

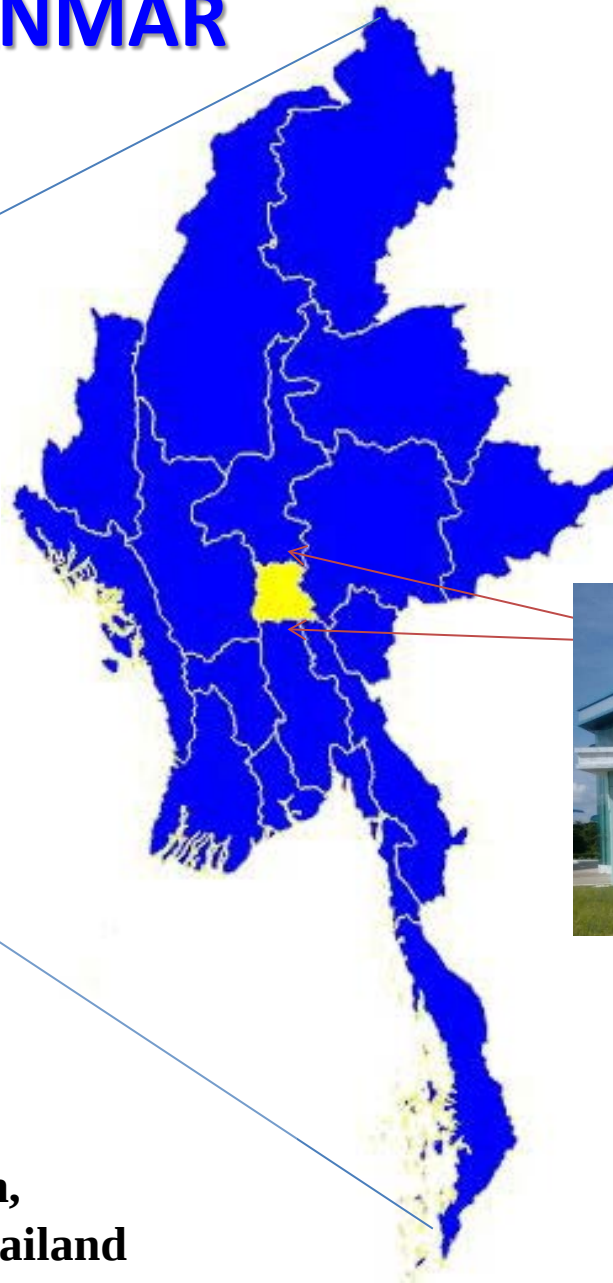


Long Range Weather Forecast in Myanmar

THAN NAING

Department of Meteorology and Hydrology
Myanmar

MYANMAR



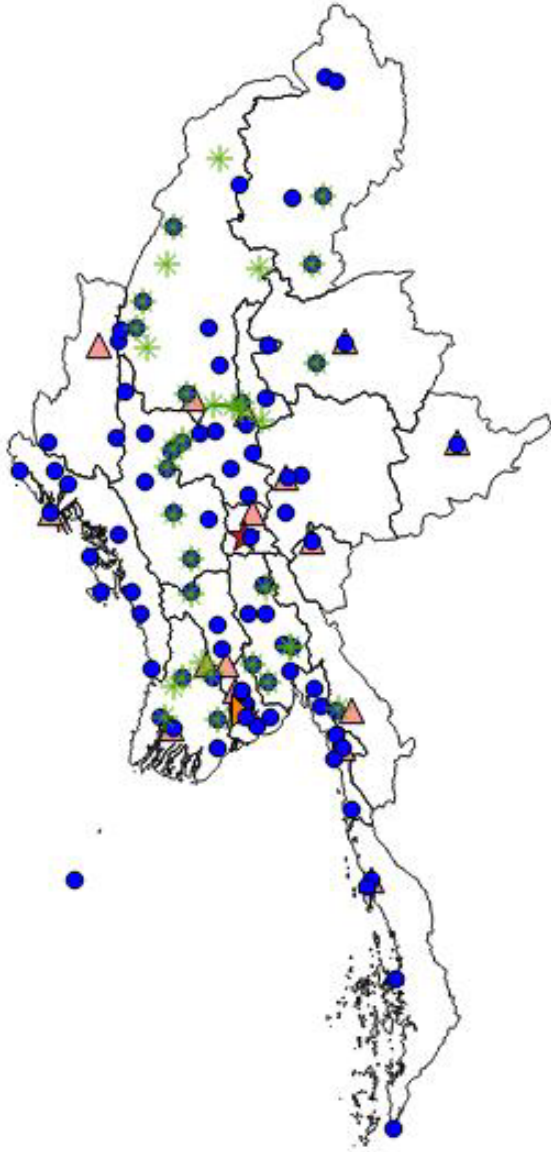
**DMH
NAY PYI TAW**



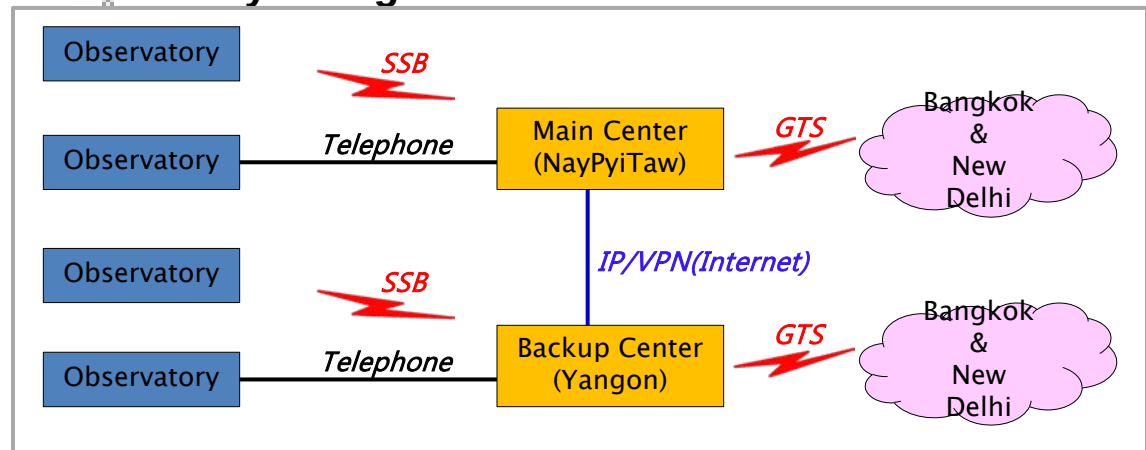
Latitude : 9° 30' N - 28° 30' N,
Longitude : 92° 10' E - 101° 11' E
Area : 678,528 Km²
Coastal Length : 1930 miles
Neighboring countries : India, Bangladesh,
China, Laos, Thailand

Meteorological Observation Network

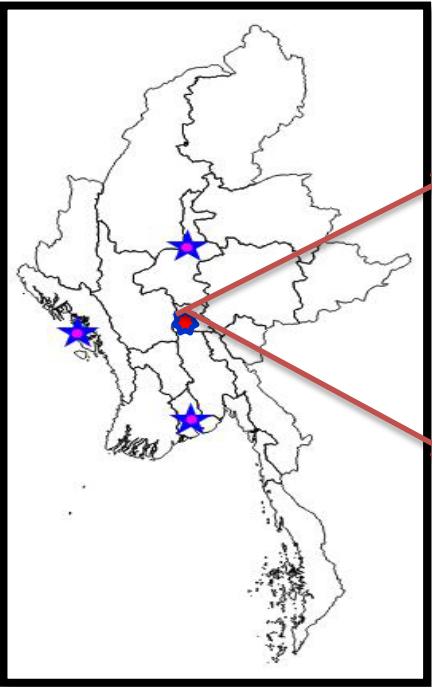
- (50) WMO Register (3)hourly Synoptic Observation Stations
- (1) Upper Air Observation Global Meteorological Observation System station



	Reporting Stations	- 50
	Meteorological Stations	- 64
	Agro meteorological Stations	- 17
	Upper Air Station	- 1
	Aviation Weather Station	- 8
	Hydrological Stations	- 27



Grant aid project "Establishment of Disastrous Weather Monitoring



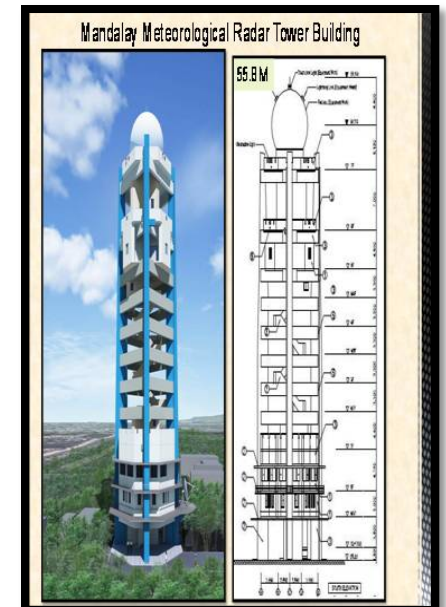
Kyaukpyu
Radar

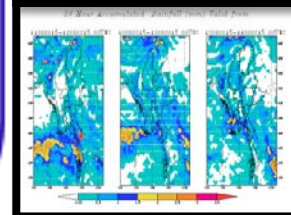
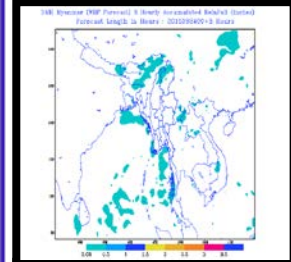
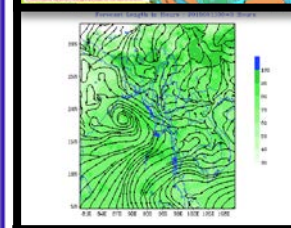
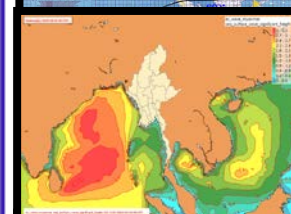
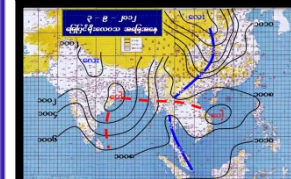
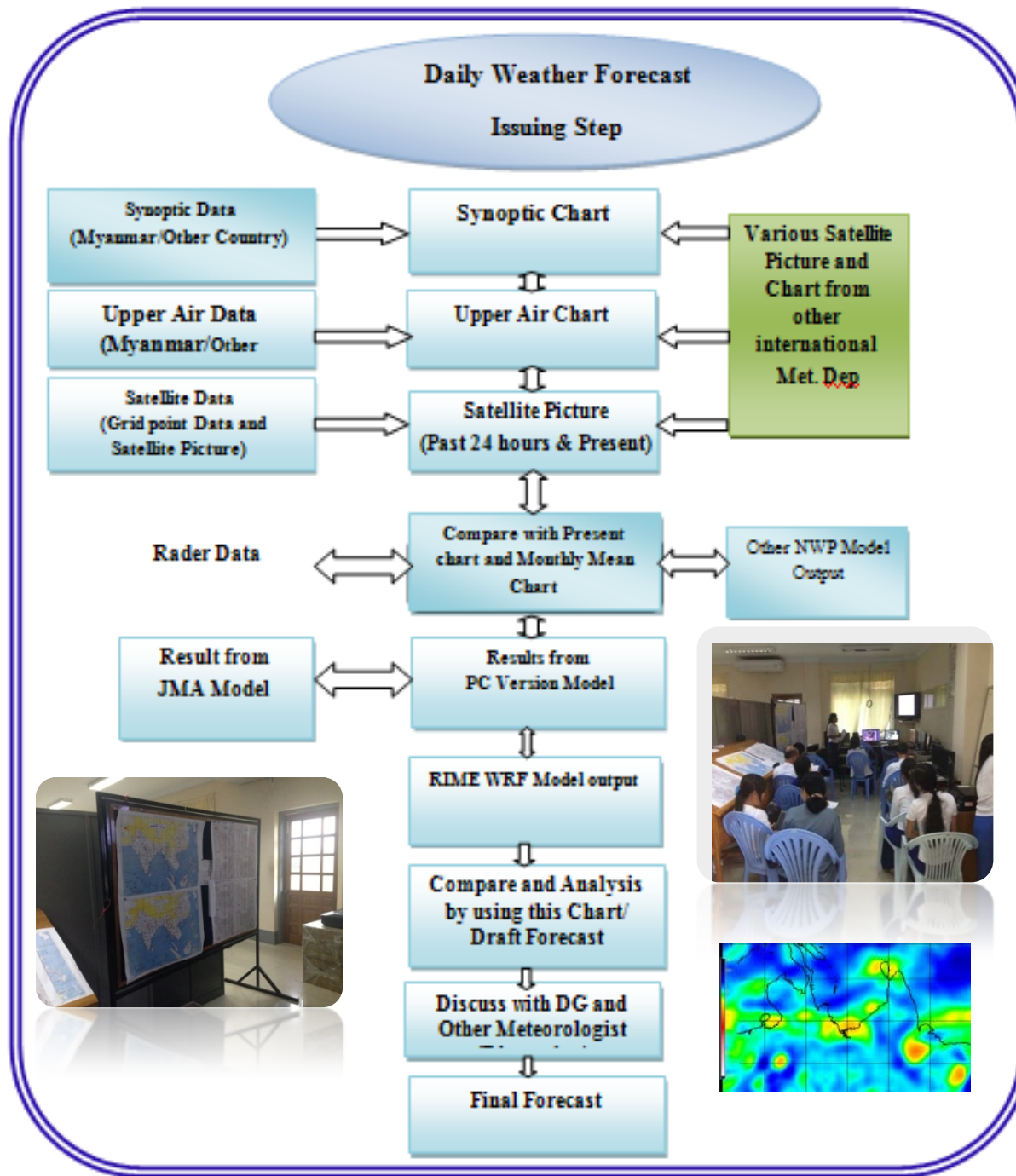
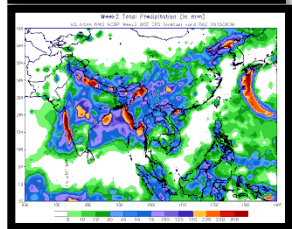
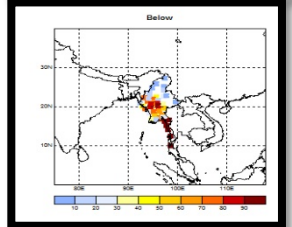
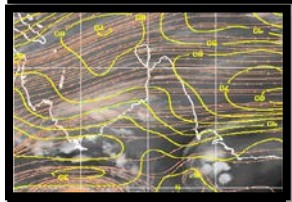
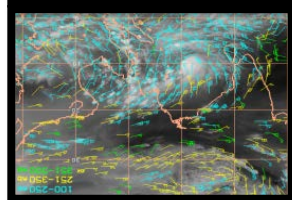
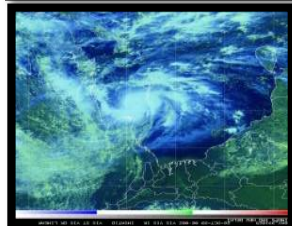
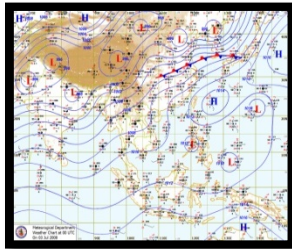


Yangon
Radar

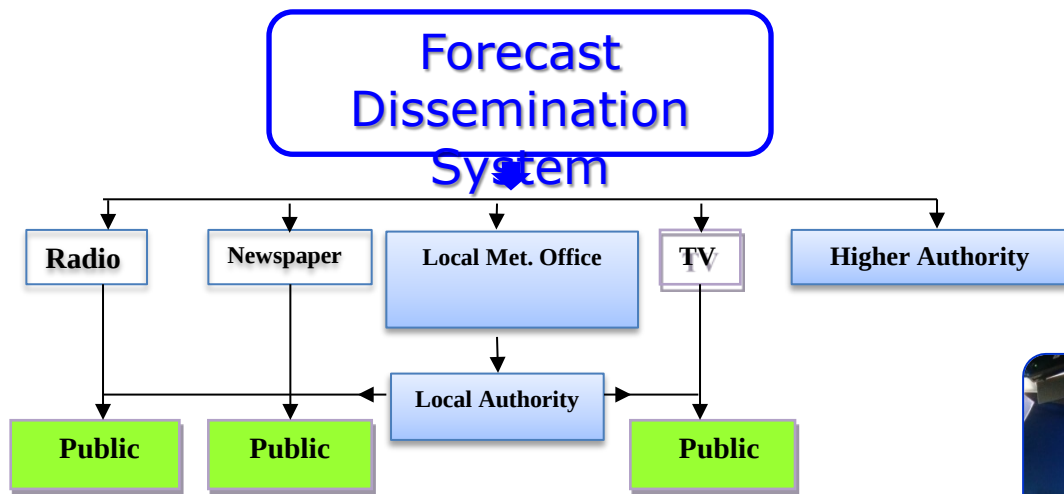


Mandalay
Radar





Forecast Dissemination System



Climate Information Timeline

Type of Forecast	Time of Issuance	Forecast Validity
(10)Day Weather Forecast	Every Month of 8/18/28	(10)Days
Monthly Weather Forecast	Every Month of 28	(1) Month
General Weather Outlook for (SW/NE)Monsoon Season	April 28/October 28	Monsoon Season
Seasonal Weather Forecast	April 28, June 28, August 28	Early, Peak, Late Monsoon

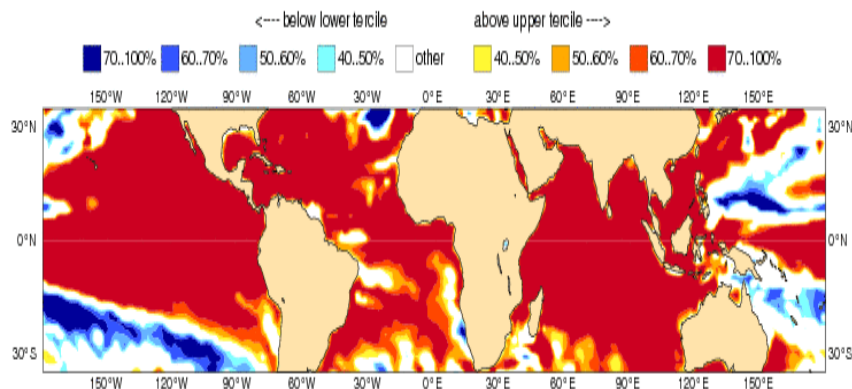
Based on the Long Range Forecast for Myanmar

- **Based on the Analogue Method**
- **TCC (Tokyo Climate Center)**
- **CPT (Climate Prediction Tools)**
- **APEC**
- **NCEP**
- **ECMWF**
- **etc**

ECMWF SST forecast for NDJF 2015-2016

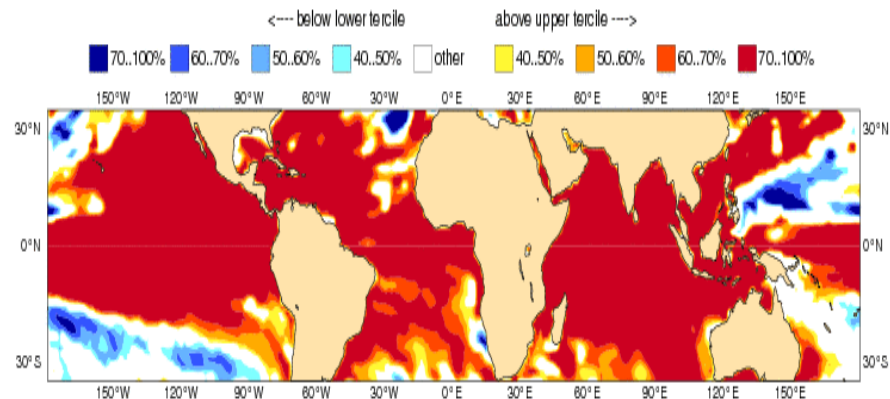
ECMWF Seasonal Forecast
Prob(most likely category of forecast SST)
Forecast start reference is 01/10/15
Ensemble size = 51, climate size = 450

System 4
NDJ 2015/16



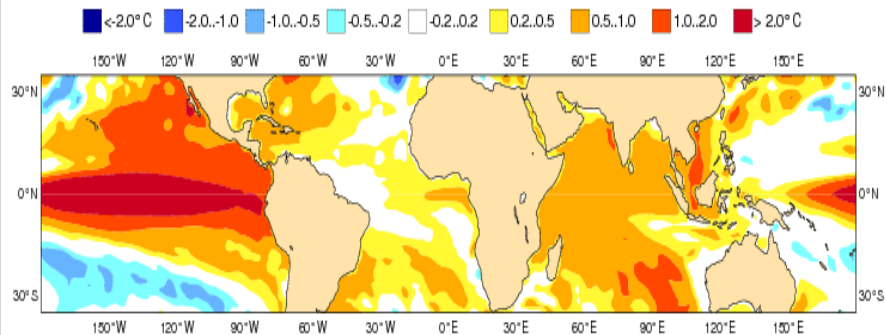
ECMWF Seasonal Forecast
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System 4
DJF 2015/16



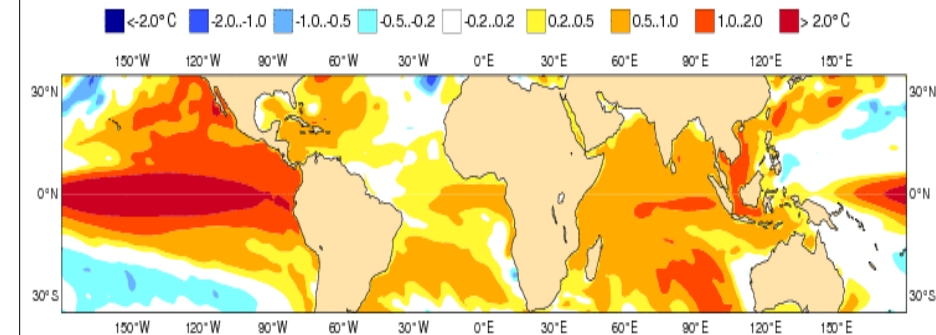
ECMWF Seasonal Forecast
Mean forecast SST anomaly
Forecast start reference is 01/09/15
Ensemble size = 51, climate size = 450

System 4
NDJ 2015/16



ECMWF Seasonal Forecast
Mean forecast SST anomaly
Forecast start reference is 01/09/15
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System 4
DJF 2015/16

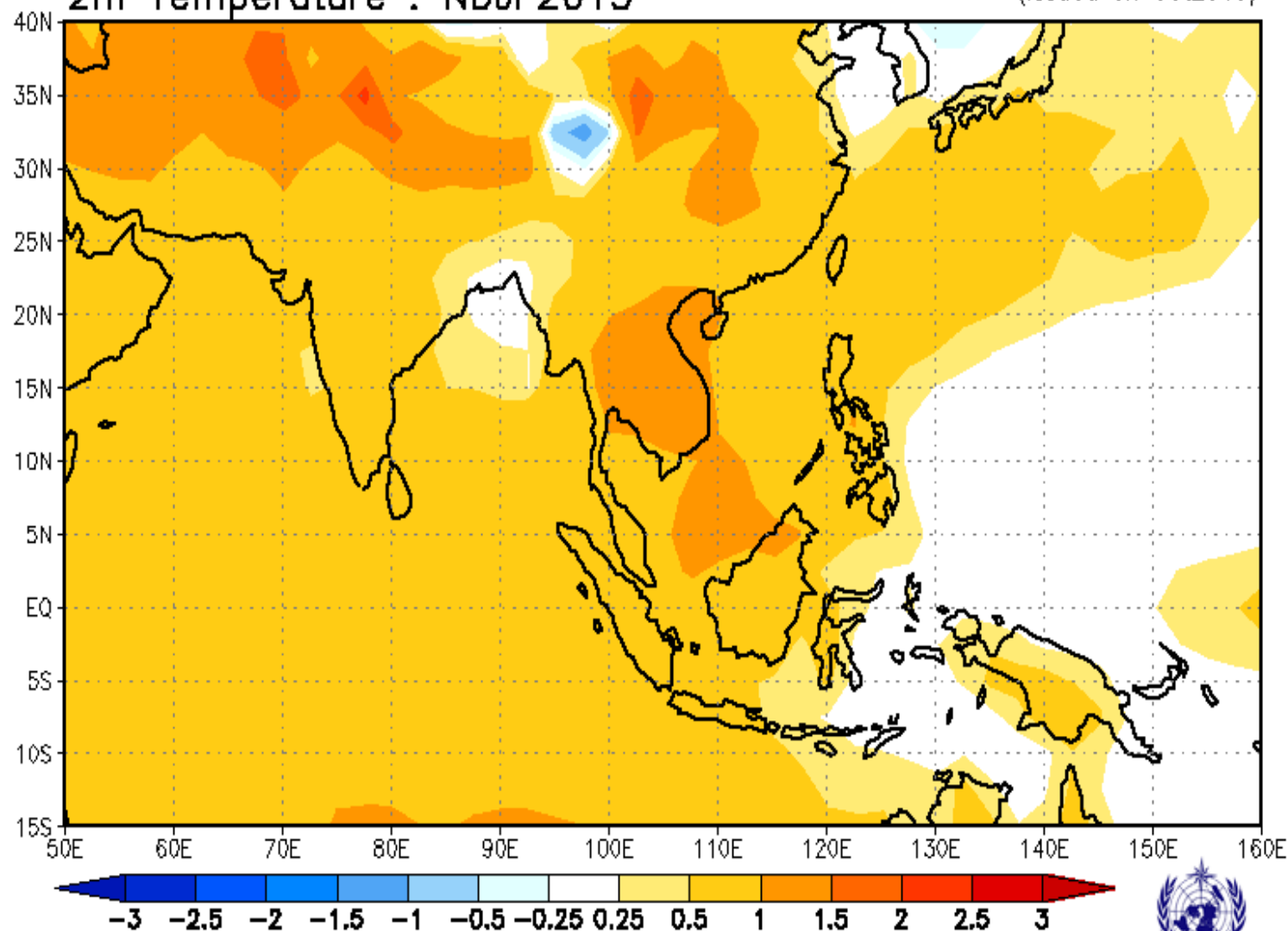


Simple Composite Map

GPC_Seoul/GPC_Montreal/GPC_Melbourne

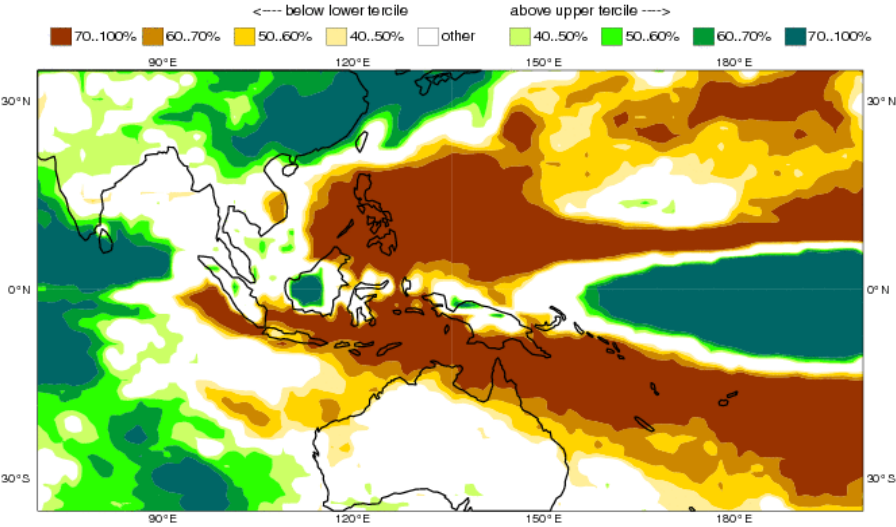
2m Temperature : NDJF2015

(issued on Oct2015)



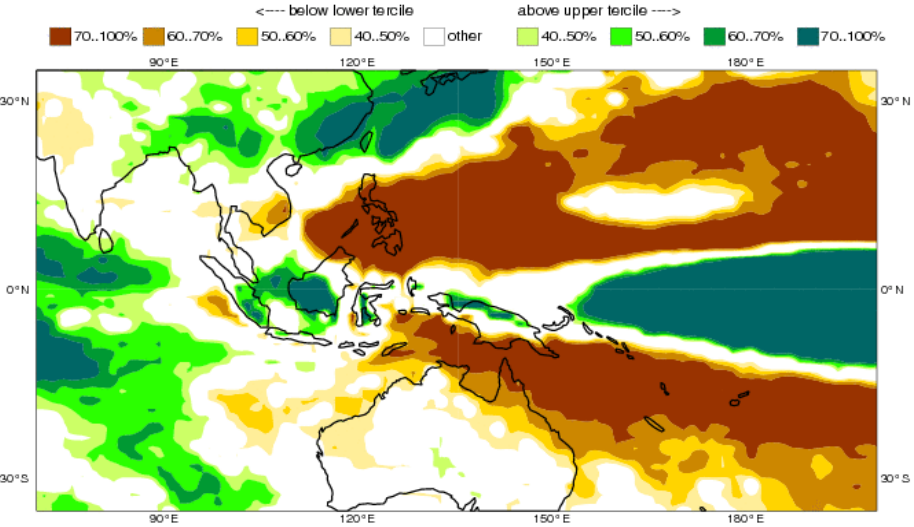
ECMWF Seasonal Forecast
Prob(most likely category of precipitation)
Forecast start reference is 01/10/15
Ensemble size = 51, climate size = 450

System 4
NDJ 2015/16



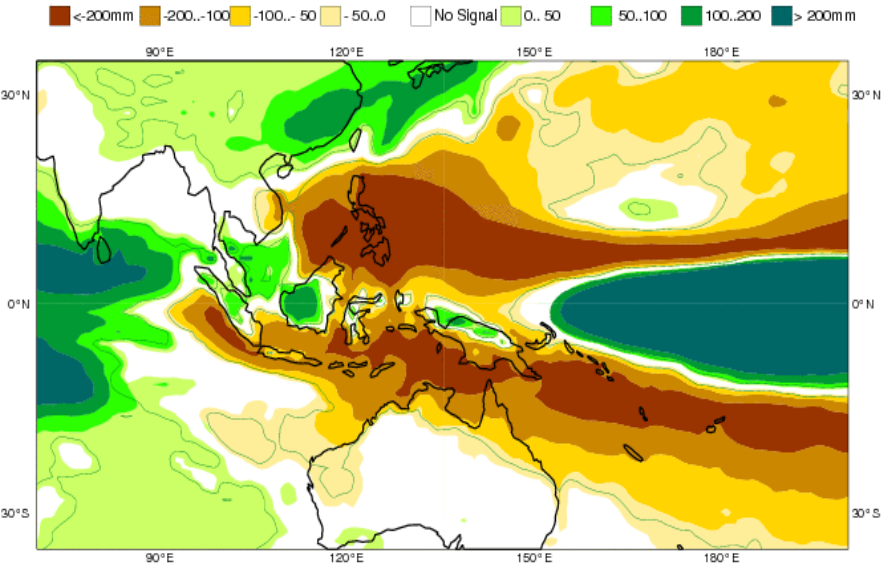
ECMWF Seasonal Forecast
Prob(most likely category of precipitation)
Forecast start reference is 01/10/15
Ensemble size = 51, climate size = 450

System 4
DJF 2015/16



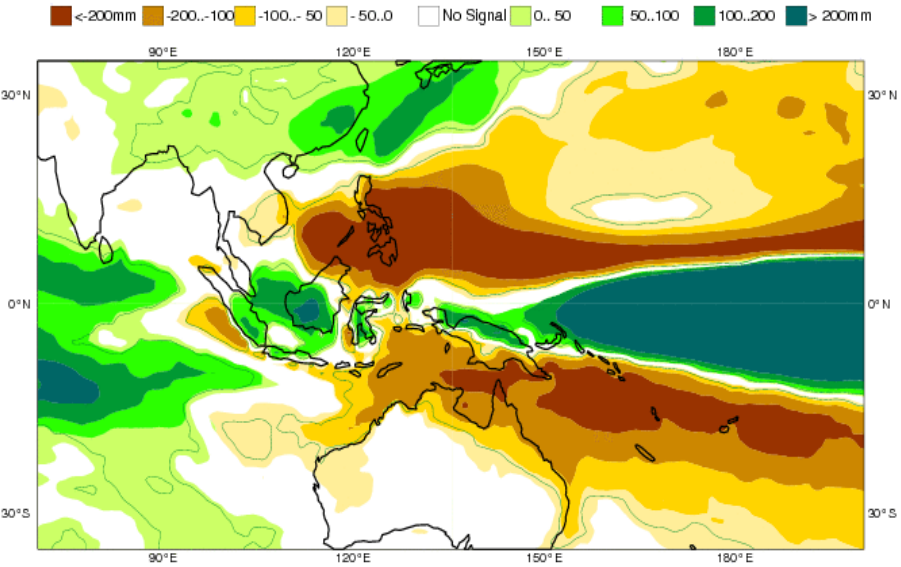
ECMWF Seasonal Forecast
Mean precipitation anomaly
Forecast start reference is 01/10/15
Ensemble size = 51, climate size = 450

System 4
NDJ 2015/16
Shaded areas significant at 10% level
Solid contour at 1% level



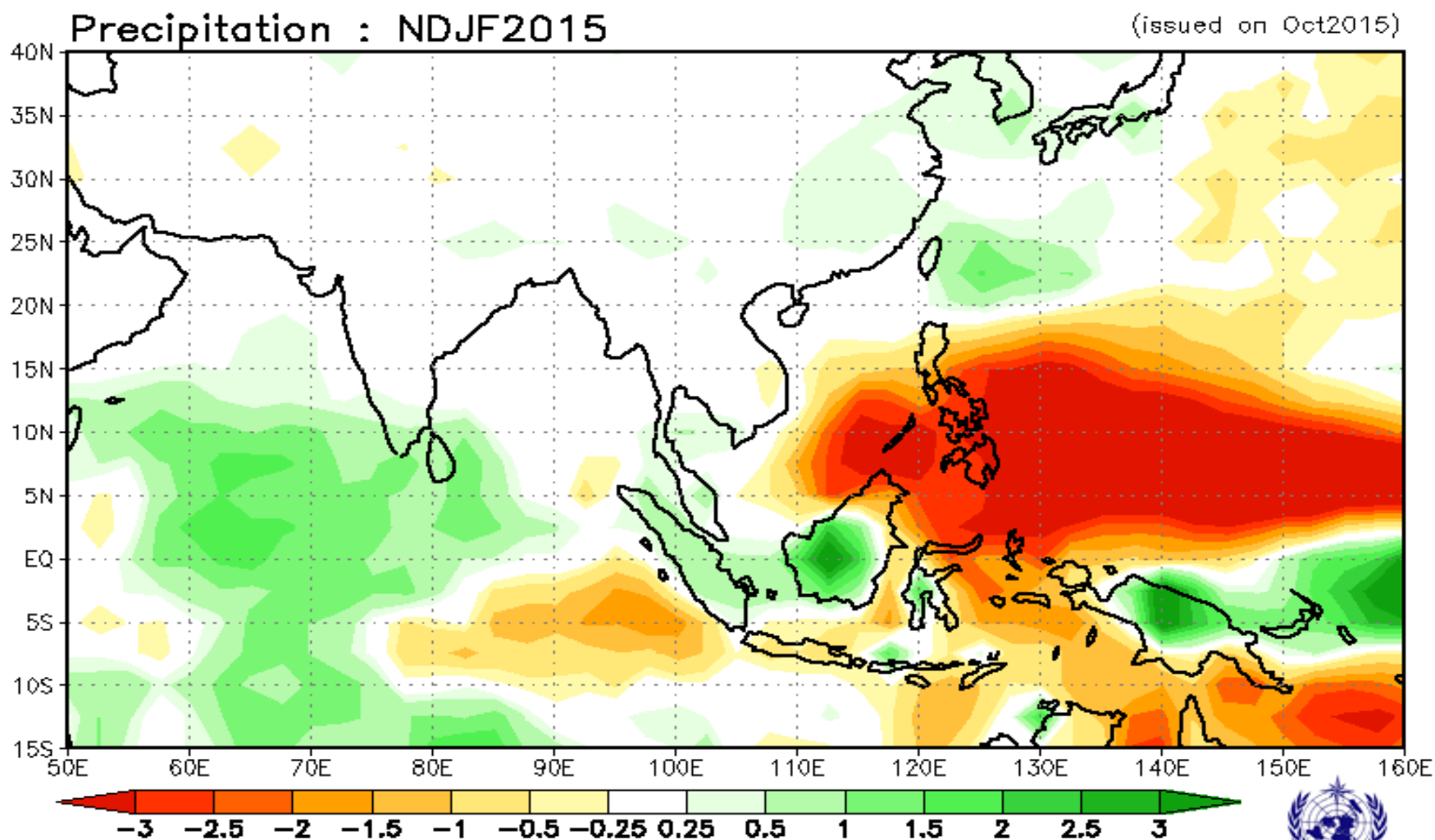
ECMWF Seasonal Forecast
Mean precipitation anomaly
Forecast start reference is 01/10/15
Ensemble size = 51, climate size = 450

System 4
DJF 2015/16
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Simple Composite Map

GPC_Seoul/GPC_Montreal/GPC_Melbourne

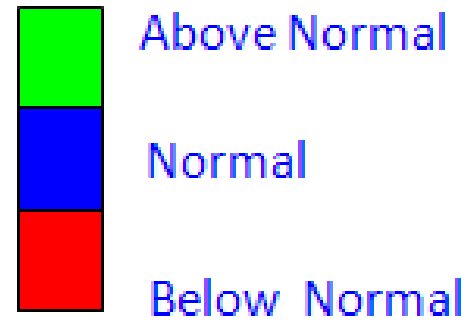
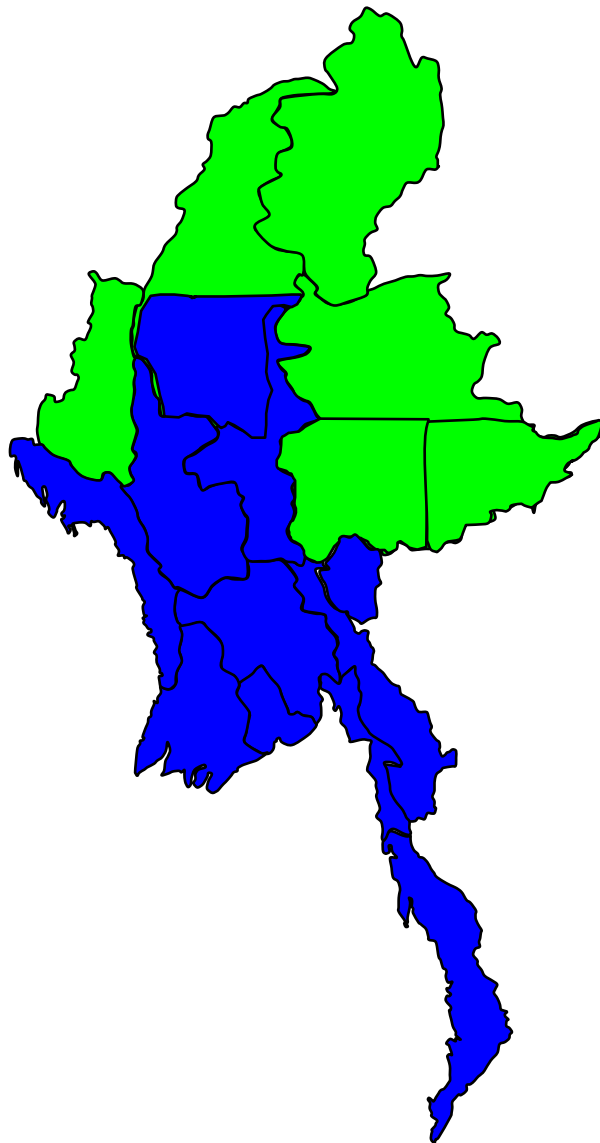


General Weather Outlook for the Northeast Monsoon Season 2015-2016

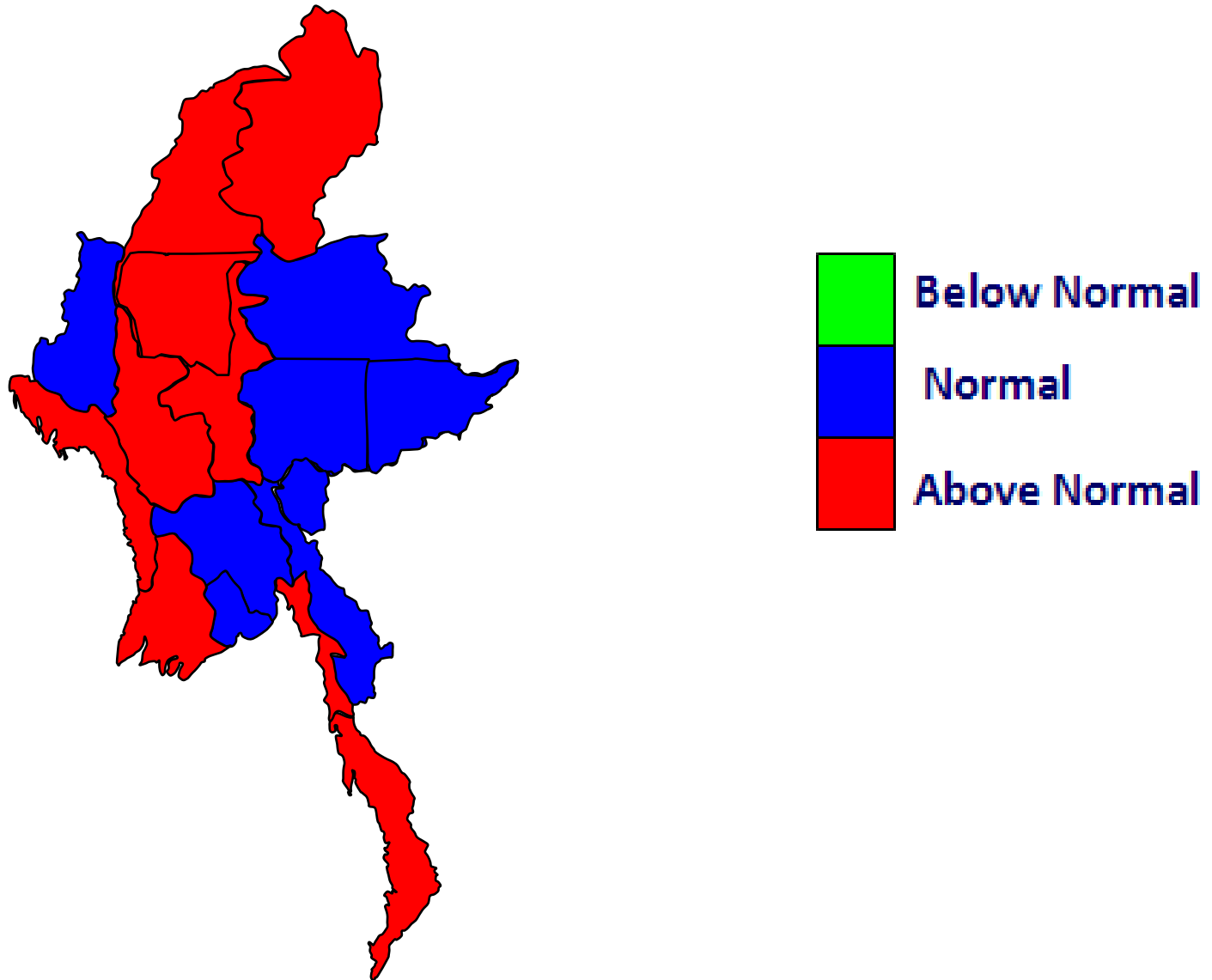
✓ Bay Inference

Three low pressure areas may form over South Bay of Bengal during this Winter Monsoon Season. Out of these three low pressure areas, one may further intensify into depression. Weather will be partly cloudy to cloudy in the Andaman Sea, South Bay and partly cloudy elsewhere in the Bay of Bengal.

Rainfall Outlook for Winter Monsoon Season for Nov 2015 - Feb 2016



Night Temperature Forecast for Winter Monsoon Season for Nov 2015 - Feb 2016



Need and Requirements ...

Institutional and regulatory strengthening

- To set up the policies and guidelines on specialized technicians and professionals for each sectors of Meteorology (Satellite, Weather Forecast, Climate, NWP, Instruments, Aviation weather, marine weather, communication)
- To establish the instrument Calibration Lab
- Institutional strengthening including the development of a robust legal and regulatory framework

Thanks you