equal to -0.5 degC continuously for six months or longer.