

# CLIMATE APPLICATION IN MALAYSIA

ZABANI MD. ZUKI

MALAYSIAN METEOROLOGICAL DEPARTMENT

**There is no Climate Forecast Products in MMD**

**Climate Forecast Products is obtained from  
Global Producing Centers (GPCs) likes;**

- ECMWF**
- NCEP/CPC**
- TCC**
- KMA**

## **Products that are frequently used by MMD;**

- **Seasonal precipitation anomaly forecast**
- **Weekly precipitation anomaly forecast**
- **ENSO (El Nino) information**
- **Sea Surface Temperature**

# ECMWF Seasonal Forecast Mean precipitation anomaly

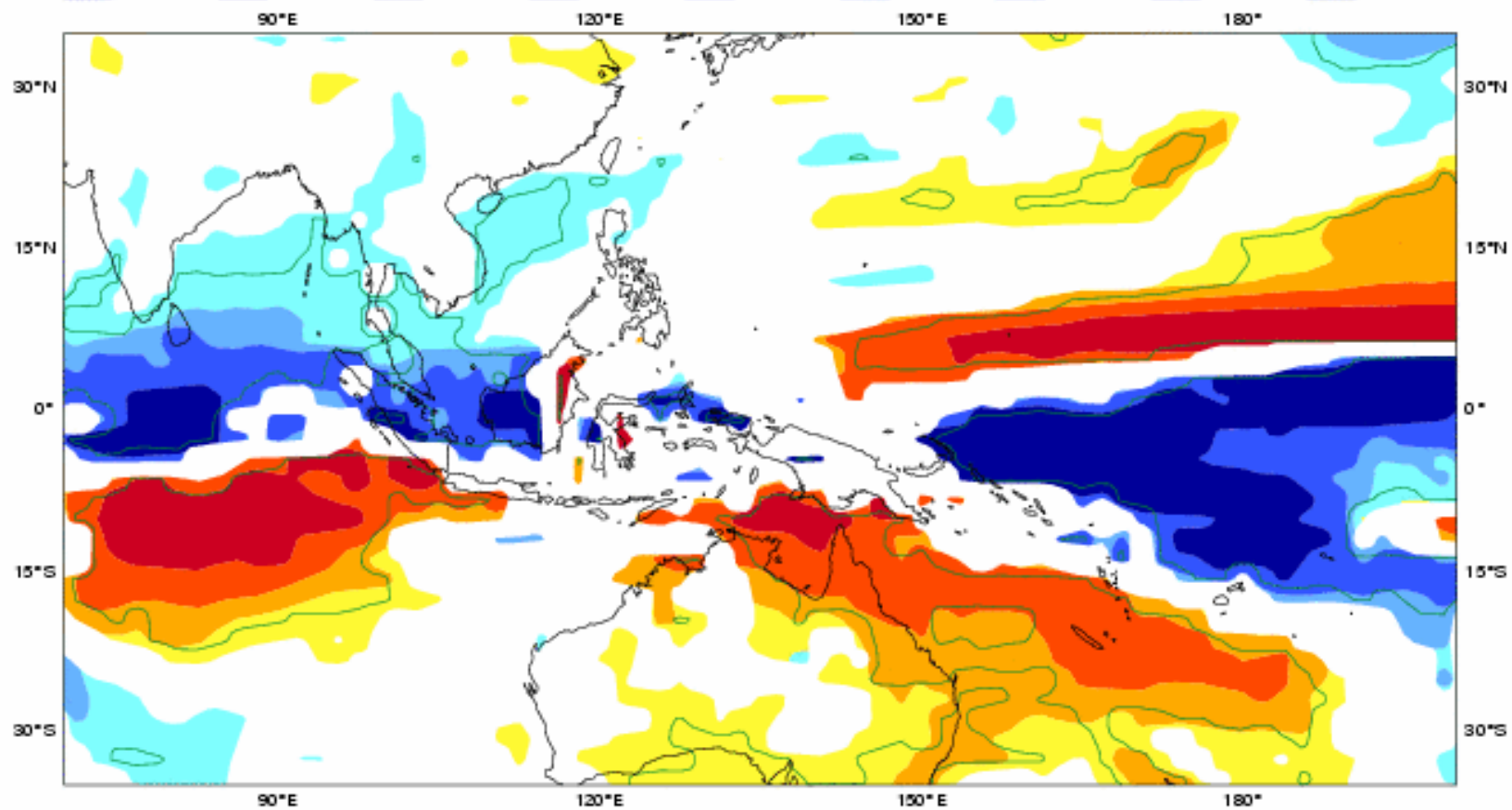
Forecast start reference is 01/12/06

Ensemble size = 40, climate size = 75

## System 2 JFM 2007

Shaded areas significant at 10% level

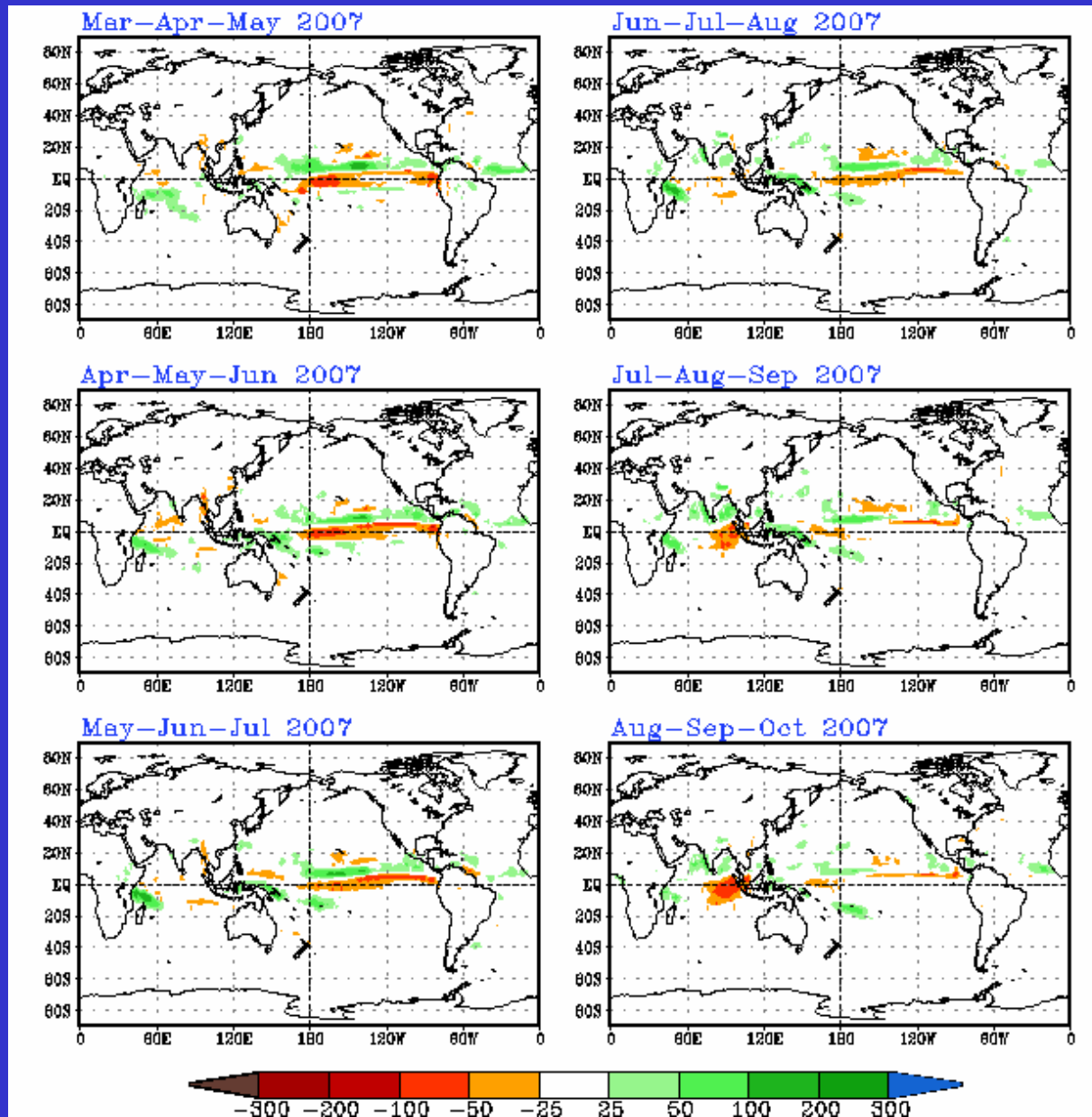
Solid contour at 1% level



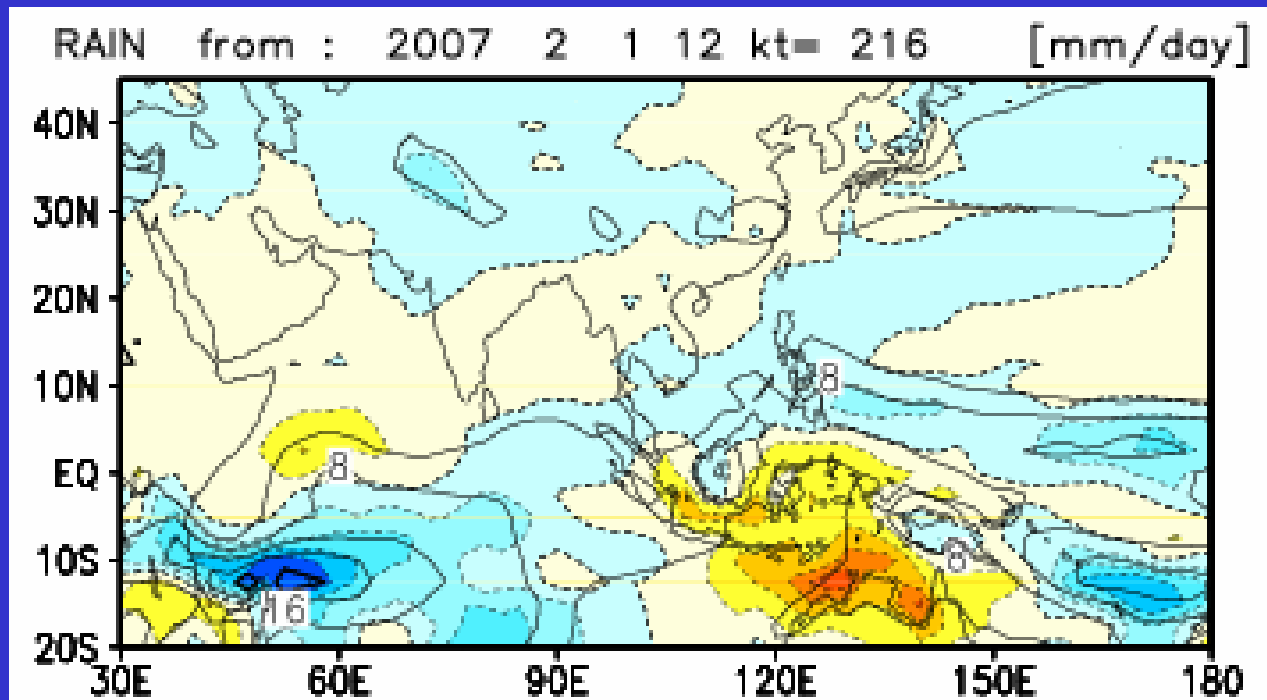
Forecast issue date: 15/12/2006

ECMWF

# SEASONAL PRECIPITATION ANOMALY FORECAST BY UNITED STATES NATIONAL CENTRE FOR ENVIRONMENTAL PREDICTION

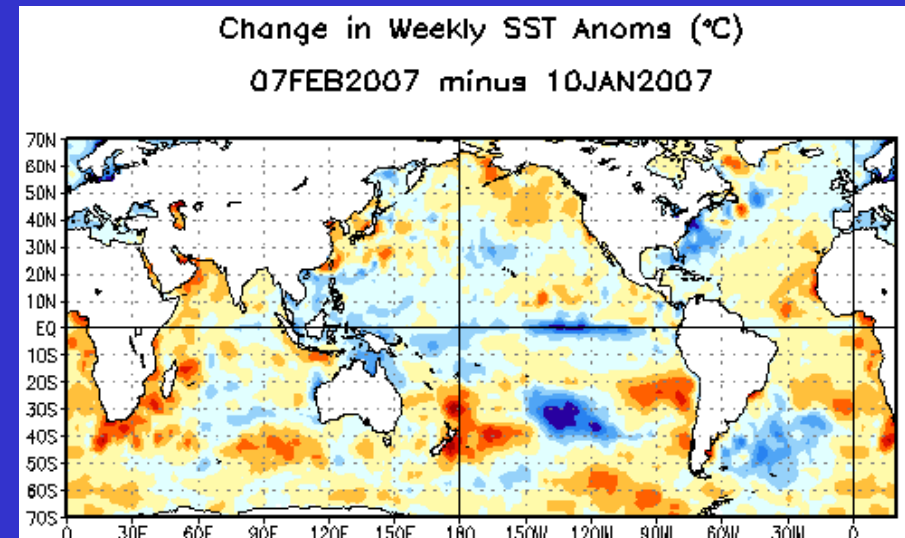
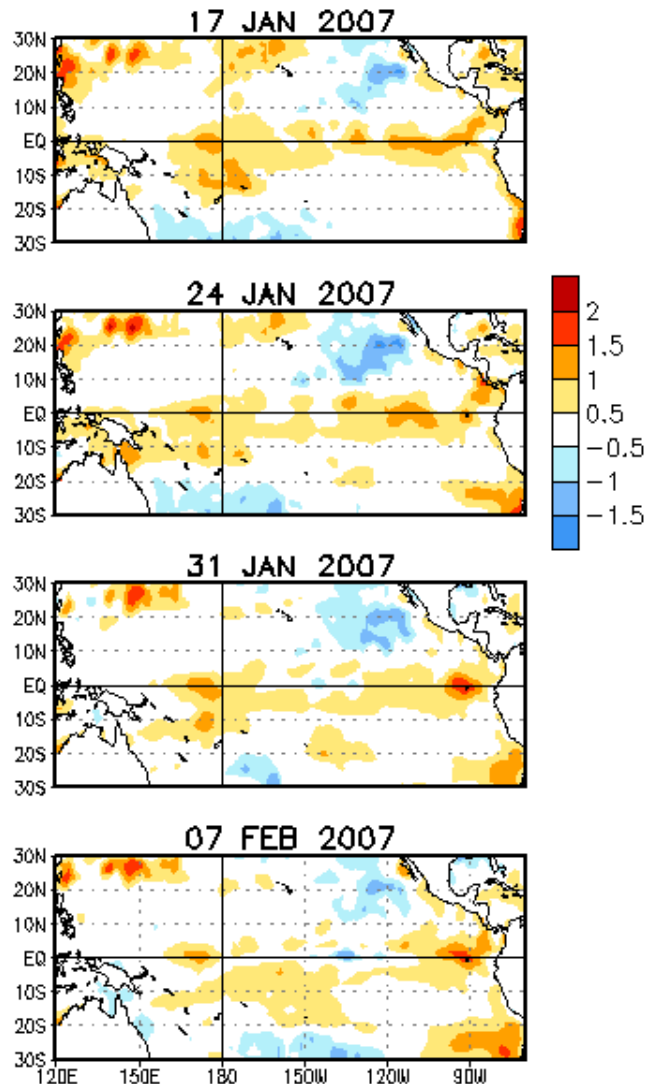


## Weekly Precipitation Anomaly Forecast from TCC



# Weekly SST Departures (°C) for the Last 4 Weeks From NCEP

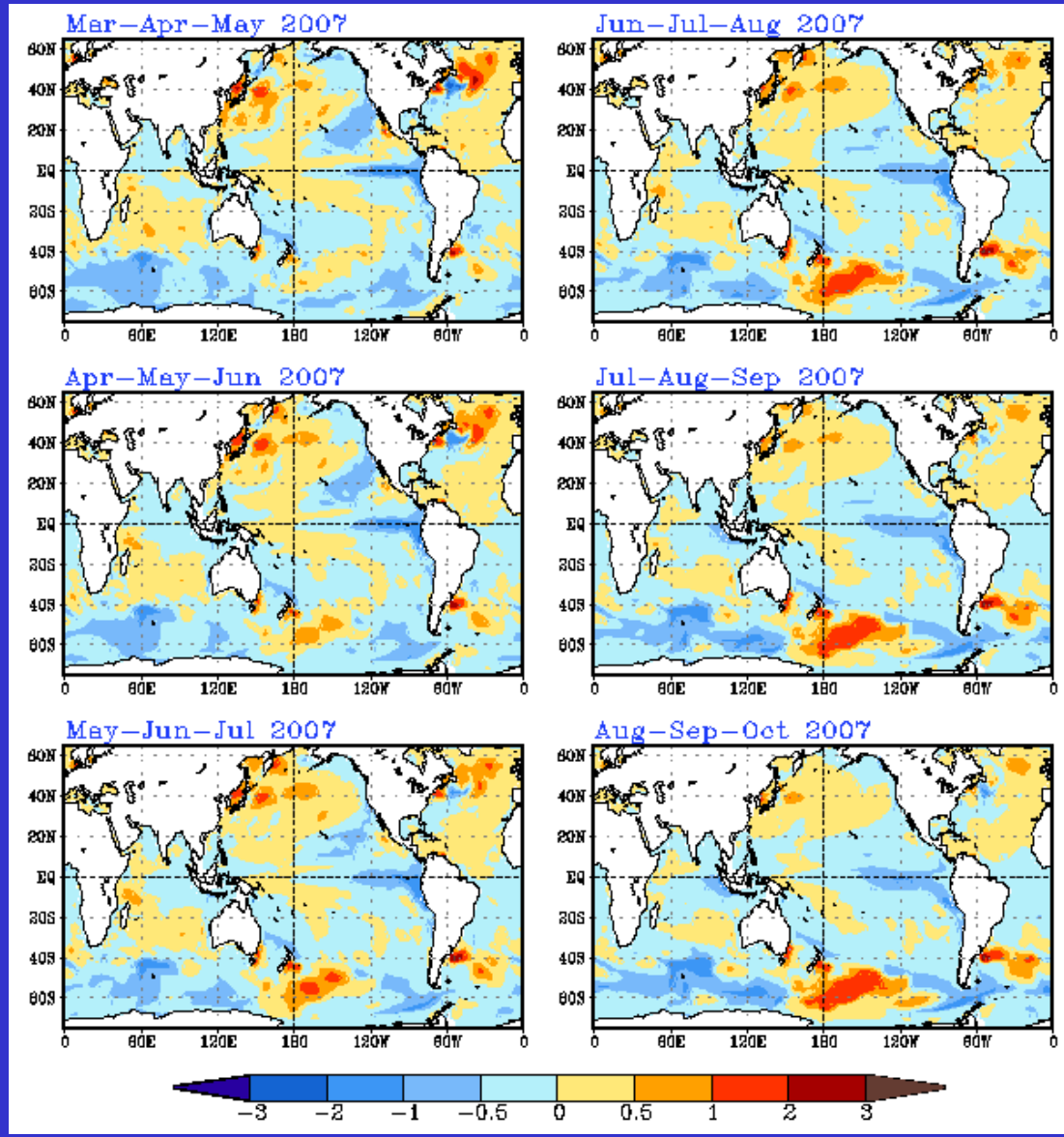
## Weekly SST Anomalies (DEG C)







# SST Outlook From NCEP



**This climate information is used for the long range weather forecast particularly the rainfall.**

**The sectors that require this information are;**

- disaster management agency**
- water resource management agency**
- agriculture**

INTERNATIONAL COOPERATION  
ON CLIMATE APPLICATION

- 1. Enhance the understanding and knowledge on climate, climate variability and climate change in Asia**
- 2. Technology transfer through training**
- 3. To promote any new techniques in climate product generation to NMHSs**
- 4. To enhance climate products currently available from GPCs**

**Enhance the understanding and knowledge on  
Climate, climate variability and climate change in  
Asia.**

- more study and research on climate in this region**
- its impact particularly to the sosio-economic activities**
- cooperation and collaboration among the NMHSs**

## **Technology transfer through training**

- conducts more training and workshop by GPCS**
- downscaling techniques**

## **To promote any new techniques in climate product generation to NMHSs**

- increase awareness among NMHSs on the any new climate products currently available**

## **To enhance climate products currently available from GPCs**

- increase the quantity of the products to cater for the requirement from the client on the long range (one year) forecast.**
- make some of the raw data in GPCs available automatically to NMHSs like through FTP**

THANK YOU