FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

Experimental Climate Assessment, Monitoring and Prediction for the Maldives

by: Lareef Zubair, Sanjaya Ratnayake, Madhura Weerasekera, Sewwandhi Chandrasekara, Zeenas Yahiya, Shaky Sherpas, Michael Bell (FECT and IRI[1]) and Aishath Shimana and Ahmed Muslim (Maldives Meteorological Services)

11 May 2011

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PACIFIC SEAS STATE

21 April 2011

As of mid-April 2011, Seas Surface Temperatures (SSTs) indicate weak La Niña conditions in the central and eastern equatorial Pacific. For March the SST anomaly in the NINO3.4 region was -1.00 C, indicative of weak to moderate La Niña conditions, and for the January-March season the anomaly was -1.30 C. Currently the IRI's definition of El Niño conditions rests on an index of SST anomalies, averaged over the NINO3.4 region (5S-5N; 170W-120W), exceeding the warmest 25%-ile of the historical distribution, and similarly for La Niña relative to the 25%-ile coldest conditions in the historical distribution. The NINO3.4 anomaly necessary to qualify as La Niña or El Niño conditions for the Apr-May-Jun and the May-Jun-Jul seasons are approximately (-0.45C, 0.45) and (-0.50, 0.45), respectively.
(Text Courtesy IRI)

Summary[2]

CLIMATOLOGY

Monthly Climatology: May, June and July are wet periods across Maldives. The wind in this period is strongly from the West with variations from South to North. Northern Maldives usually receives 100-150 mm of rainfall; central region receives 150-200 mm/month rainfall and the Southern region receives 200-250 mm.

MONITORING

Weekly Monitoring: During the previous week (From 21st to 26th April 2011) rainfall was experienced in most of the Maldives Islands. On 21st rainfall was around 10-35 mm except for Northern region. On 22nd and 23rd April, rain fell on almost all atolls. On 22nd of April some Islands received heavy rainfall around 80-100 mm. However, on 24th April only 5-15 mm of rainfall received by the Northern atolls – with the same pattern continues on 25th. On 26th April rainfall level reduced to below 10 mm with nearly no rainfall on 27th April.

Monthly Rainfall Maps: During January 2011, only 5mm rainfall was experienced to the central Maldives Island. Further, Northern and Southern regions received only 2.5mm rainfall. During February no rainfall was experienced but, the Southern islands with a slight rainfall of about 2.5mm. During March almost all the islands experienced 5mm rainfall and particularly 2.5-10mm to the Southern islands. However, during April 2.5-10mm rainfall was experienced across the island.

Monthly and Seasonal Monitoring: In the Northern Maldives, during the last 365 days the rainfall has been in aggregate above normal by about 10%. However, during the last 4 months (January-April 2011), the rainfall has been considerably below the usual. We shall cover Central and Southern Maldives in coming months.

Current Sea Surface Temperatures: In the Pacific Ocean, there is an ongoing transition from La Nina conditions. Closer to Maldives in the Arabian Sea, the surface temperatures are close to normal – although it is weakly warmer to the South.

PREDICTIONS

Weekly Precipitation Forecast: Heavy rainfall is not expected across the Maldives from 1st to 6th May 2011.

Seasonal Rainfall and Temperature Prediction: As per IRI Multi Model Probability Forecast for May 2011 to July 2011, issued on April 2011, there is no strong shift in rainfall totals expected except in the Southern most islands where there is a slightly likelihood towards lower rainfall. However, a slight drop in aggregate temperatures is expected in the upcoming months.

Inside this Issue

[1] International Research Institute for Climate and Society.
[2] These interpretations of climatic conditions are an experimental product. Please consult with the Maldives Meteorological Services for advice on interpretation.

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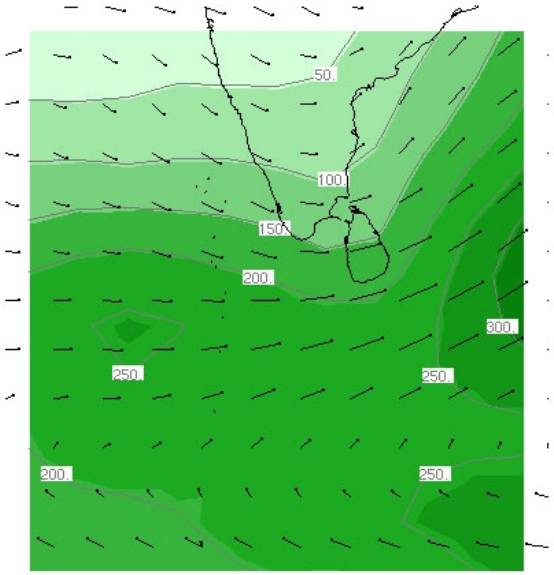
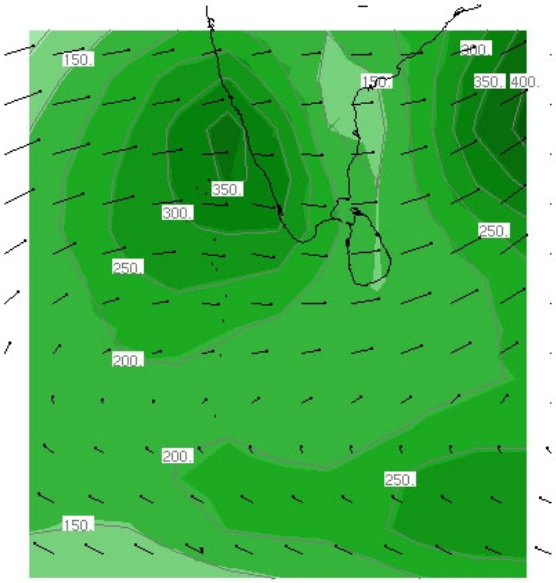
1) Monthly Climatology (CAMS-OPI):

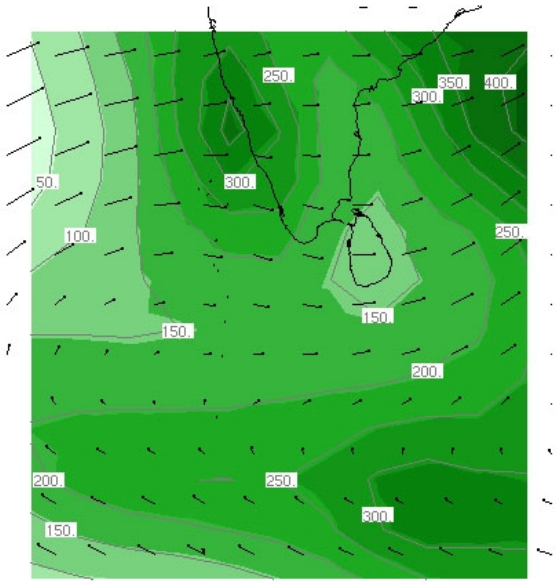
Maps: *May, June and July, 2011 (Left-Right)*



May



July



August

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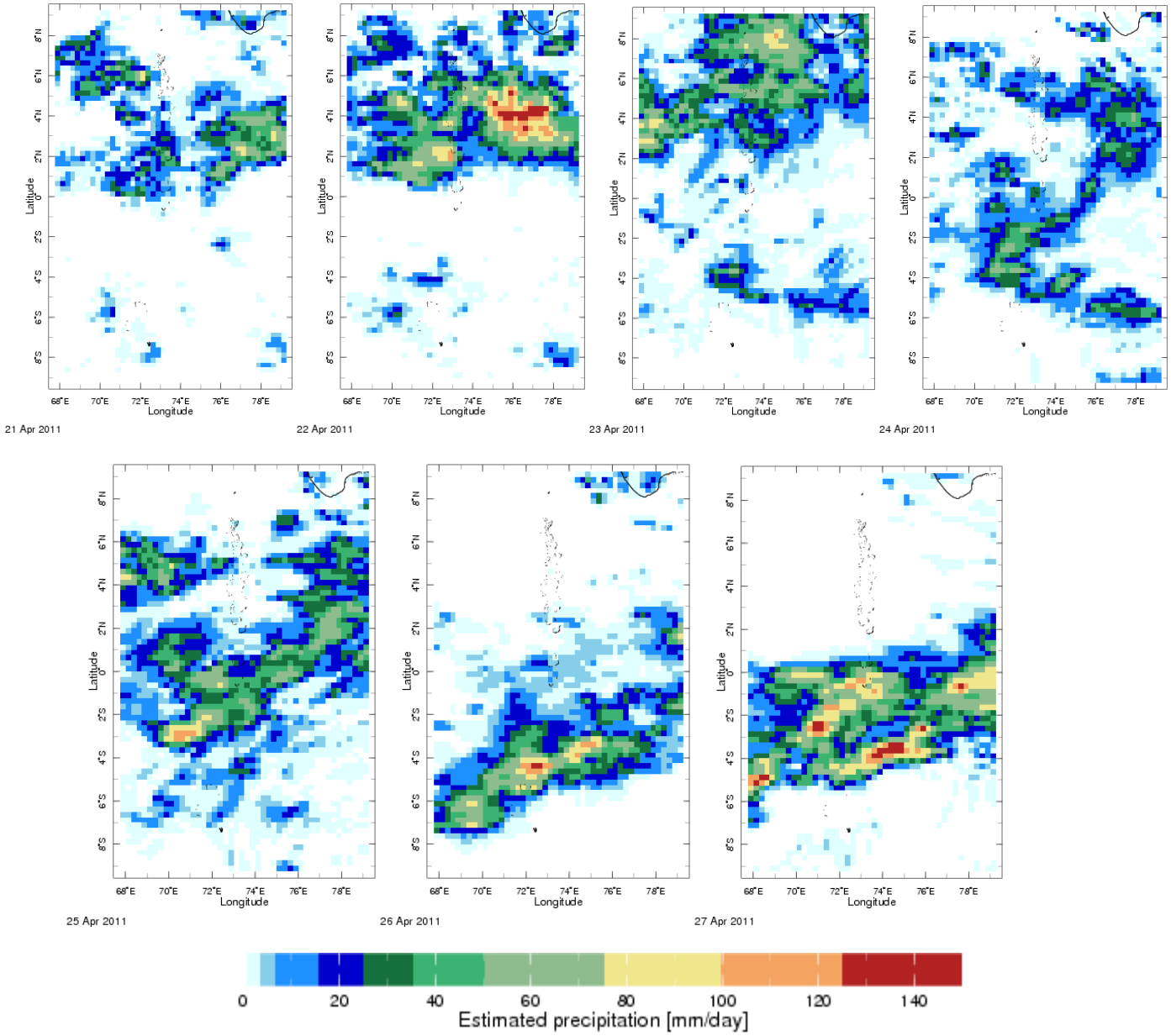
2) Rainfall Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: *21st April – 26th April, 2011 (Left-Right, Top-Bottom)*



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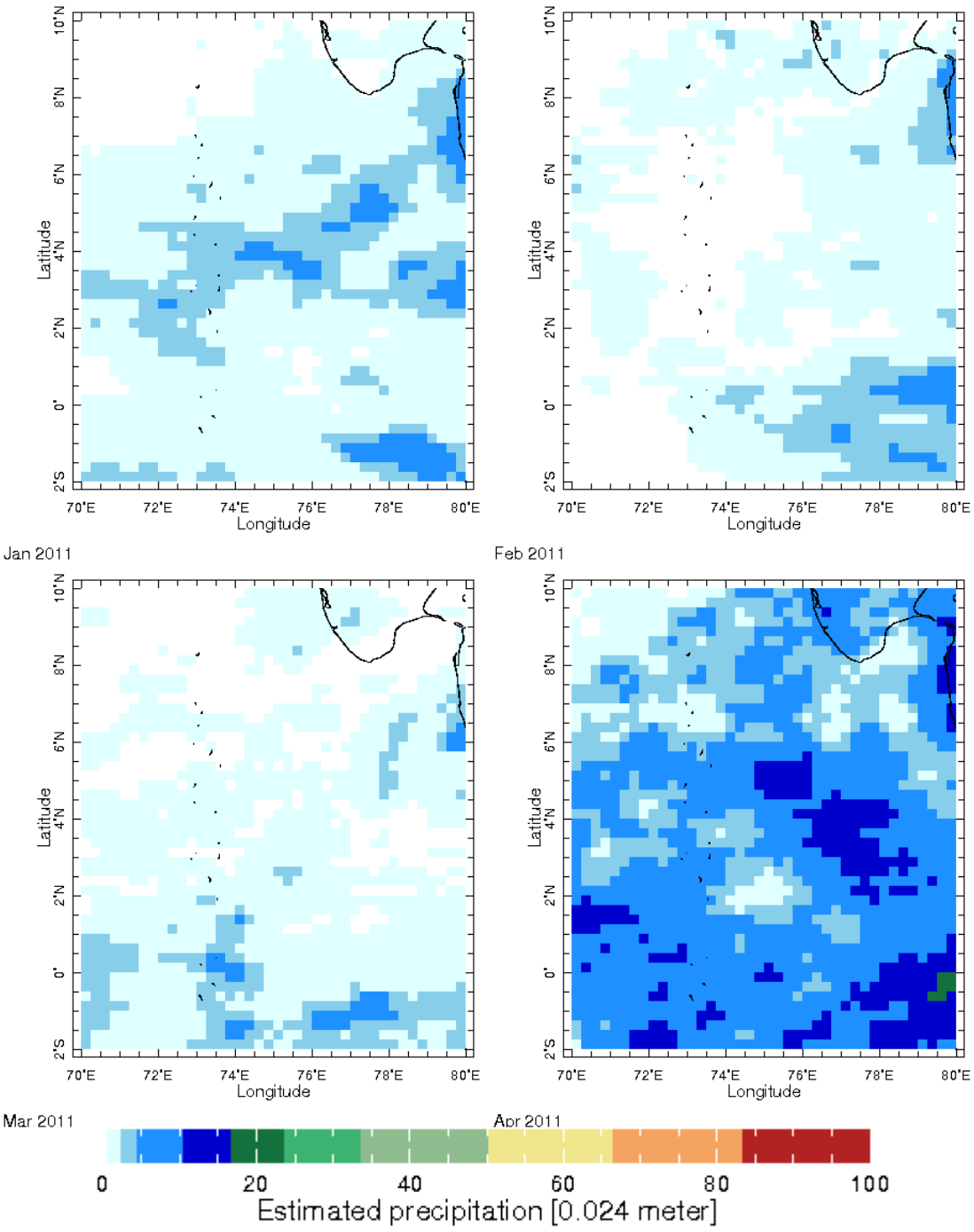
b) Monthly Rainfall Monitoring

Monthly Rainfall (January to April 2011) *Derived from Satellite Rainfall Estimate*



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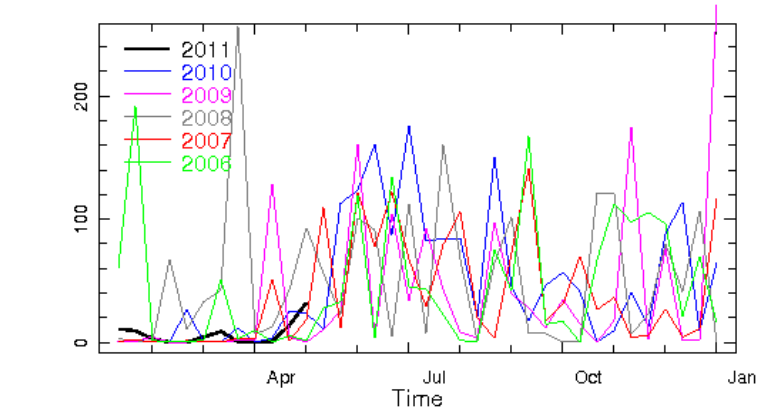
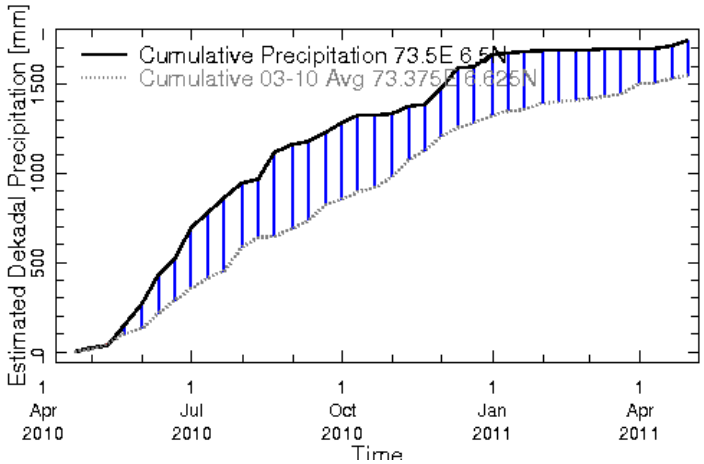
c) Seasonal to Annual Rainfall Monitoring (for Northern Maldives)

1) Rainfall in 2011 (black) compared to rainfall in previous 5 years

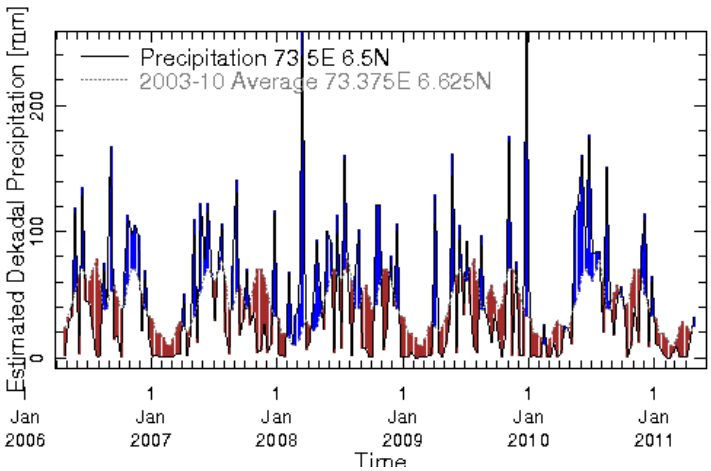


Longitude 73.5E Latitude 6.5N

2) Rainfall the past 365 days (black) compared to average rainfall in previous 8 years.



3) Rainfall for the past 5 years with above-average (compared to the last 8 years) hatched in blue and below normal in brown.



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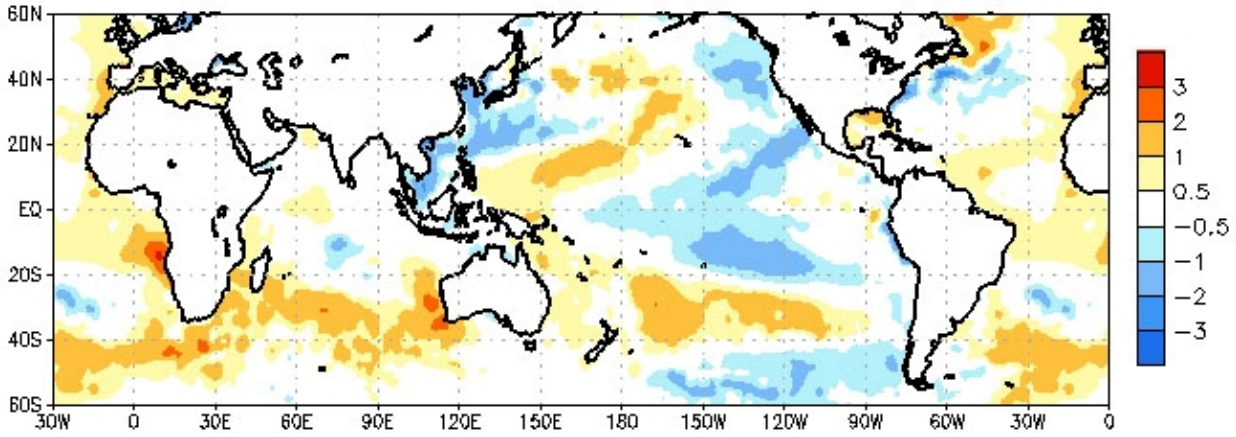
d) Weekly Average SST Anomalies

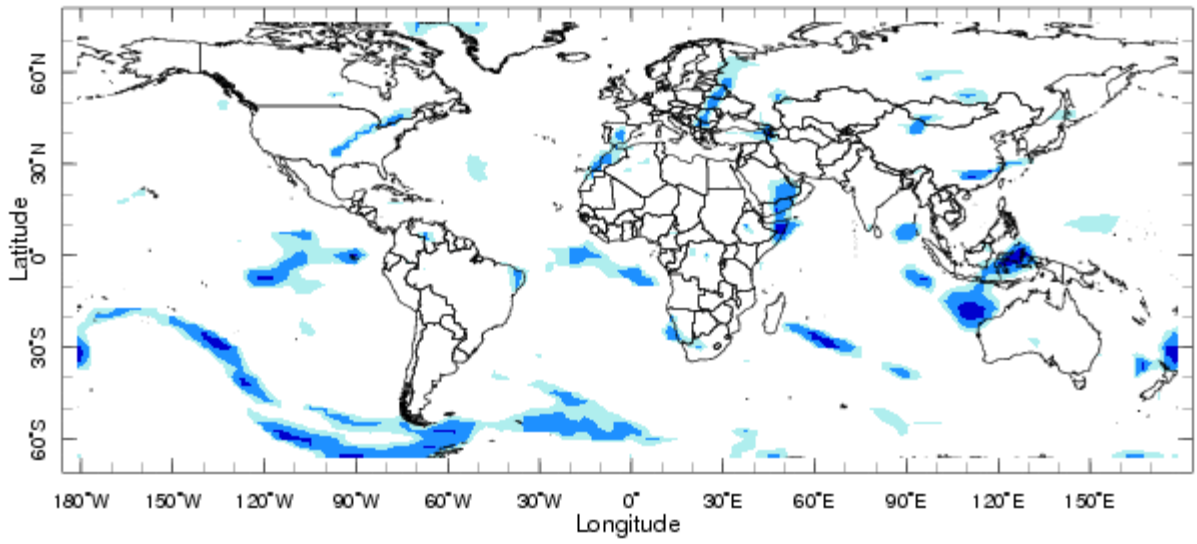
Ave. SST Anomalies (^{0}C) 23 March 2001 – 20 April 2011



Data Source: NCEP Global Sea Surface Temperature Analysis (Climatology 1979-1995)

3). Predictions

a) Weekly Precipitation Forecast for 1-6 May, 2011.



Forecast for 1-6 May 2011 Issued 0000 1 May 2011

Heavy Rainfall | Very Heavy Rainfall | Extremely Heavy Rainfall

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3). Predictions

a) *Seasonal Rainfall and Temperature Predictions from IRI*