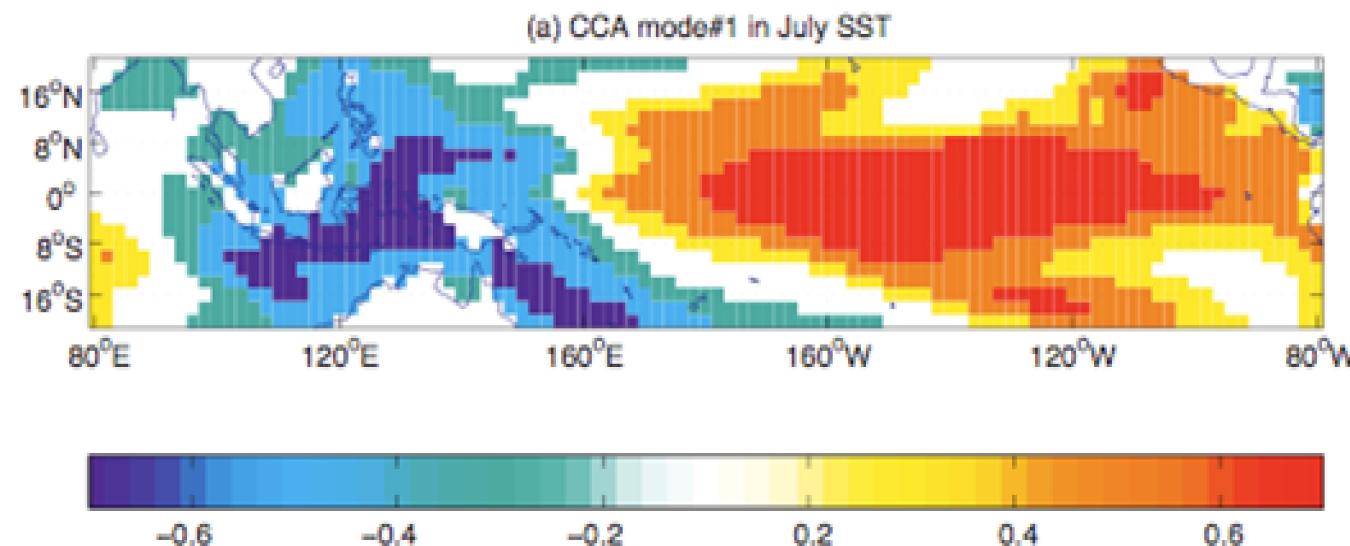
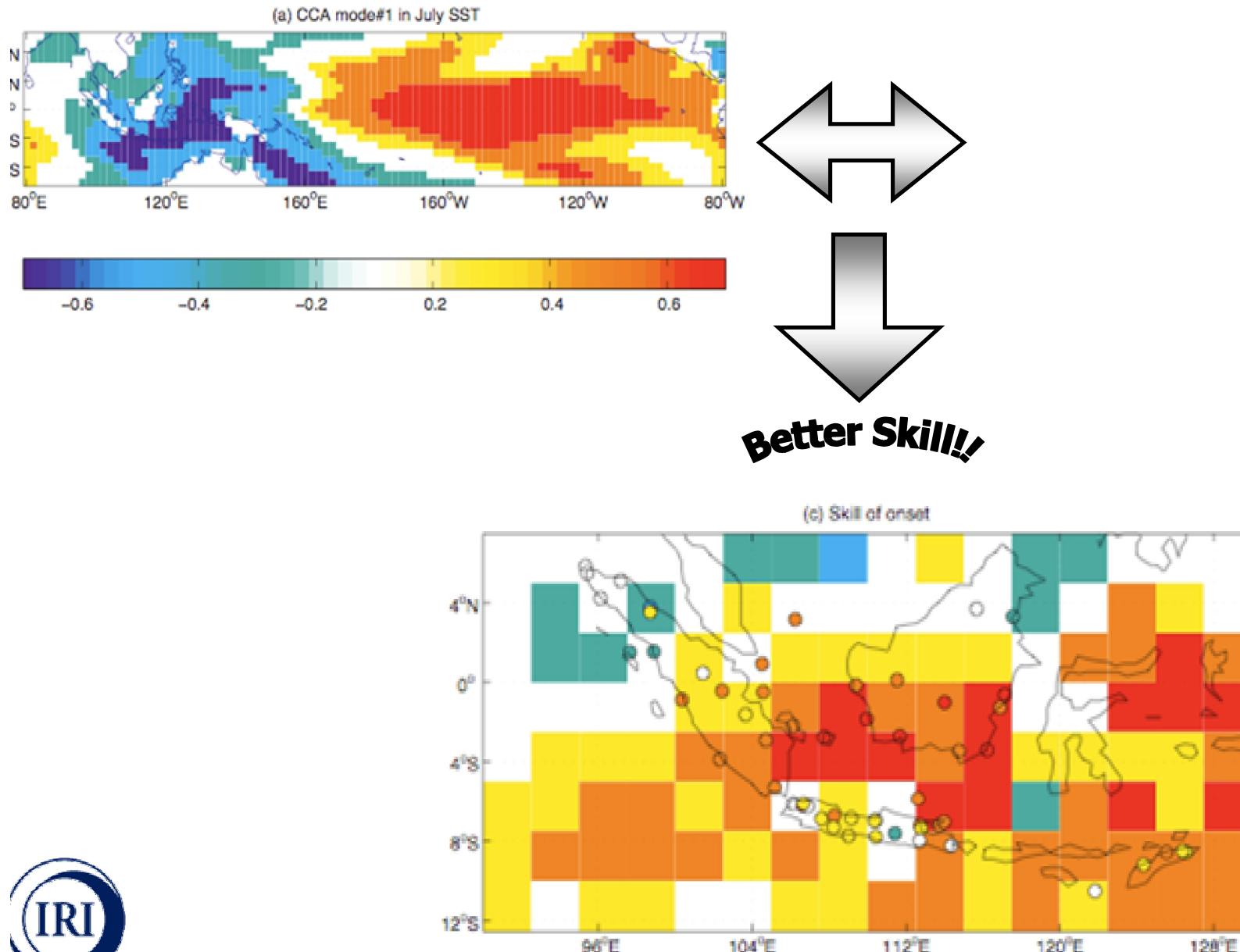


# ONSET PREDICTABILITY OVER NTT

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# large-scale onset-date predictability

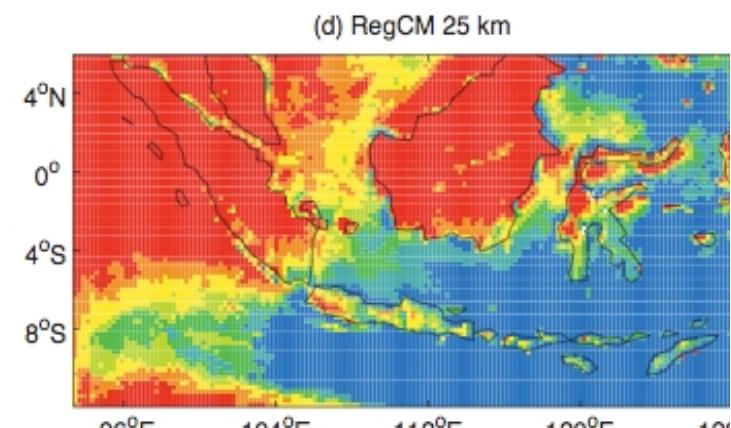
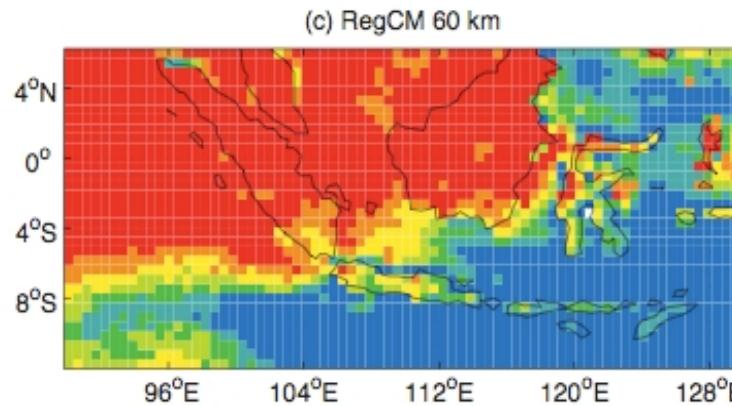
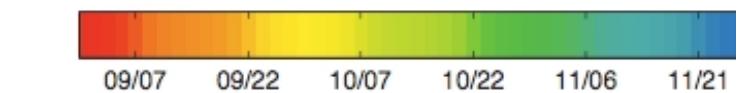
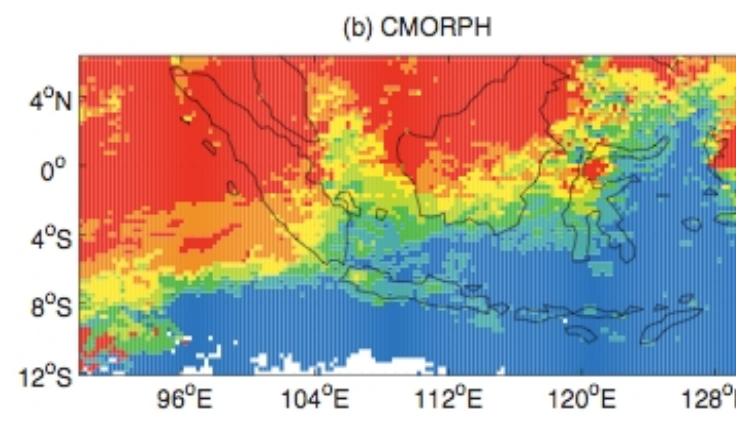
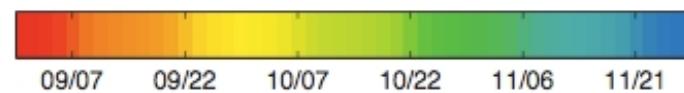
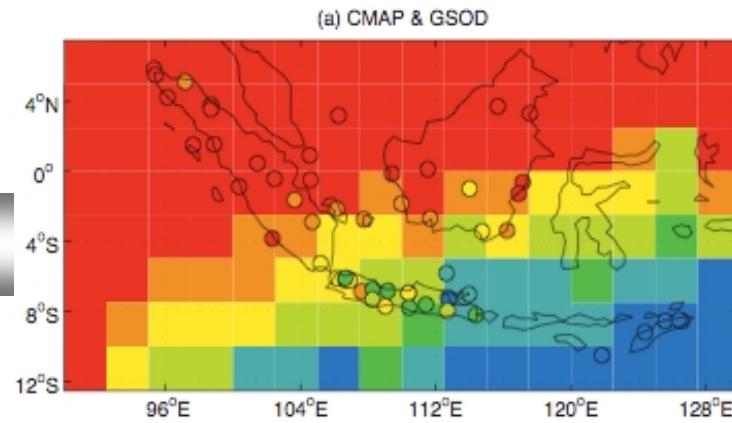


# Perbandingan antara rata-rata awal masuk MH hasil pengamatan dan simulasi di Indonesia

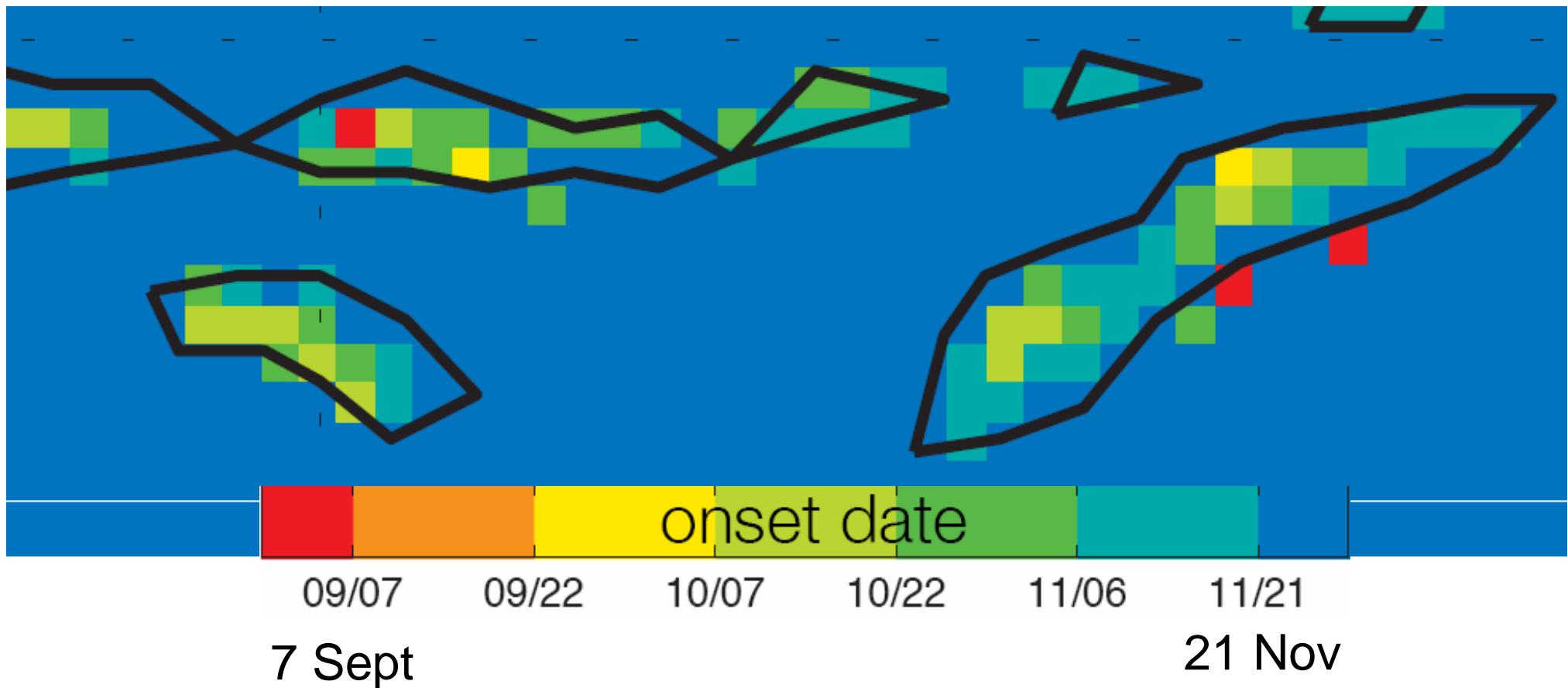
Pengamatan

Model mampu  
memprediski  
awal  
masuknya MH  
dengan baik

Simulasi

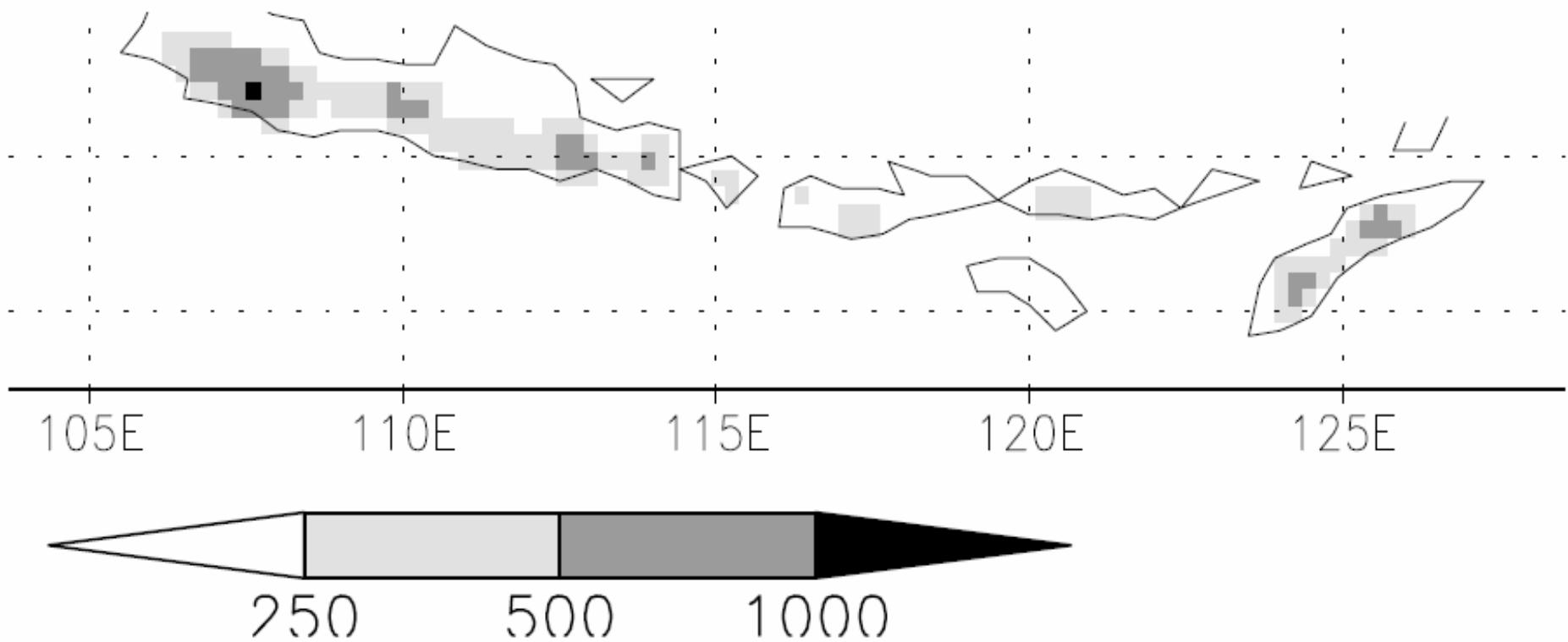


# Awal masuk MH untuk wilayah NTT hasil simulasi RegCM-25

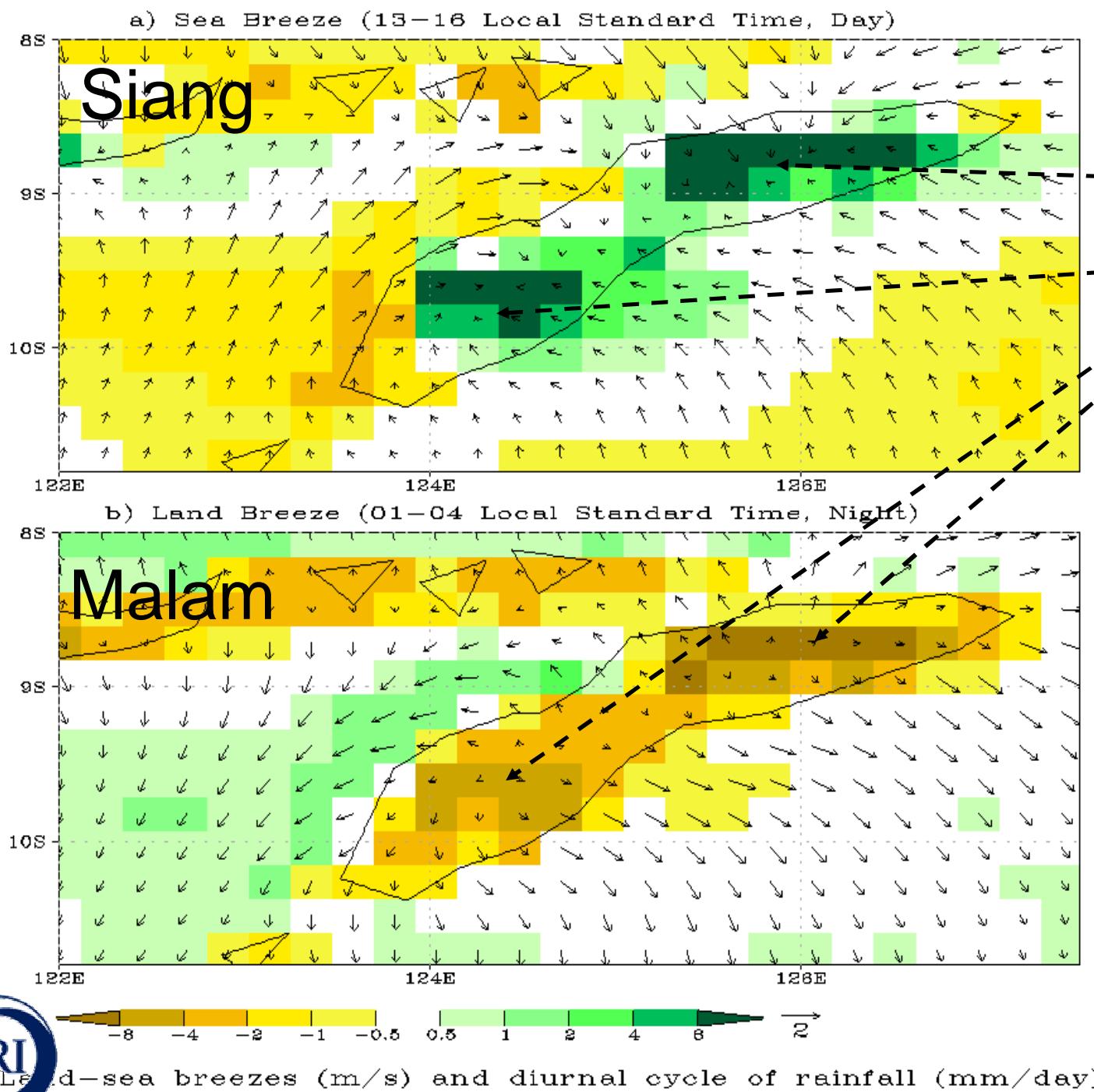


Awal masuk MH di wilayah NTT berkisar antara Awal September sampai akhir November. Di wilayah dataran tinggi MH masuk lebih cepat dibanding dataran rendah

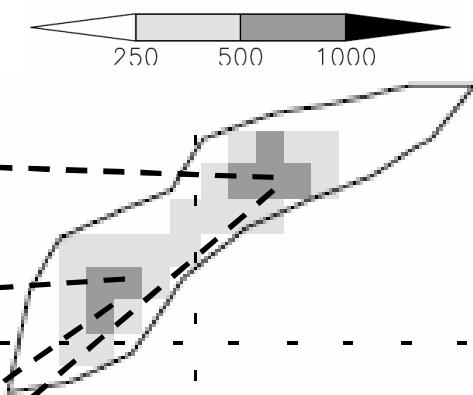
# Pengaruh Topografi terhadap keragaman hujan di NTT



# Angin Darat dan Laut di NTT

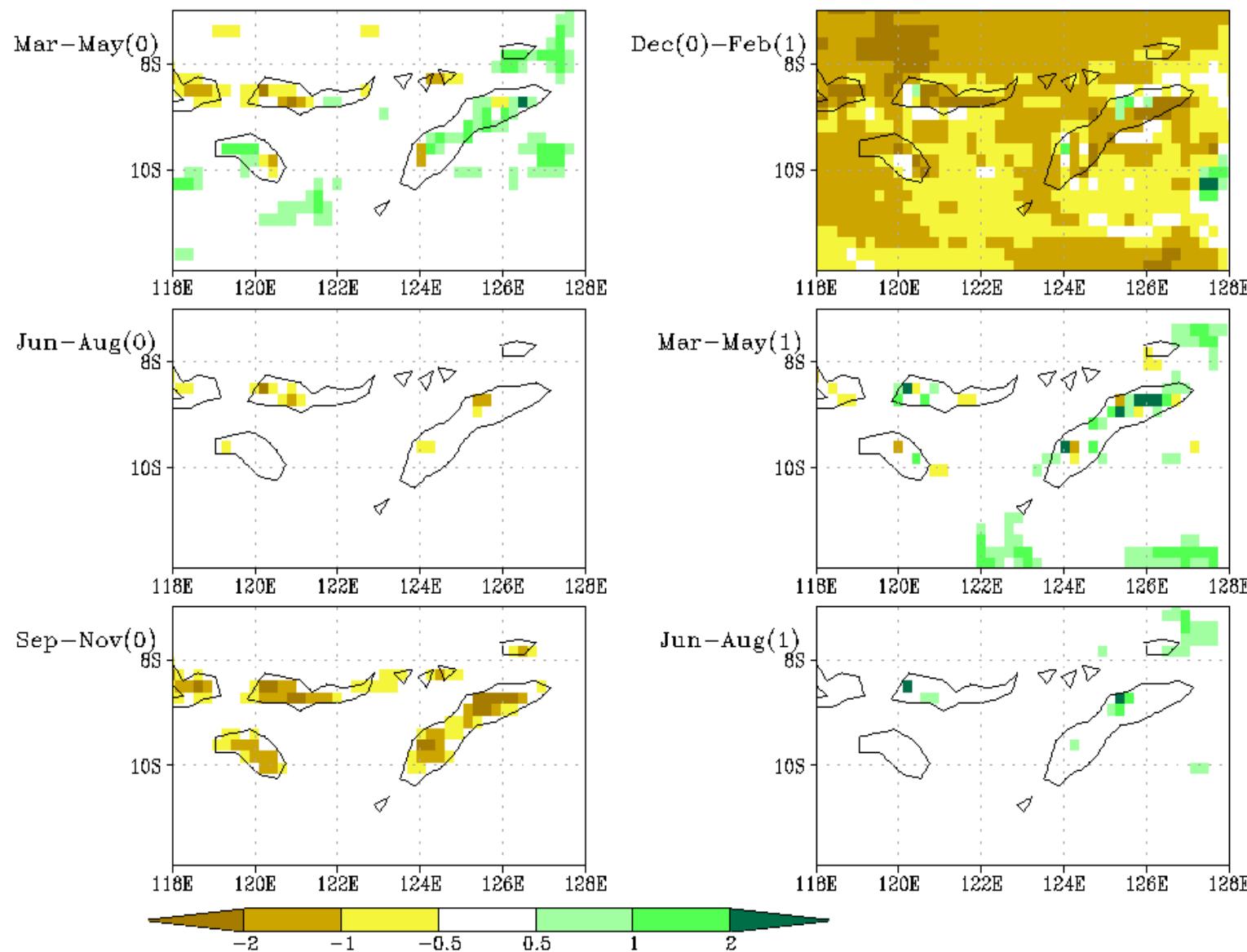


Ketinggian tempat (m dpl)



Siang hari terjadi konvergensi angin di daratan ~ curah hujan pada daerah dataran tinggi relatif lebih tinggi dibanding dataran rendah. Pengaruh lokal ini cukup kuat sehingga dampak El-Nino pada dataran tinggi tidak begitu kuat sebaliknya pada dataran rendah.

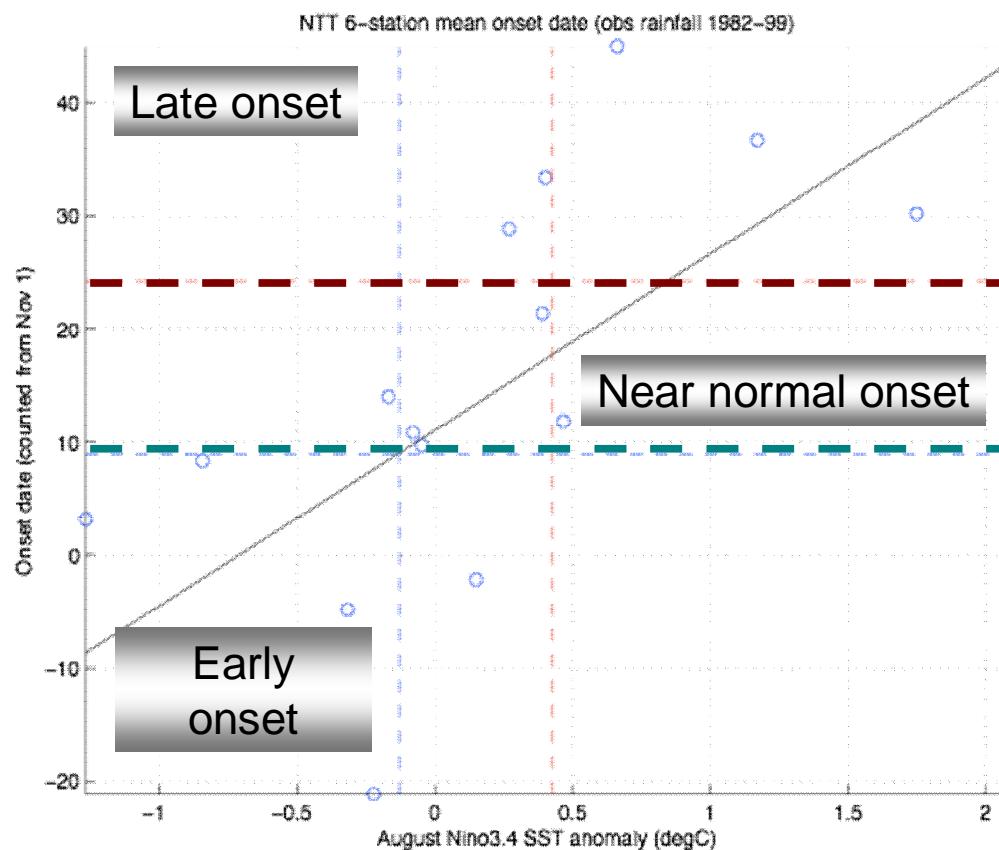
# El Niño reduces rainfall in N.II in Sep-Nov, complex impacts over mountains in Dec-Feb



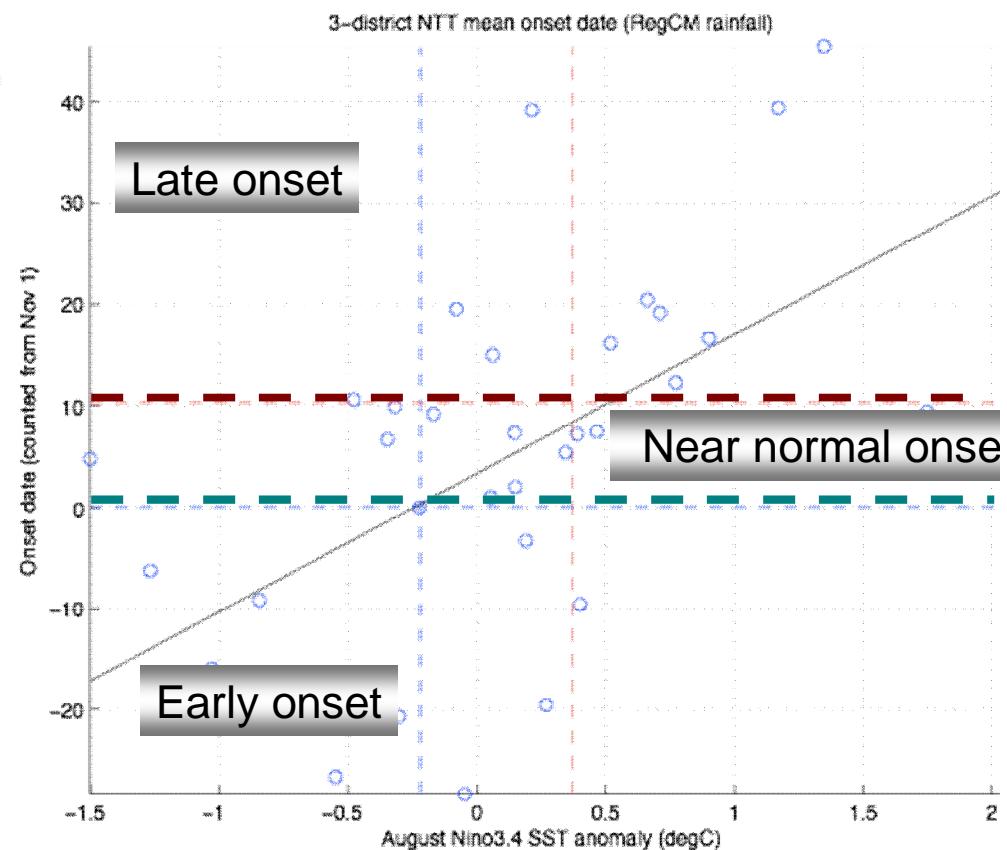
(El Niño – Climatology) composite of NCEP–reanalysis–driving RegCM3 simulated rain (mm/day).  
El Niño developing and decline years are denoted by (0) and (1), respectively.  
(Res: 25km; El Niño years: 72/73, 82/83, 86/87, 91/92, 94/95, 97/98)

# NTT onset vs. August Nino3.4 SST anomaly

## observed rainfall



## RegCM rainfall (1971 – 2005)



6 obs NTT station avg

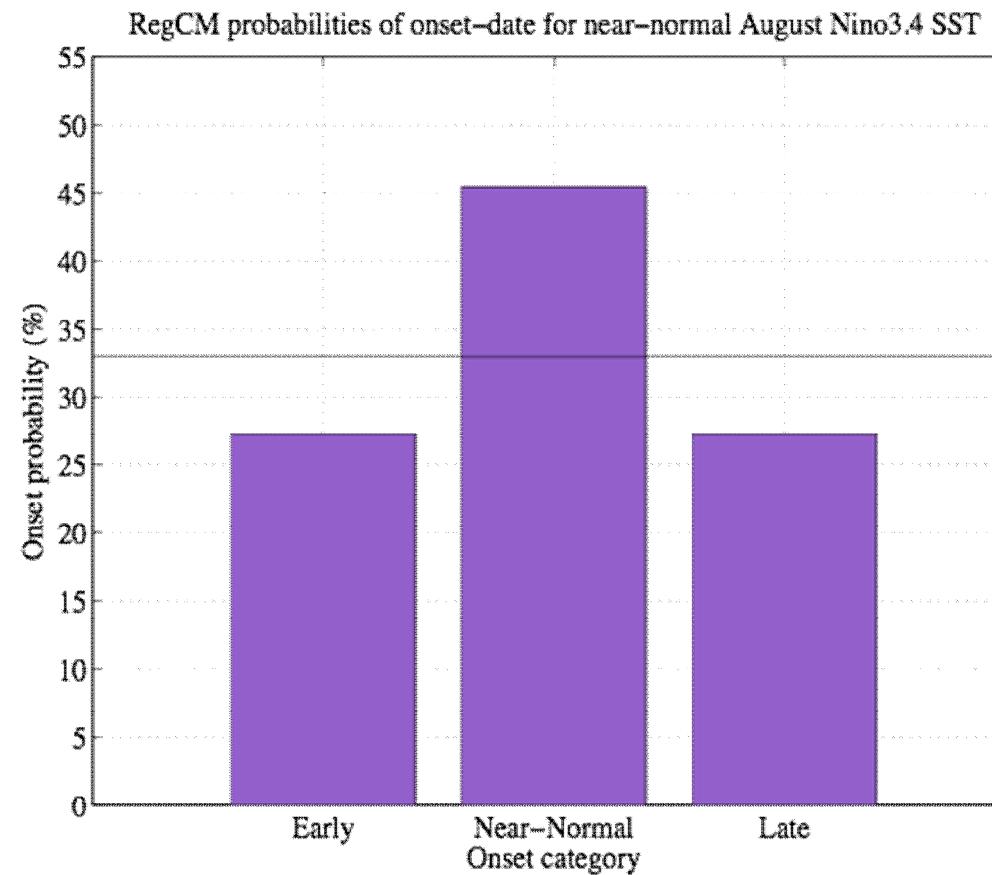
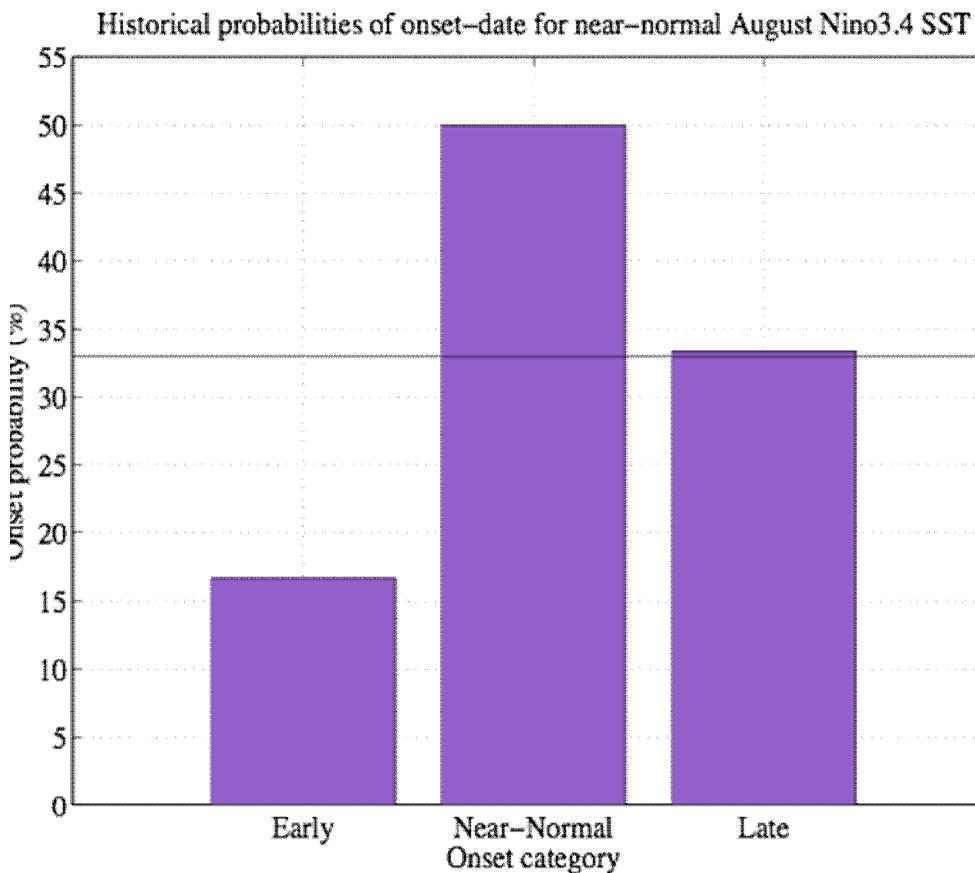
RegCM West Timor avg



August Nino3.4 SST anomaly (July) is +0.1 suggesting near-normal expected onset this year

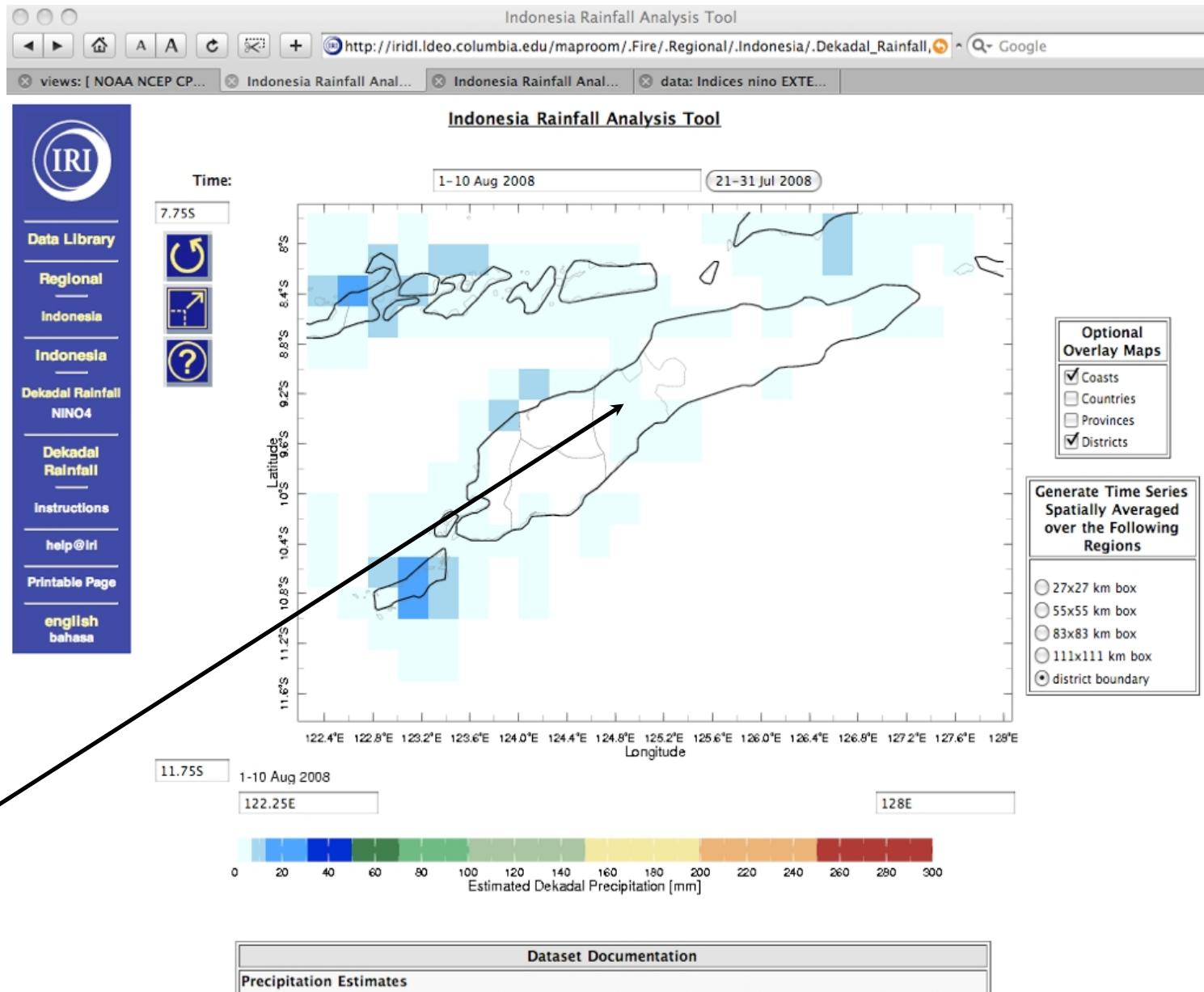
# onset-date probabilities for near-normal August Nino3.4 SST index

*what does “expected” to be near-normal imply?*



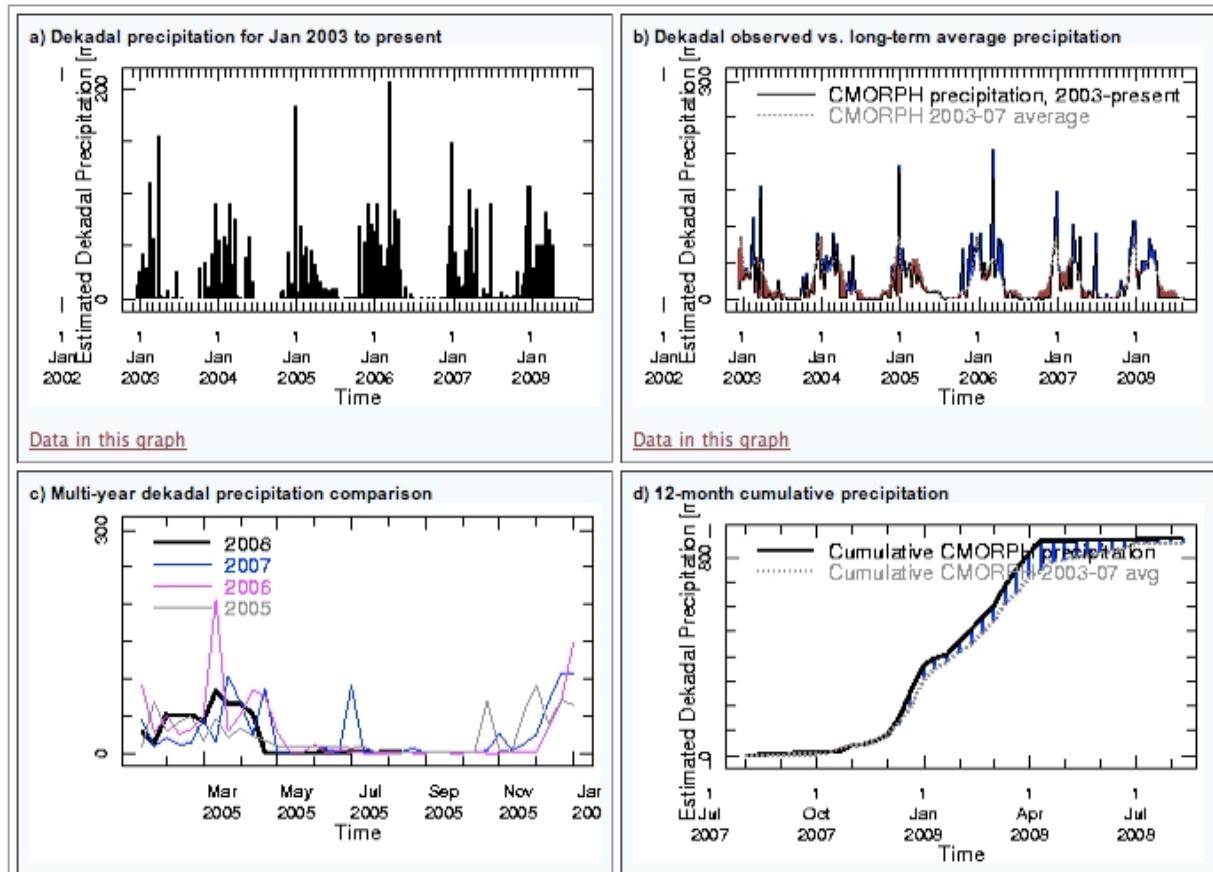
*... the near-normal outcome is more-likely than usual, but onset may still be early or late*

# rainfall monitoring tools





Click on a graph to enlarge it and access display options

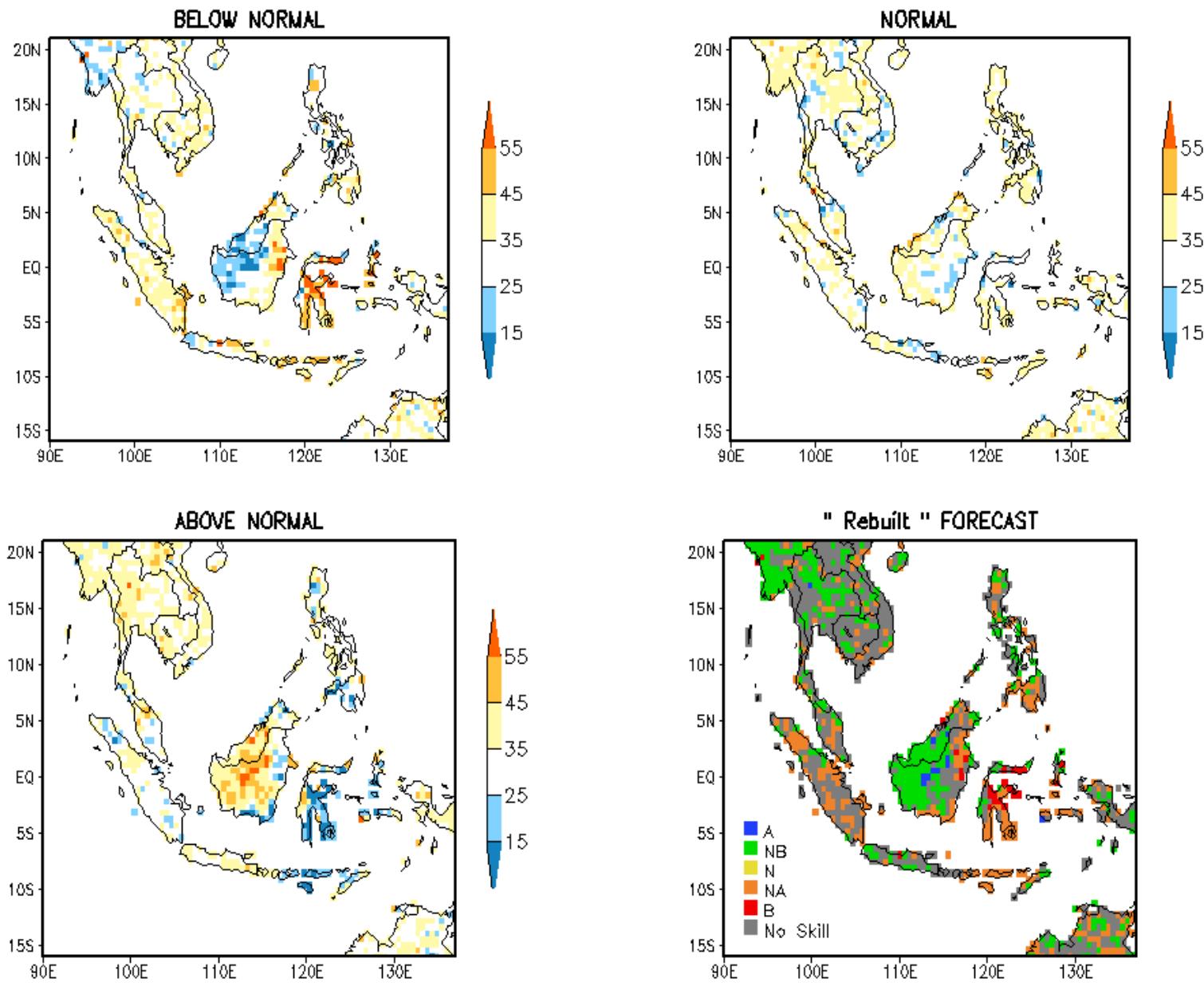


#### Description

- a) Dekadal\* precipitation estimates for 1 Jan 2003 to the present in the selected region.
- b) Dekadal precipitation estimates for 1 Jan 2003 to the present (solid black line) with the addition of the short-term (2003-2007) average precipitation for the same region (grey dotted line). The blue (red) bars are indicative of precipitation estimates that are above (below) the short-term average. Note that the short-term average estimated precipitation data have been smoothed.
- c) Dekadal precipitation estimates for the current calendar year (thick black line). Precipitation estimates from previous years are also shown (blue: -1 yr from present; magenta: -2 yrs from present; grey: -3 yrs from present).
- d) Cumulative dekadal precipitation estimates (solid black line) and the cumulative short-term (2003-2007) average precipitation estimates (grey dotted line) for the most recent 12-month period in the selected region. The blue (red) bars are indicative of estimates that are above (below)

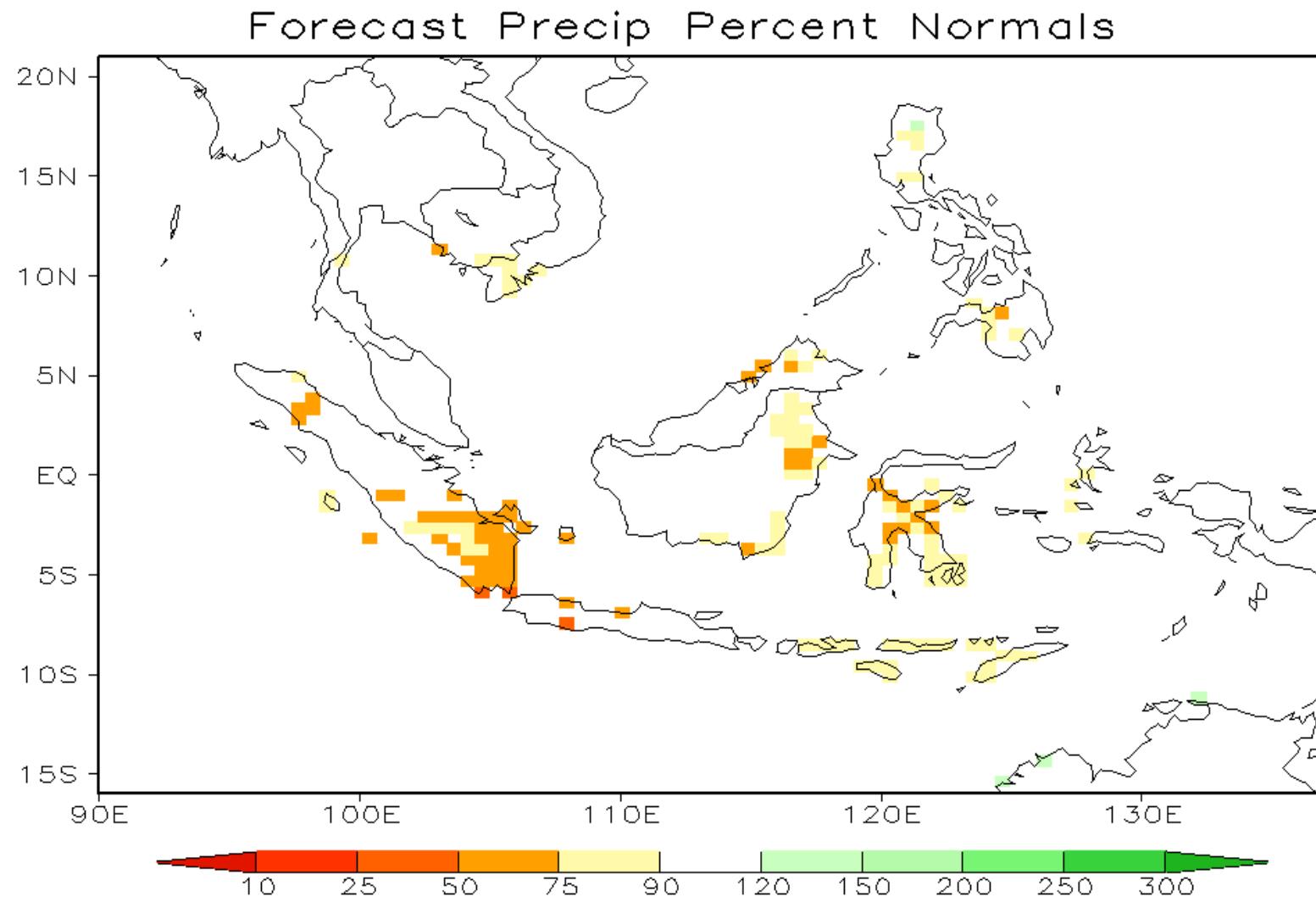
# Forecasted rainfall probabilities over Southeast Asia

OCT–NOV–DEC 2008  
ECHAM4.5 – RegCM3 Precipitation Forecast  
Predicted SST AUG–2008 – Ensemble MEAN  
1971–2000 Climatology



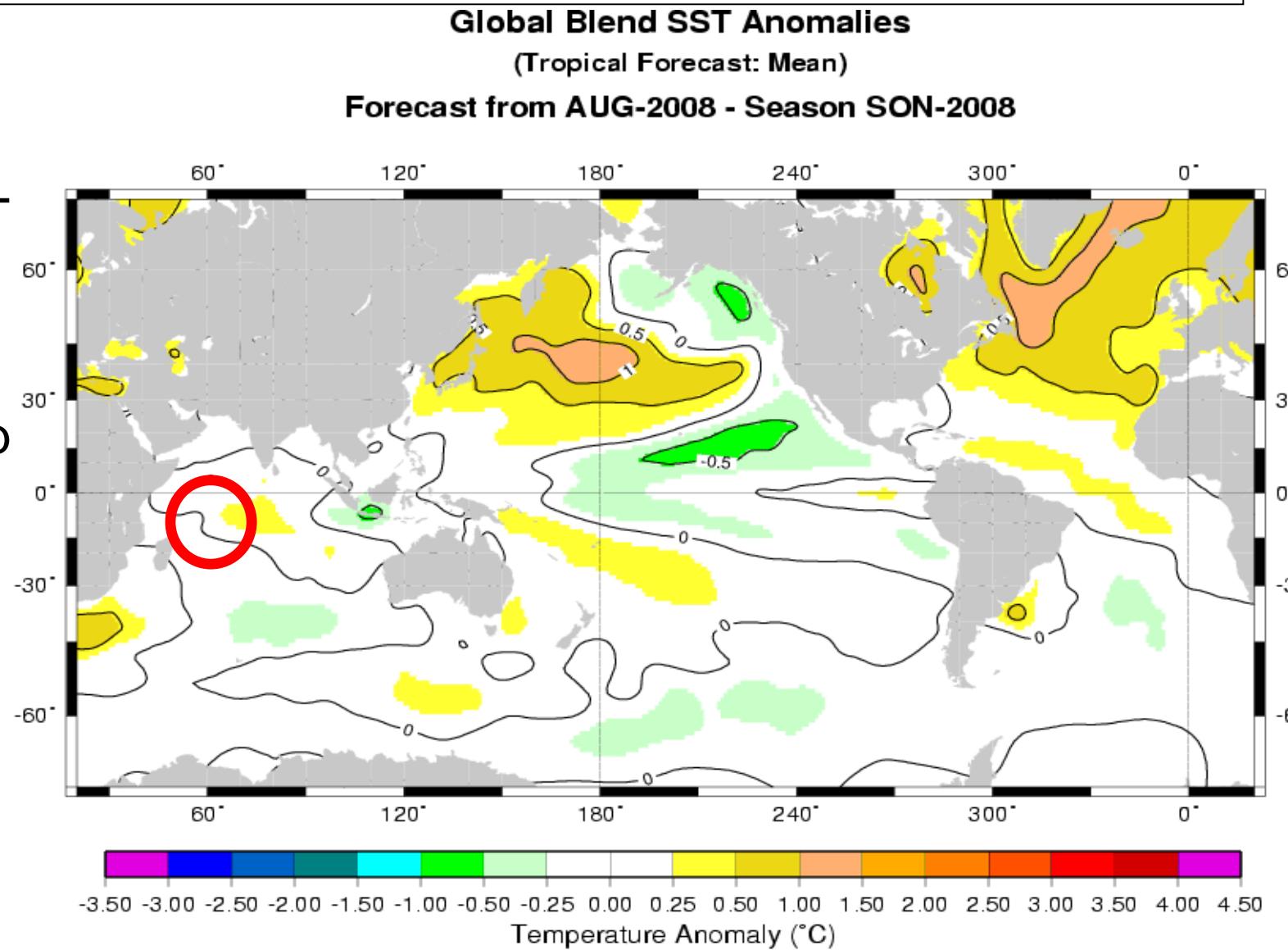
# Rainfall Anomaly (%) Forecast for Southeast Asia

OCT–NOV–DEC 2008  
ECHAM4.5–RegCM3 Ensemble Mean  
Predicted SST AUG–2008



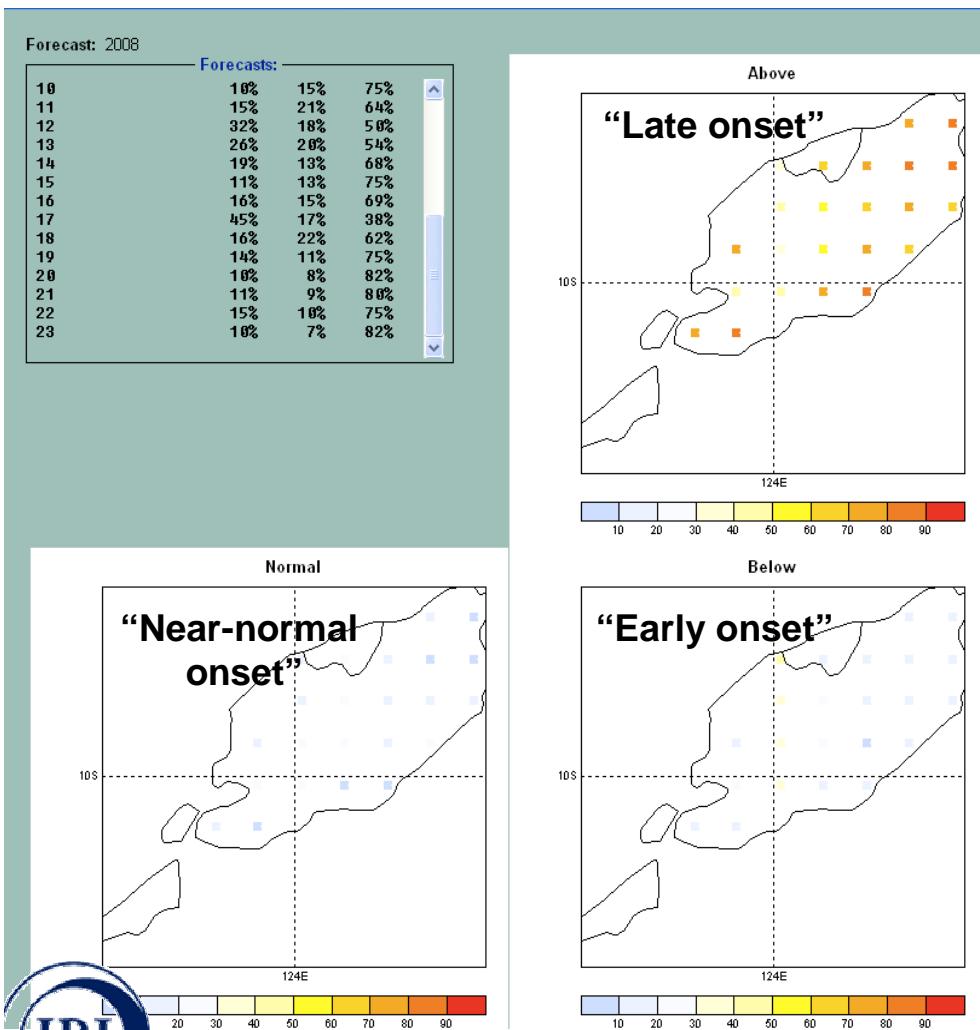
# IRI forecast of SST for Sept–Nov 2008 season made August 1

Pengaruh SML  
dekat wilayah  
perairan NTT  
berpengaruh  
besar terhadap

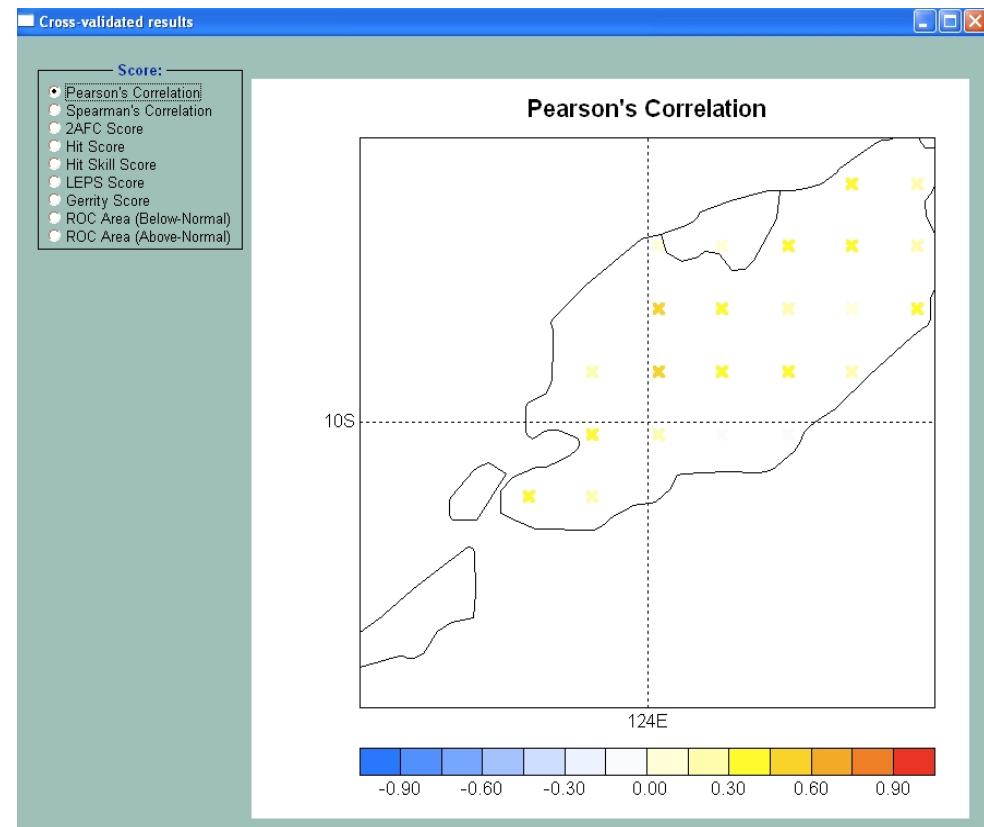


# statistical downscaled onset forecast for 2008 based on GCM predictions

ECHAM-SSST fcst from 1 Aug:  
predicted tercile category probabilities



hindcast skill 1971–2005



based on SON predicted GCM precip &  
ReaCM "reanalysis" rainfall

# Monthly Rainfall Forecast for Kupang NTT (6-month-

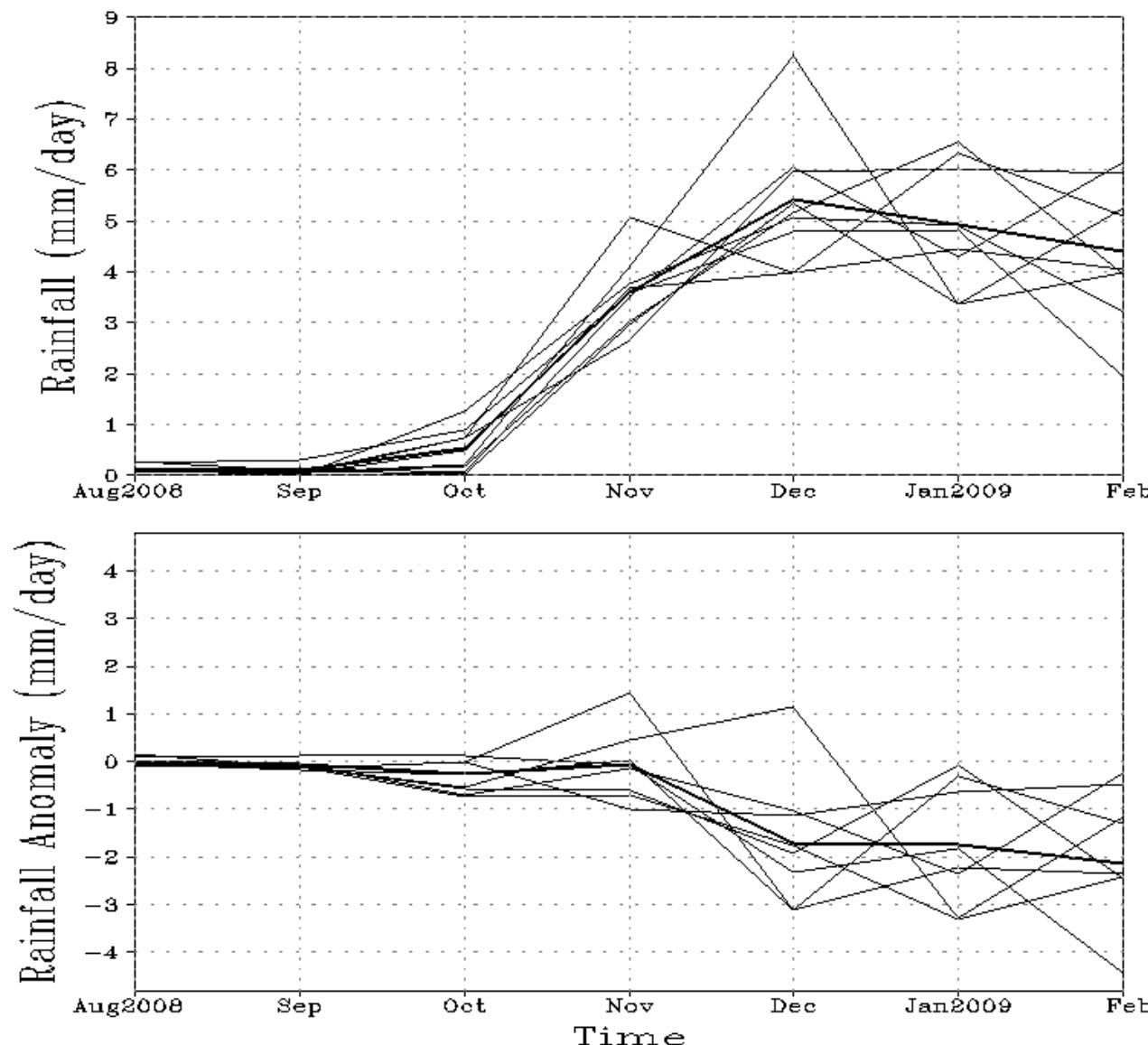


Fig. Monthly rainfall (a) and rainfall anomalies (b) (mm/day) over Kupang NTT in the domain of (123.5E–125E, 10.25S–9.25S), for the RegCM3 ensemble members (thin), and ensemble mean (thick). Forecast made in Aug 2008.

# PENUTUP

- Hasil kajian ini mendemonstrasikan bahwa kemampuan untuk memprediksi awal masuk MH dua bulan di depan di NTT-Kupang cukup baik. Informasi ini digunakan sebagai peringkatan dini untuk menghadapi kemungkinan rawan pangan (B2KP dan lembaga lain dapat melakukan langkah antisipasi lebih awal)
- Beberapa metode dapat digunakan untuk menduga awal dan tinggi hujan MH di NTT. Penelitian lebih lanjut melalui kerjasama dengan BMG diperlukan
- Mengatasi masalah ketersedian data, IRI sudah mengembangkan IRI Data Library (Perpustakaan Data IRI), dimana sistem ini memberikan hasil pemantauan hujan 10 harian untuk seluruh wilayah Indonesia yang disajikan sampai tingkat kabupaten dan diupdate setiap 2 minggu sekali.

