



MEDCOF SEECOF - PRESANORD RCC forecast – 11/2015

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Hanene Mairech (INM Tunisia)

Outline

- Some analysis products
- SSTs Seasonal forecast
- Temperature and Rainfall Seasonal Forecasts
- Summary

Outline

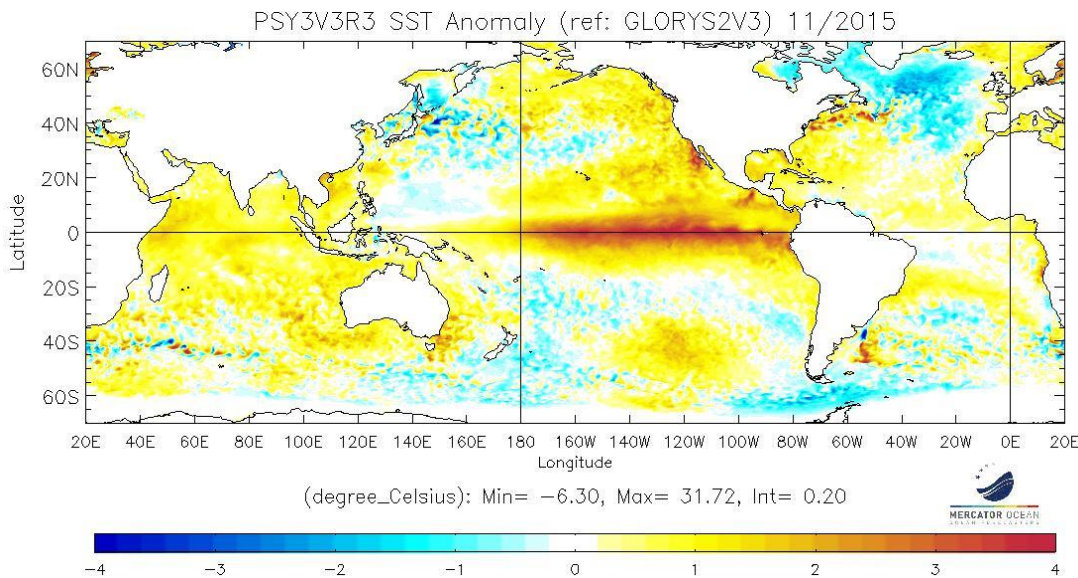
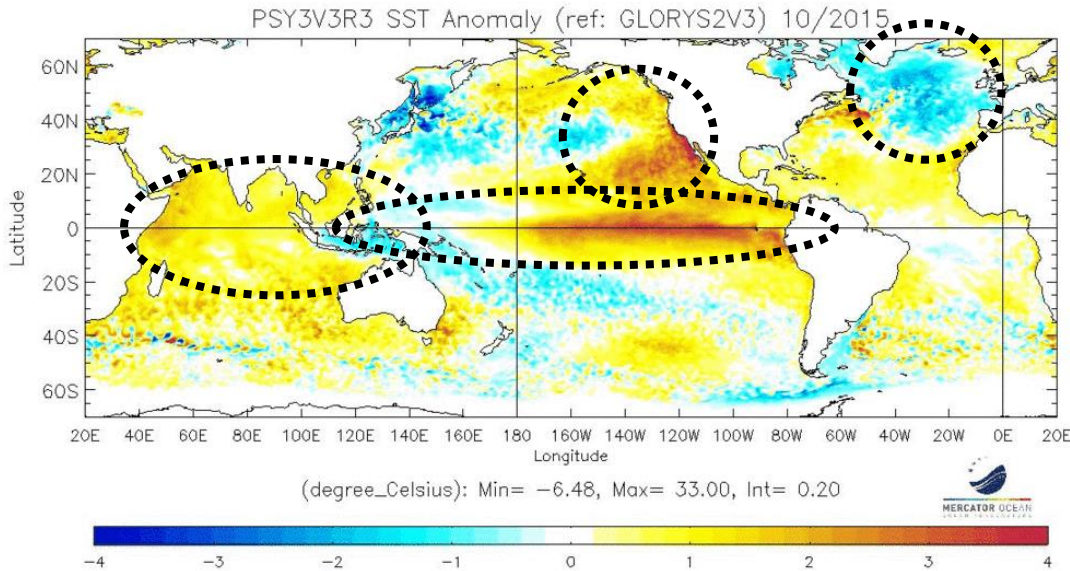
- Some analysis products



Ocean analysis

Oceanic analysis

October 2015

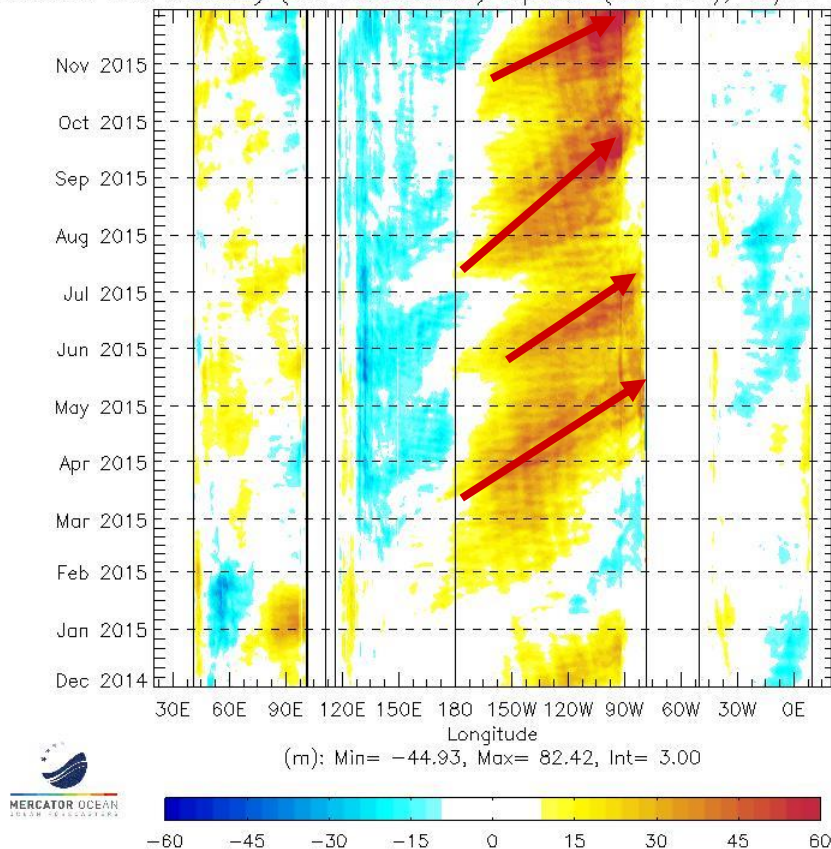


November 2015
(mix obs. and fcst)

23-26/11/2015 – Marrakesh, Morocco

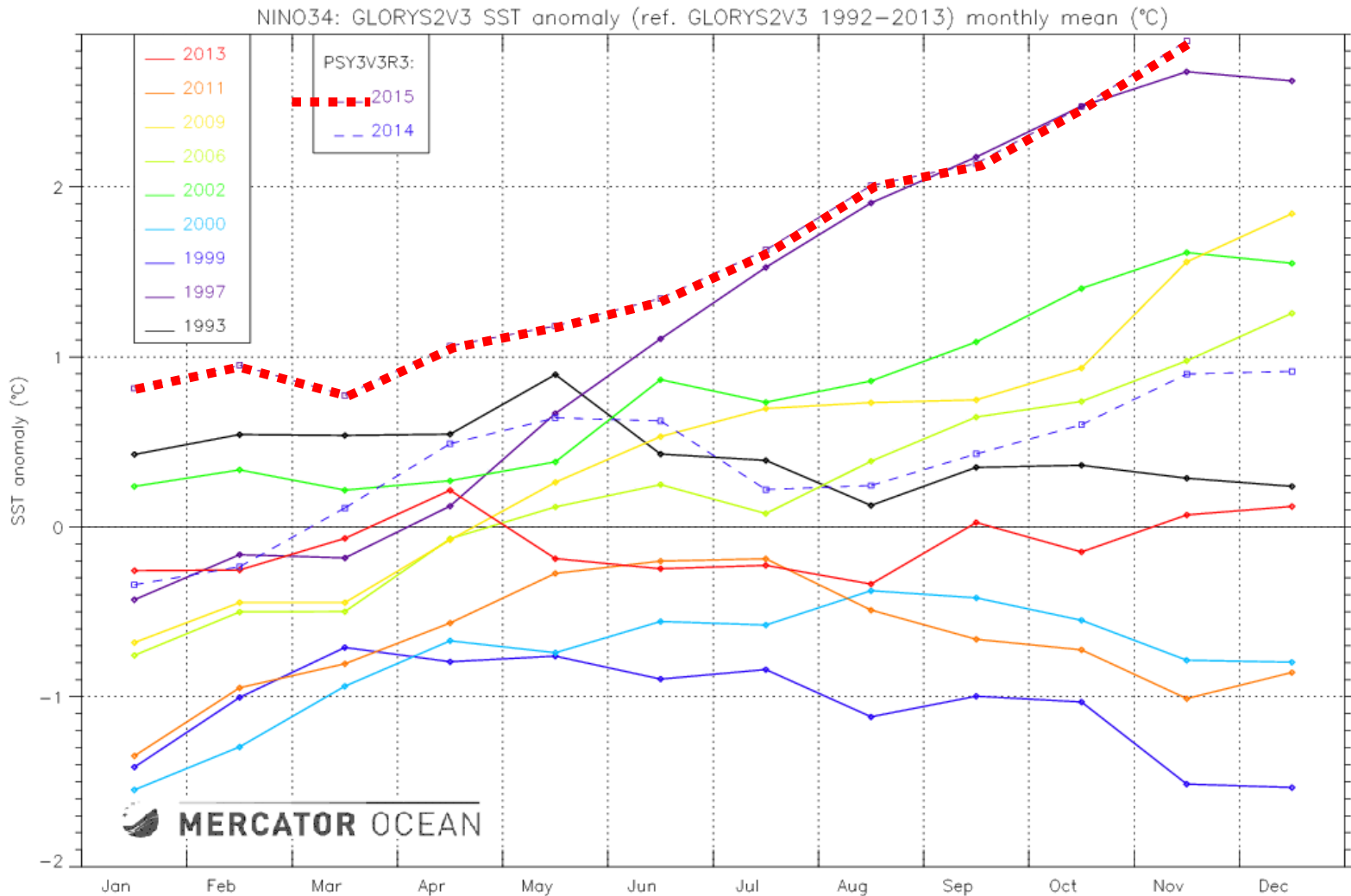
Real time Ocean analysis:

PSY3V3R3 D20 Anomaly (ref: GLORYS2V3) Equator (2°S–2°N), 12/2014 to 11/2015

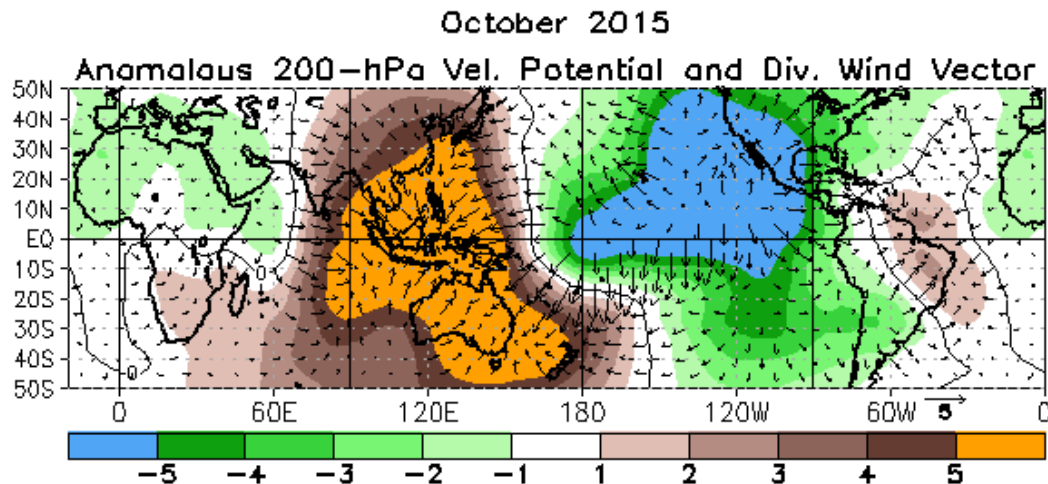
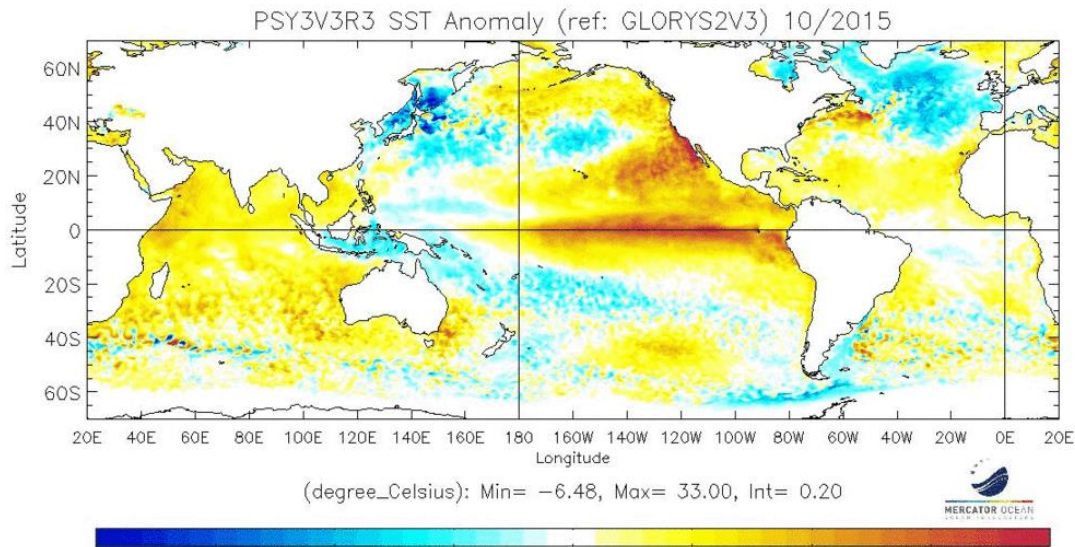


MedCOF, SEECOF & PresaNORD
23-26/11/2015 – Marrakesh, Morocco

Past El Niño events



Atmospheric response

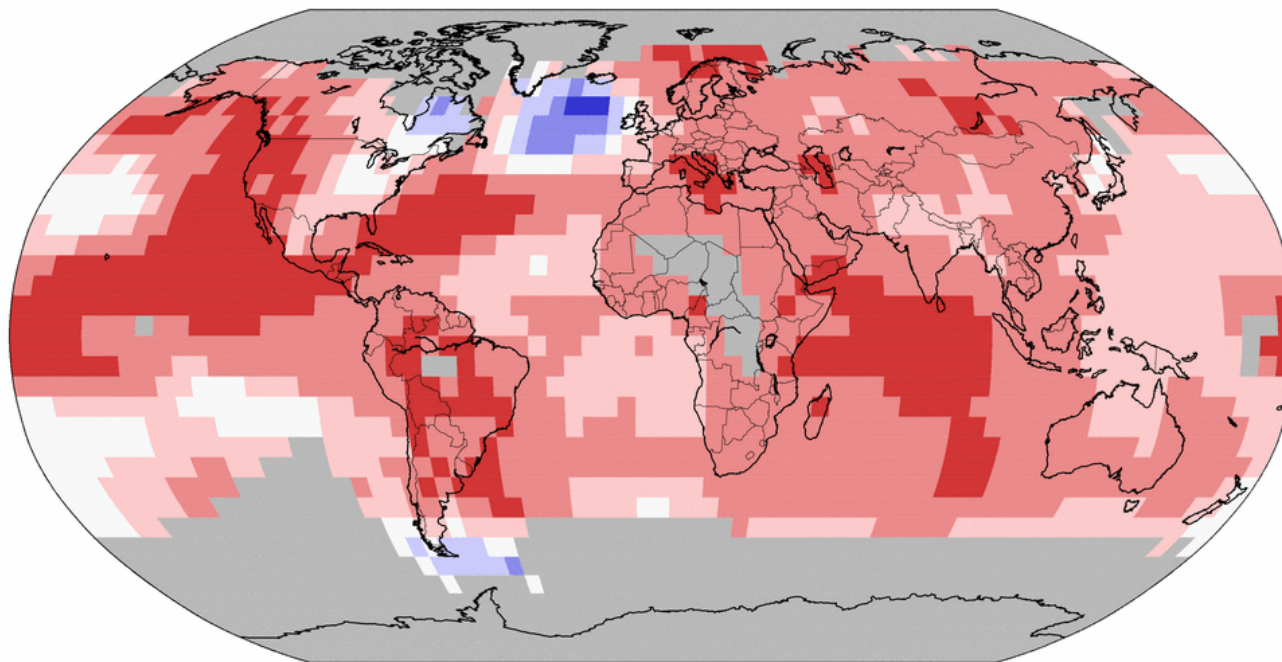


Cold anomaly over the north Atlantic

Land & Ocean Temperature Percentiles Jan–Oct 2015

NOAA's National Centers for Environmental Information

Data Source: GHCN–M version 3.3.0 & ERSST version 4.0.0



Record Coldest

Much Cooler than Average

Cooler than Average

Near Average

Warmer than Average

Much Warmer than Average

Record Warmest



Tue Nov 17 06:54:45 EST 2015

<https://www.ncdc.noaa.gov/sotc/global/201510>

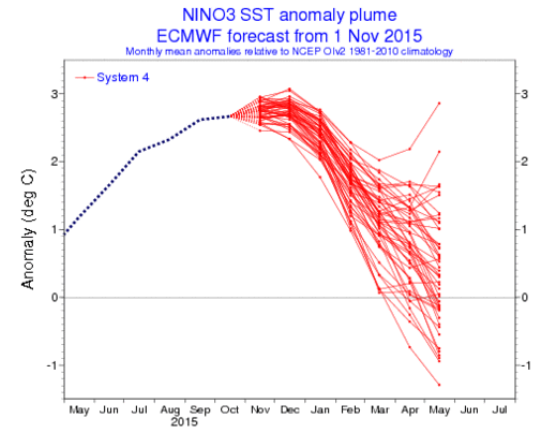
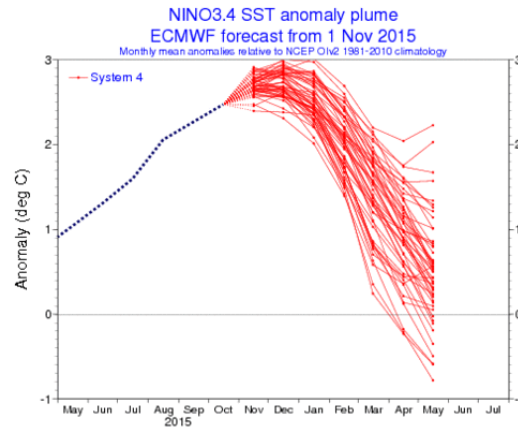
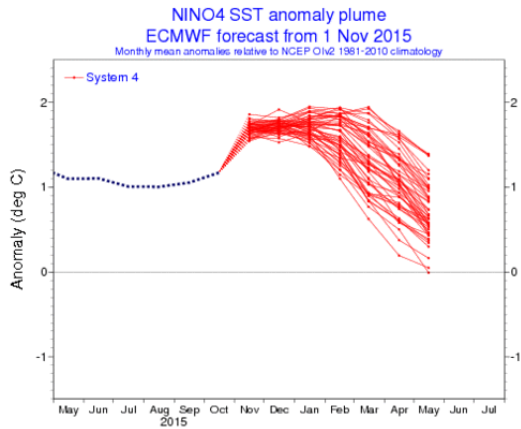
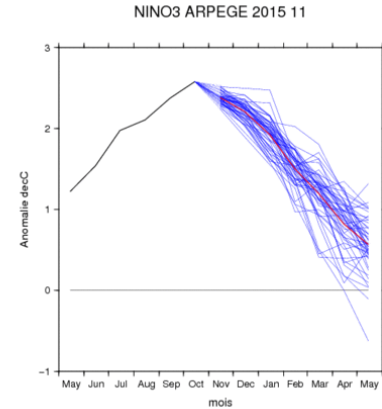
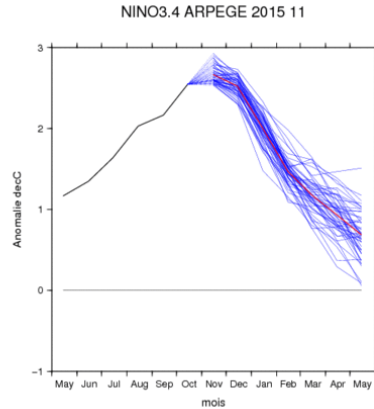
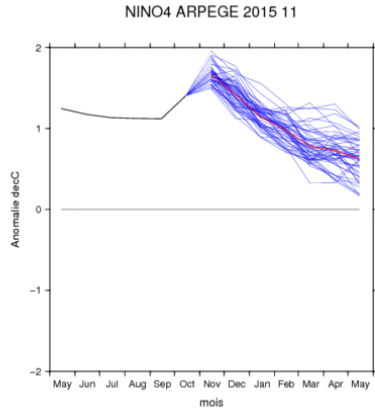
MedCOF, SEECOF & PresaNORD
23-26/11/2015 – Marrakesh, Morocco

 **METEO FRANCE**
Toujours un temps d'avance

Outline

- SSTs Seasonal forecasts

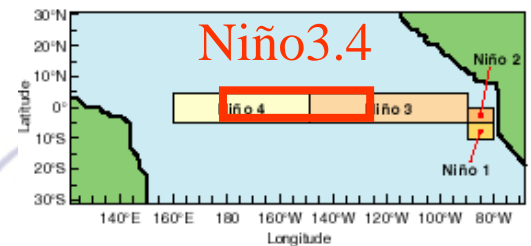
SSTs Seasonal Forecast



ECMWF

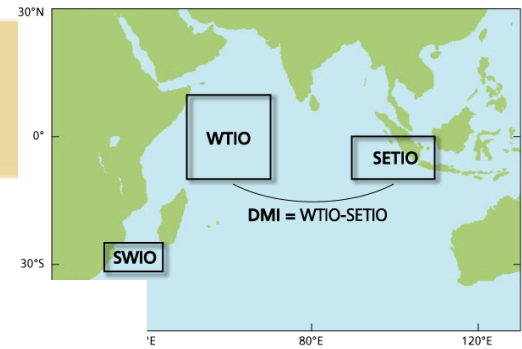
ECMWF

ECMWF

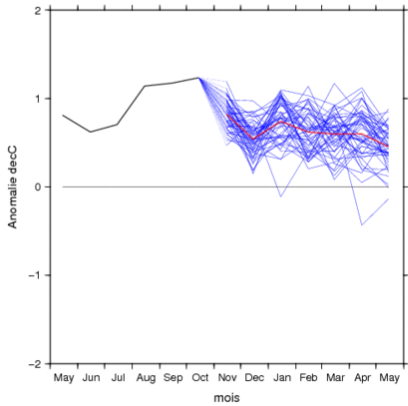


MedCOF, SEECOF & PresaNORD
23-26/11/2015 – Marrakesh, Morocco

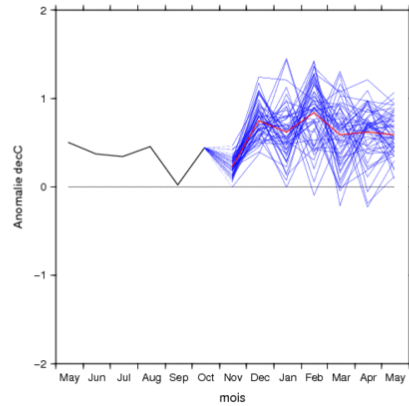
SSTs Seasonal Forecast



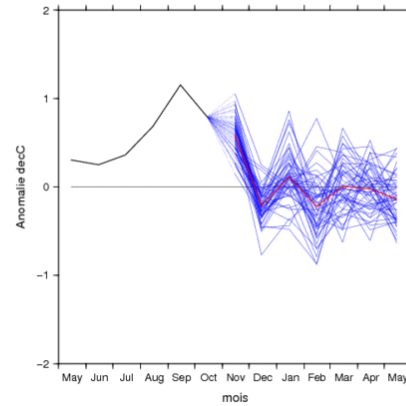
WTIO ARPEGE 2015 11



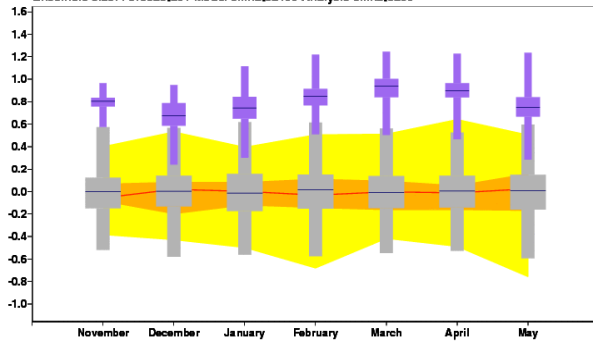
SETIO ARPEGE 2015 11



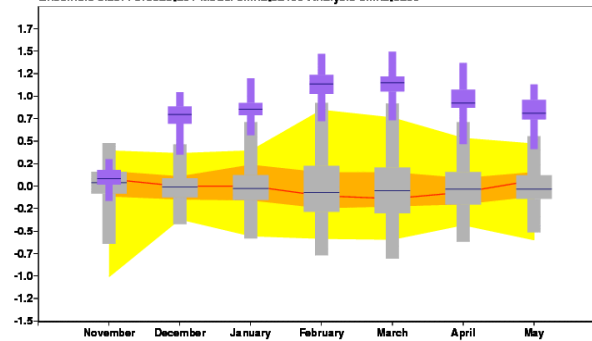
DMI ARPEGE 2015 11



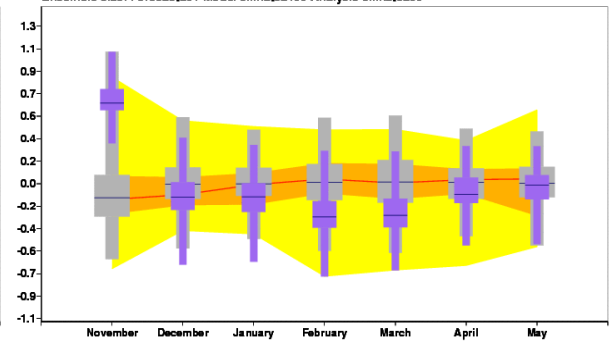
SST anomalies (K) latitude= 10.0 to -10.0 longitude= 50.0 to 70.0
Forecast initial date: 20151101
Ensemble size: Forecast=51 Model climate=450 Analysis climate=30



SST anomalies (K) latitude= 0.0 to -10.0 longitude= 90.0 to 110.0
Forecast initial date: 20151101
Ensemble size: Forecast=51 Model climate=450 Analysis climate=30



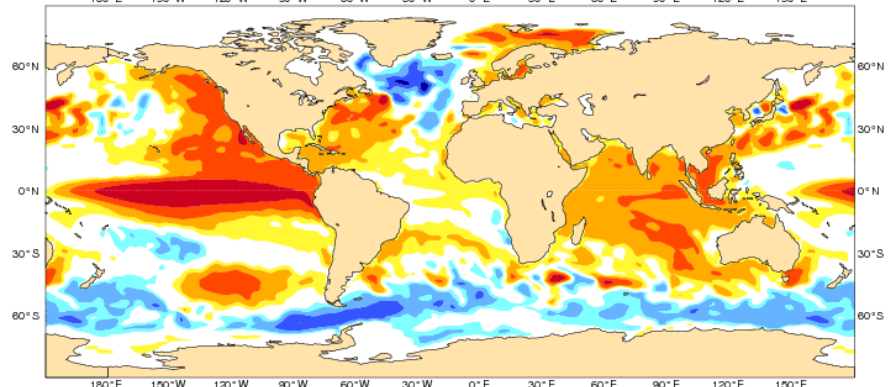
SST anomalies (K) 10.0 to -10.0 50.0 to 70.0 minus 0.0 to -10.0 90.0 to 110.0
Forecast initial date: 20151101
Ensemble size: Forecast=51 Model climate=450 Analysis climate=30



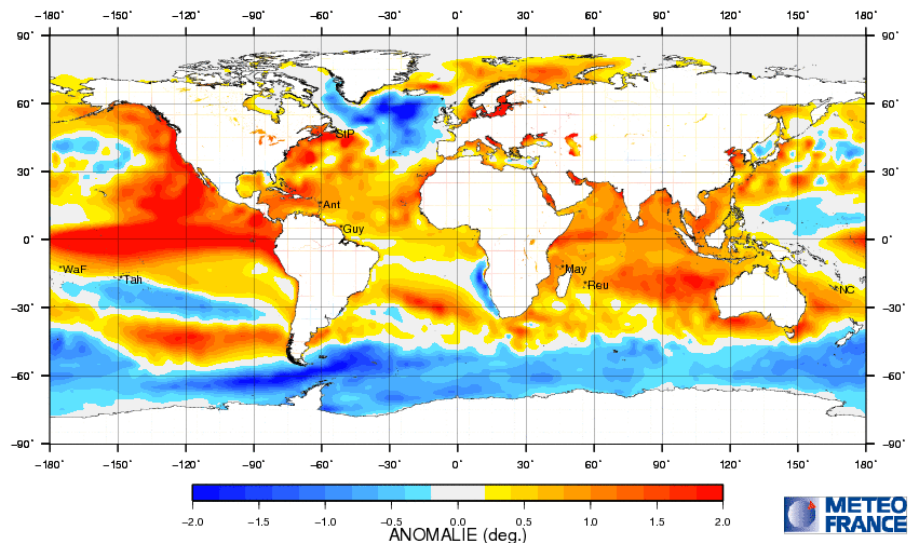
Latest SST predictions DJF

ECMWF Seasonal Forecast
 Mean forecast SST anomaly
 Forecast start reference is 01/11/15
 Ensemble size = 51, climate size = 450

System 4
 DJF 2015/16



SST PREVISION ARPS4 DECEMBRE-JANVIER-FEVRIER RUN DE NOVEMBRE 2015

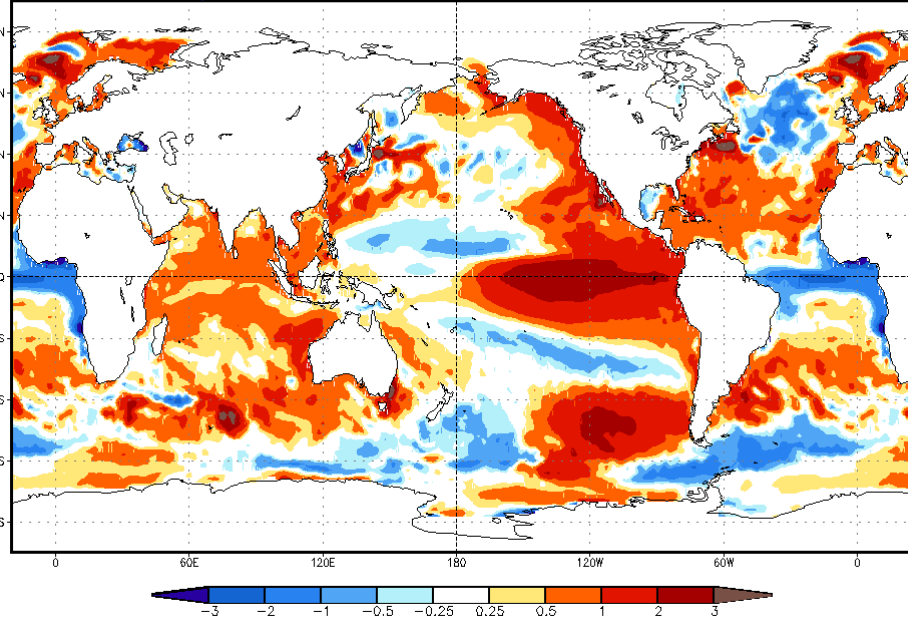


CFSv2 seasonal SST anomalies (K)



Initial conditions: 17Oct2015-26Oct2015

Dec-Jan-Feb 2015/2016



Latest SST predictions DJF

EUROSIP multi-model seasonal forecast

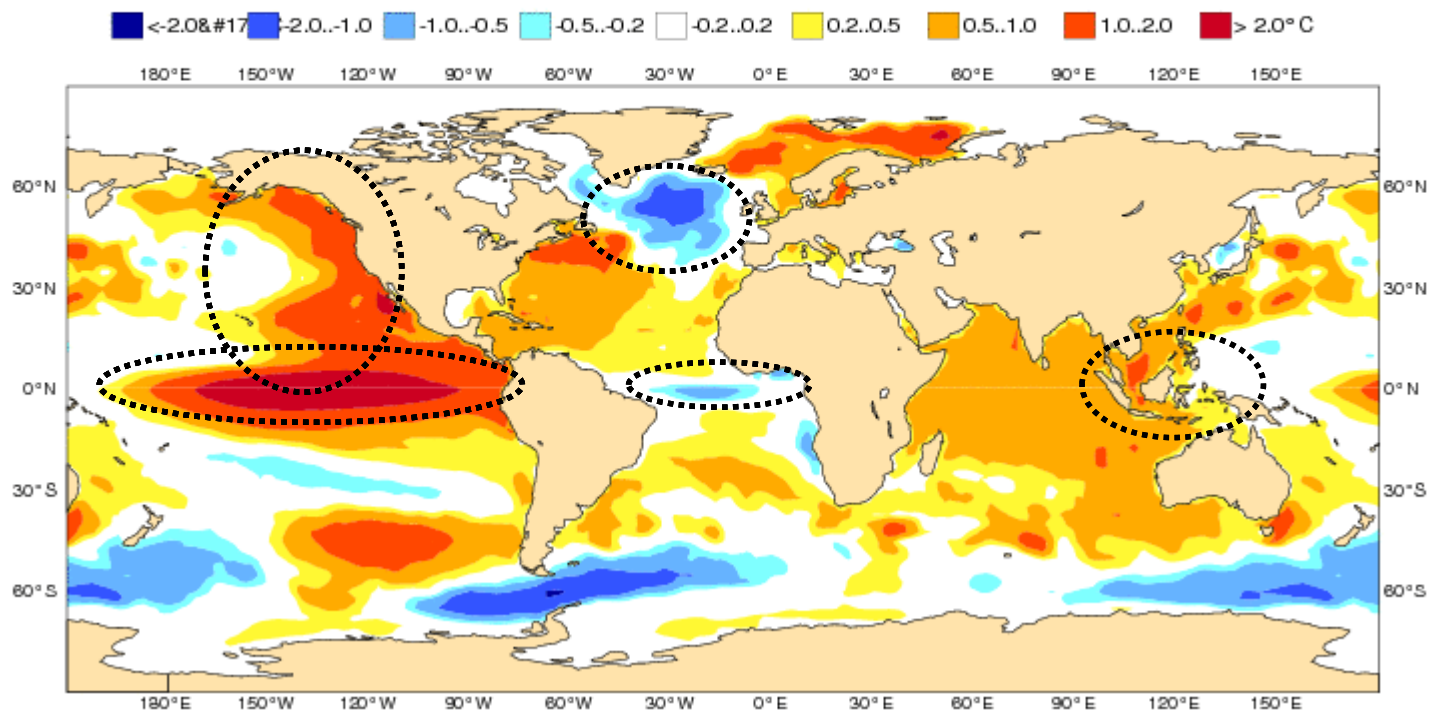
Mean forecast SST anomaly

Forecast start reference is 01/11/15

Variance-standardized mean

ECMWF/Met Office/Meteo-France/NCEP

DJF 2015/16



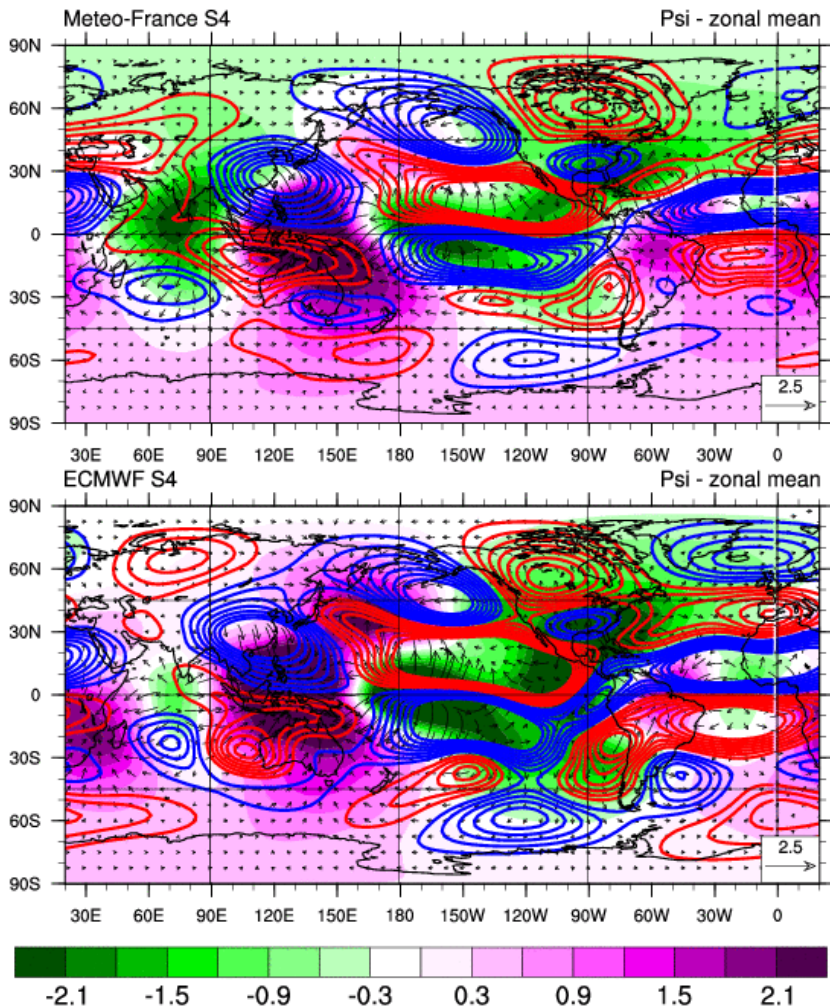
Outline

■ General Circulation



Tropical response and forcing - DJF

DJF CHI&PSI@200 [IC = Nov. 2015]



Upper troposphere circulation fields (200 hPa)

Shaded area : velocity potential anomalies (divergent circulation anomalies)

green <-> upward motion anomaly

pink <-> downward motion anomaly

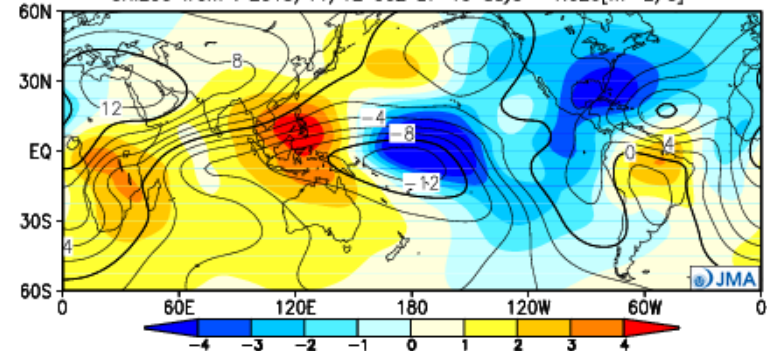
Isolines : stream function anomalies (rotational circulation anomalies)

blue lines <-> cyclonic (in NH)

red lines <-> anticyclonic (in NH)

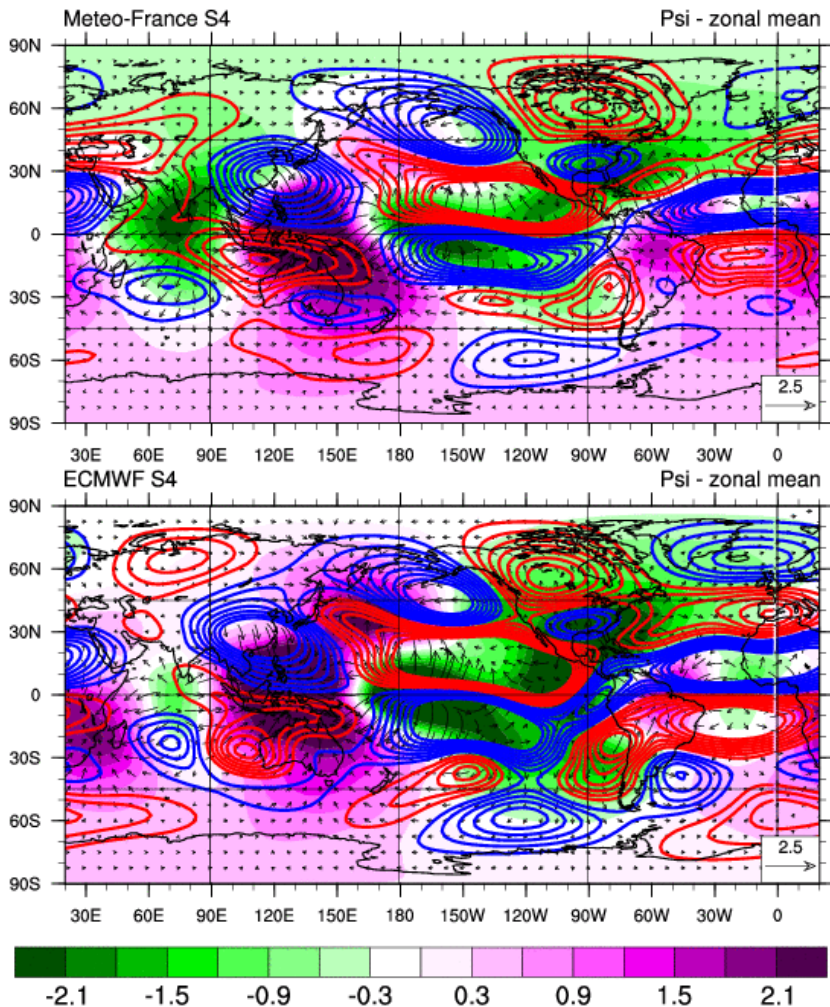
Ensemble forecast (10 month mean : DEC-FEB)

CHI200 from : 2015/11/12 00Z LT=19 days *1.0E6[m**2/s]

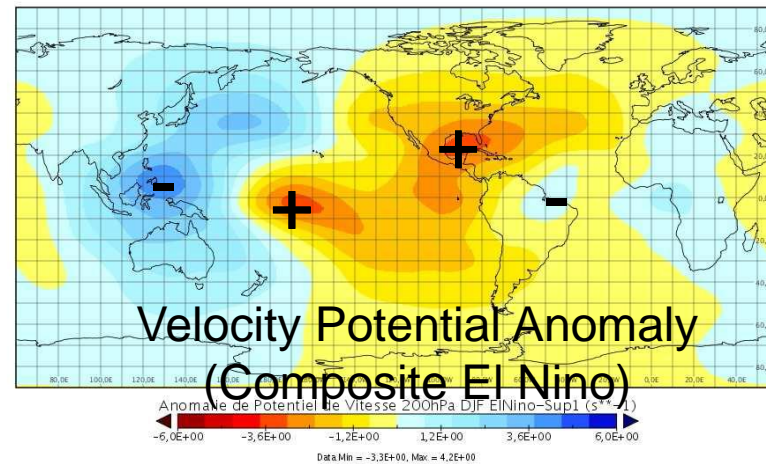


Tropical response and forcing - DJF

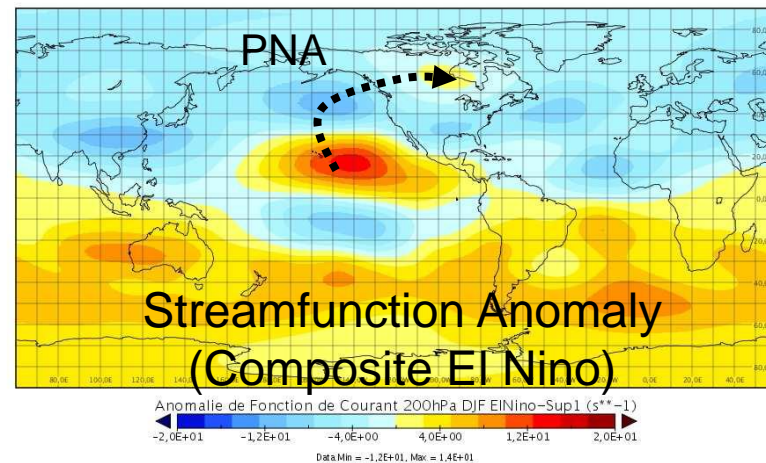
DJF CHI&PSI@200 [IC = Nov. 2015]



Anomalie de Potentiel de Vitesse 200hPa DJF ElNino-Sup1



Anomalie de Fonction de Courant 200hPa DJF ElNino-Sup1

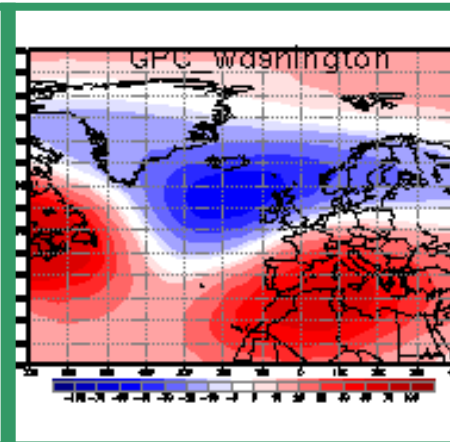
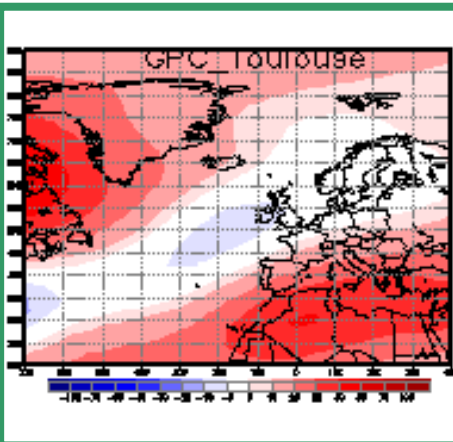
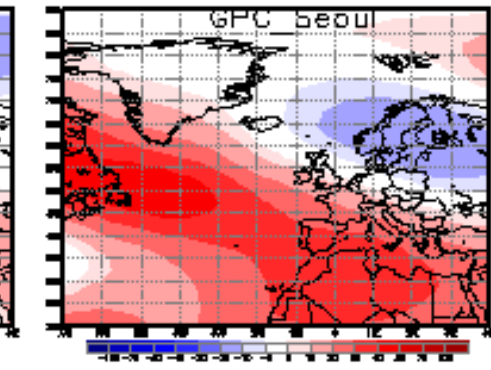
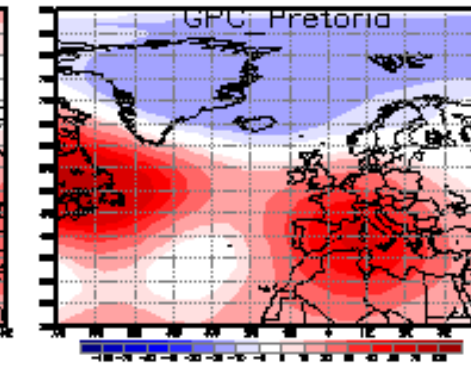
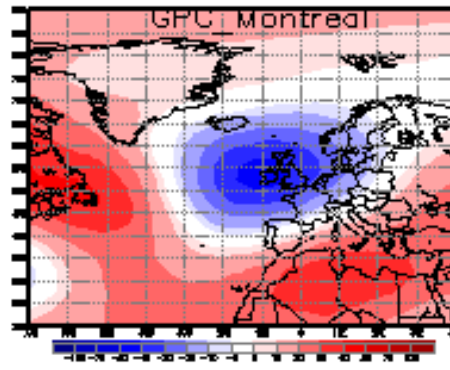
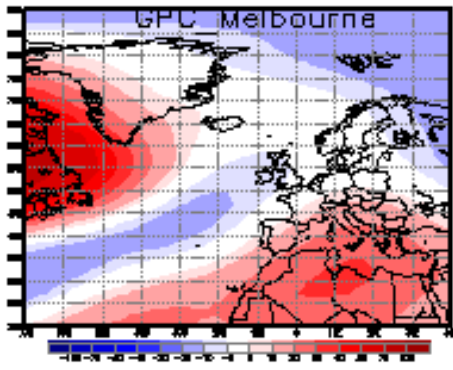
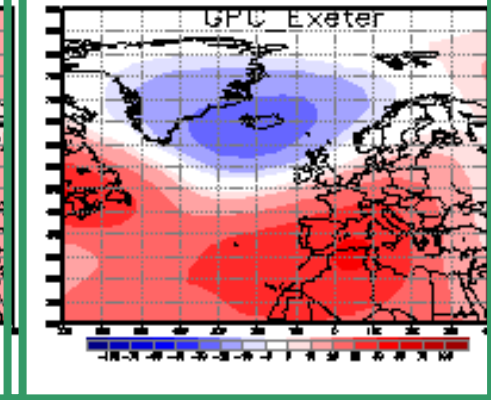
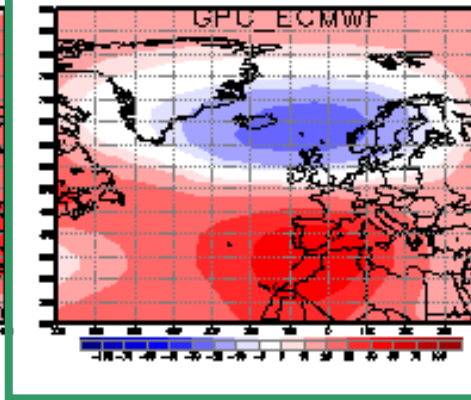
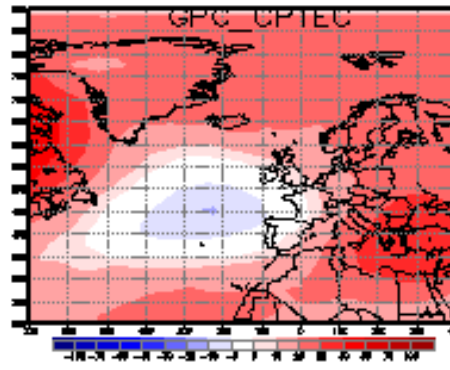
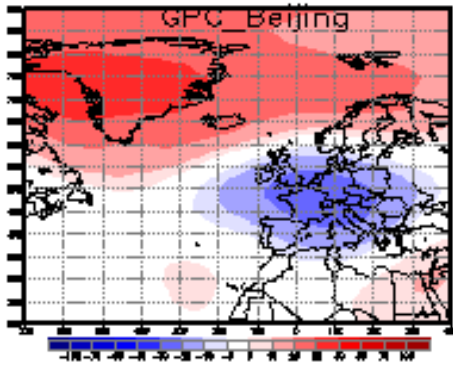


lat=20 90
lon=-70 40

500hPa GPH : 02015

(Issued on Nov)

[Unit: m]



In green : EUROSIP

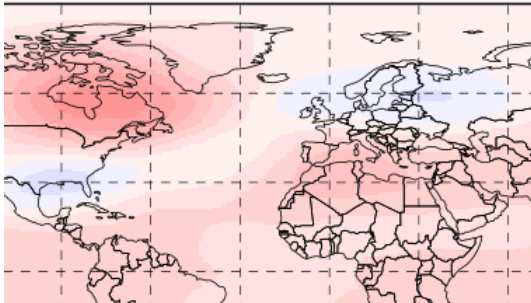
<https://www.wmolc.org>



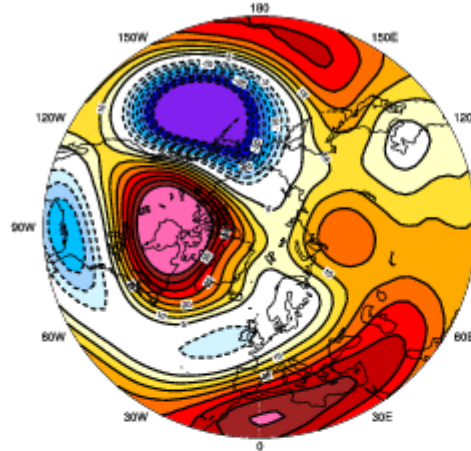
Mid-Latitude Response - DJF

DJF Z500 Forecast [IC = Nov. 2015]

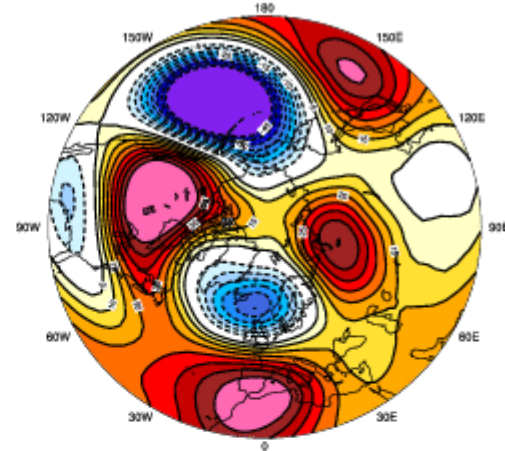
Meteo-France S5



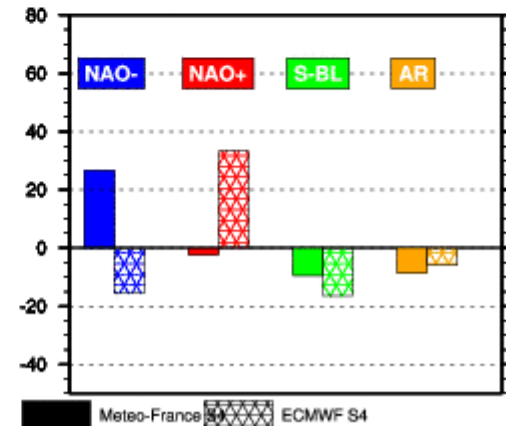
Meteo-France S4



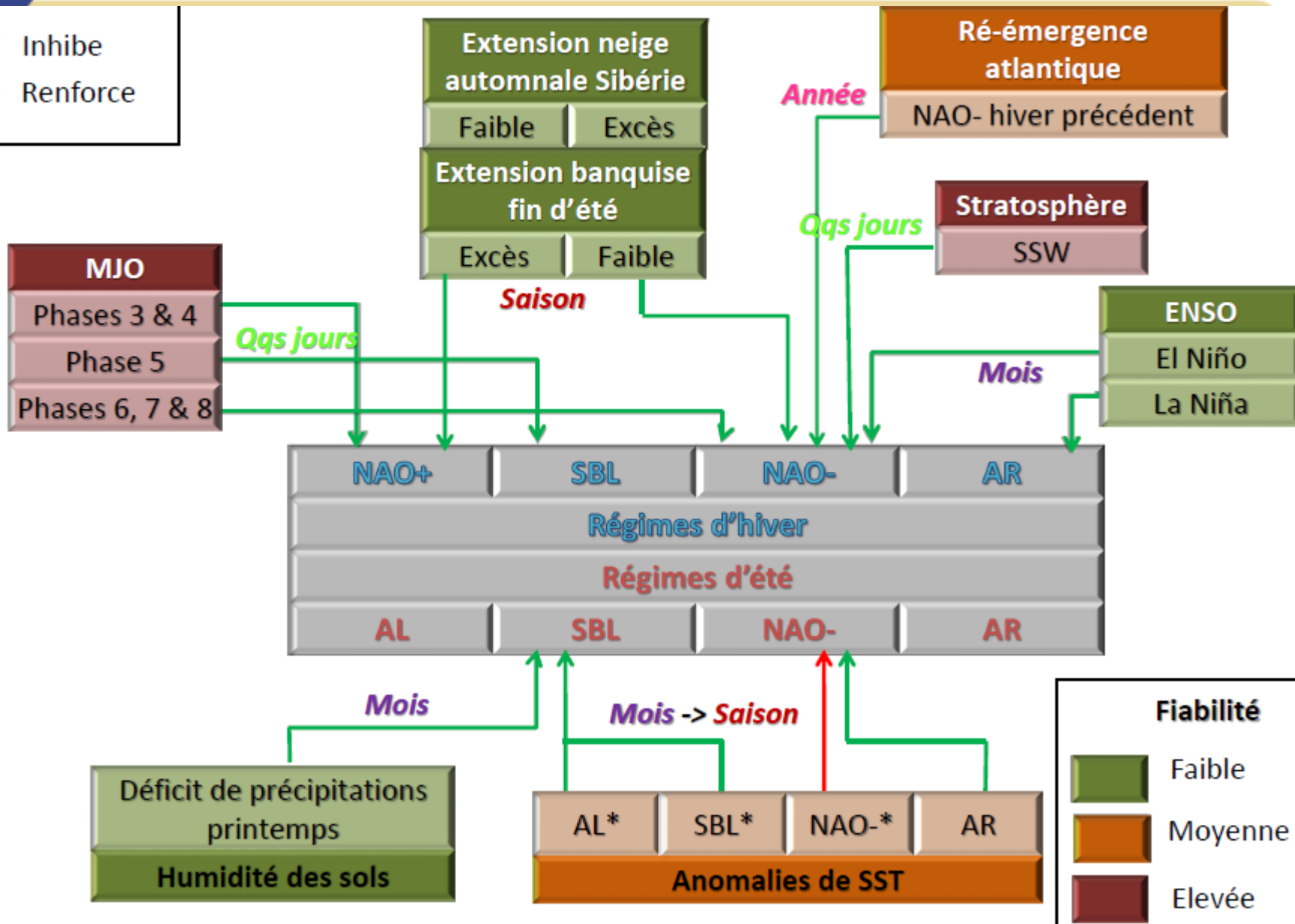
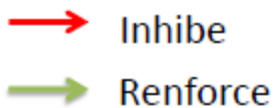
ECMWF S4



Anomalous regime occurrence (%)



Computed as departure from the 1993-2007 climatology

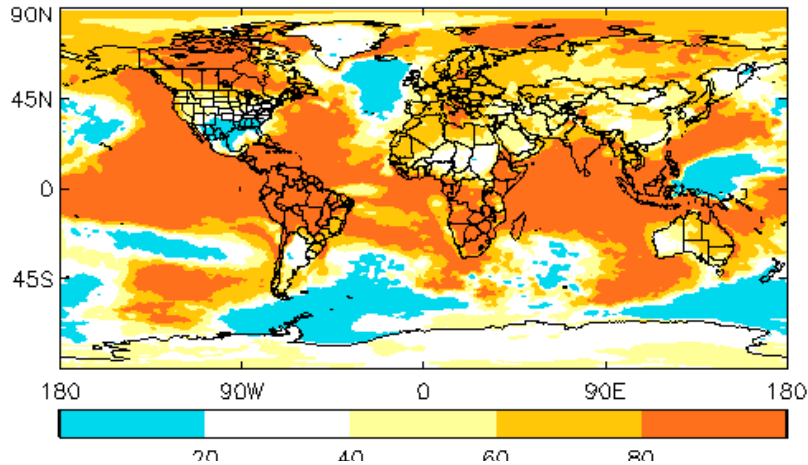


Outline

- Temperature and Rainfall Seasonal Forecasts

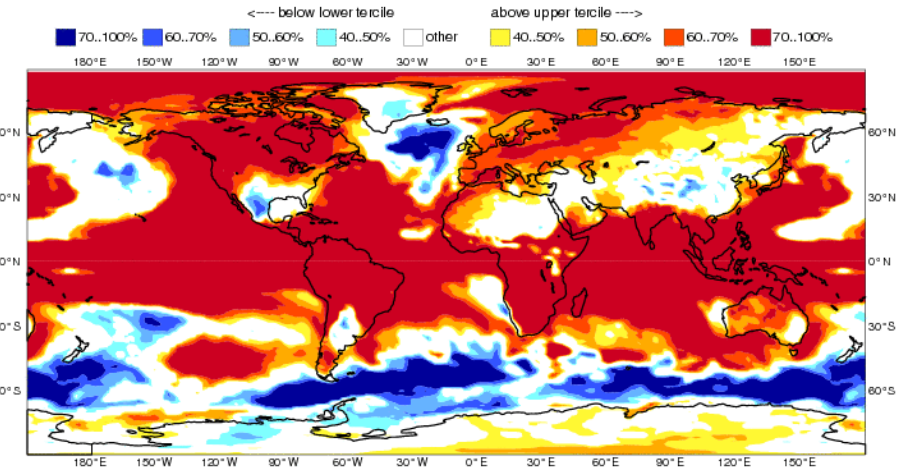
Temperature probability : DJF

Probability of tercile categories Dec/Jan/Feb Issued Nov 2015
above-normal 2m temperature

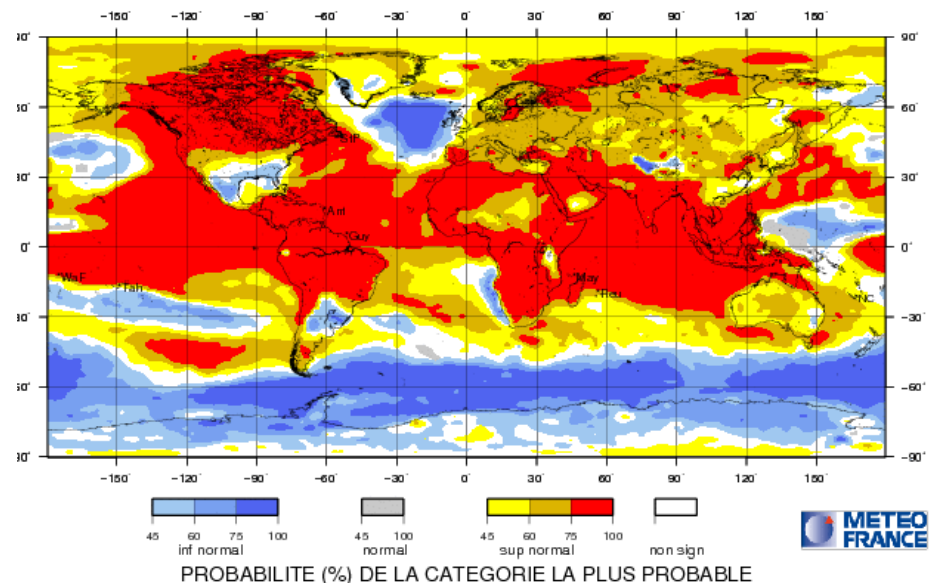


ECMWF Seasonal Forecast
Prob(most likely category of 2m temperature)
Forecast start reference is 01/11/15
Ensemble size = 51, climate size = 450

System 4
DJF 2015/16

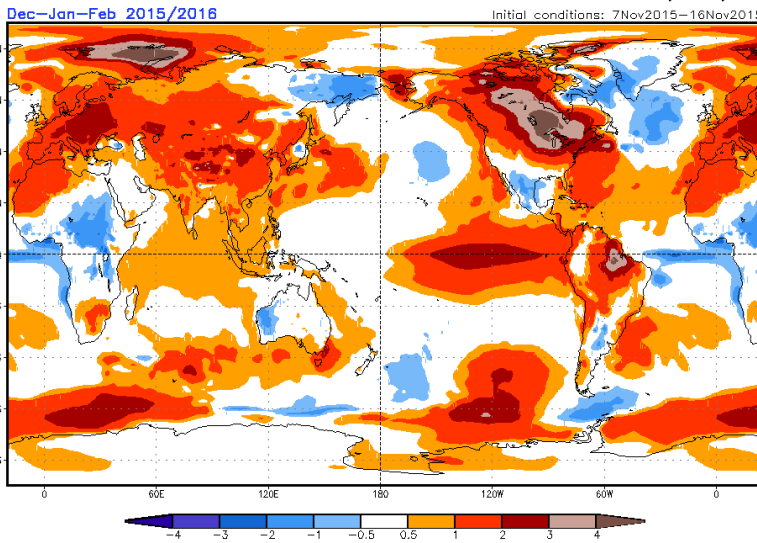


T 2 M PREVISION ARPS4 DECEMBRE-JANVIER-FEVRIER RUN DE NOVEMBRE 2015



CFSv2 seasonal T2m anomalies (K)

NWS/NCEP/CPC
Initial conditions: 7Nov2015-16Nov2015

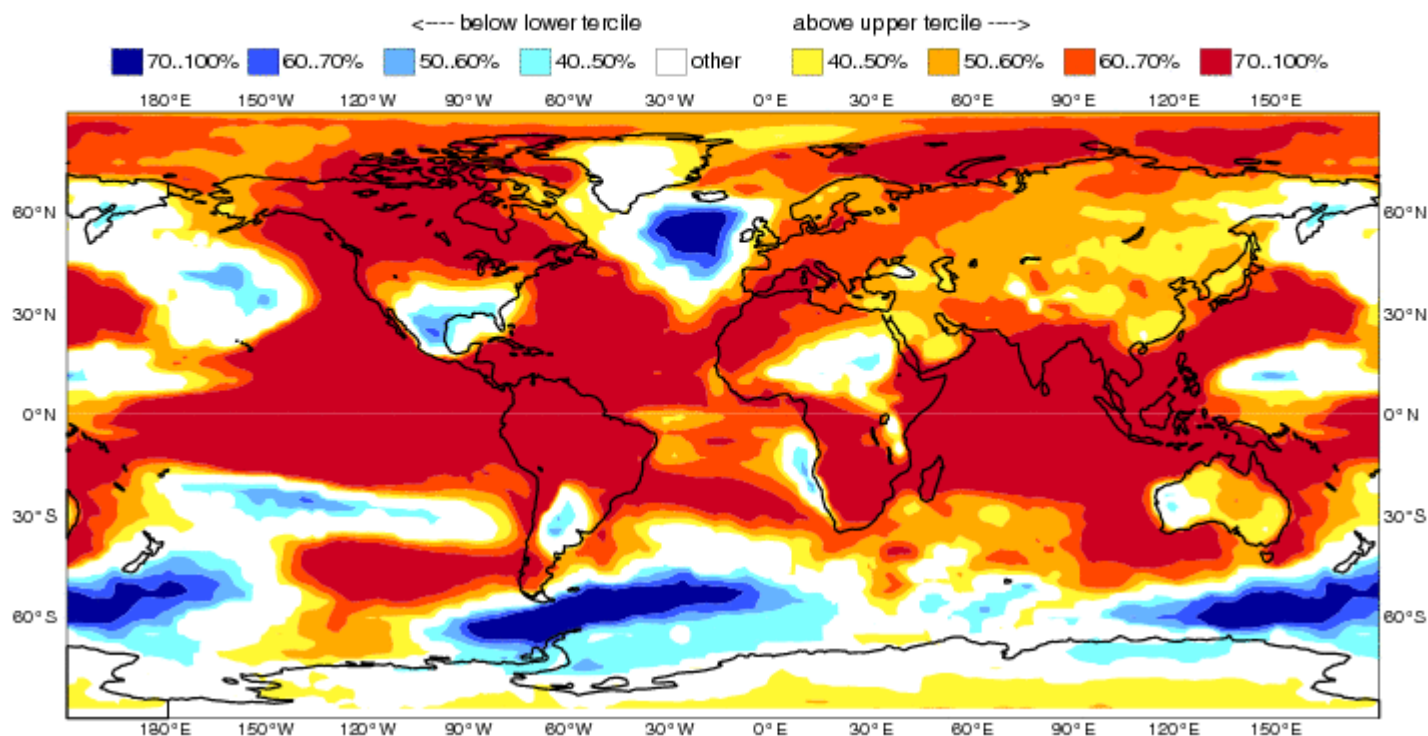


PROBABILITY (%) DE LA CATEGORIE LA PLUS PROBABLE

Temperature probability : DJF

EUROSIP multi-model seasonal forecast
Prob(most likely category of 2m temperature)
Forecast start reference is 01/11/15
Unweighted mean

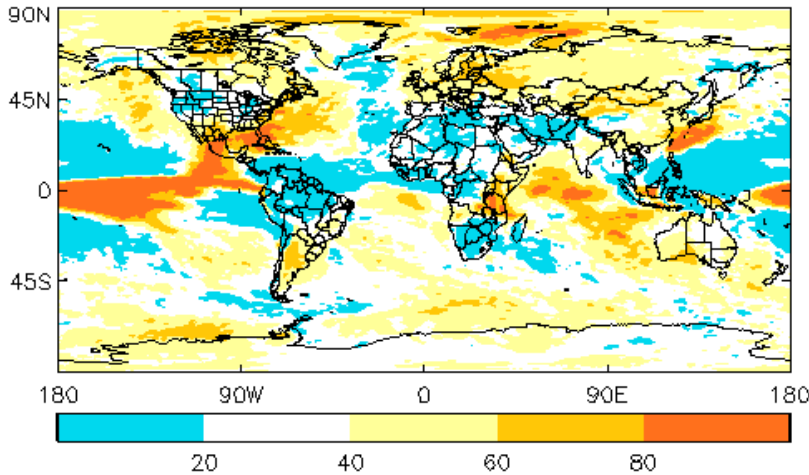
ECMWF/Met Office/Meteo-France/NCEP
DJF 2015/16



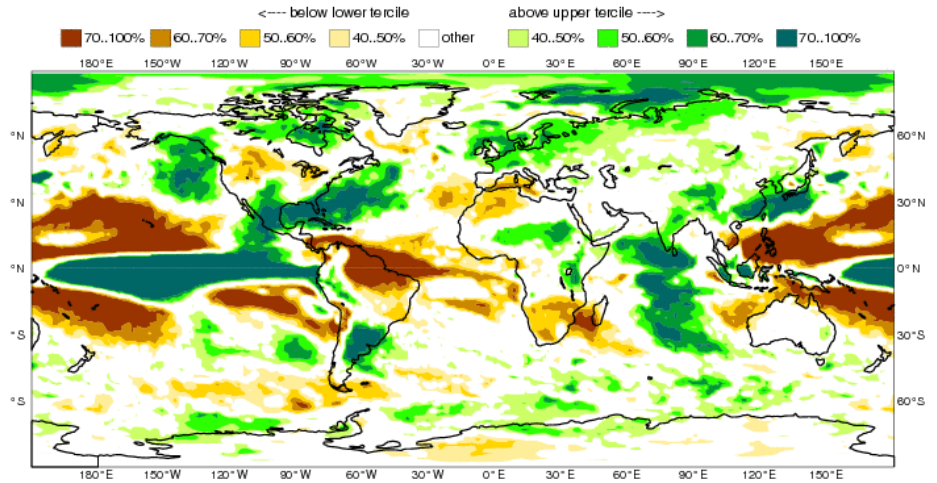
Precipitation probability : DJF

System 4
DJF 2015/16

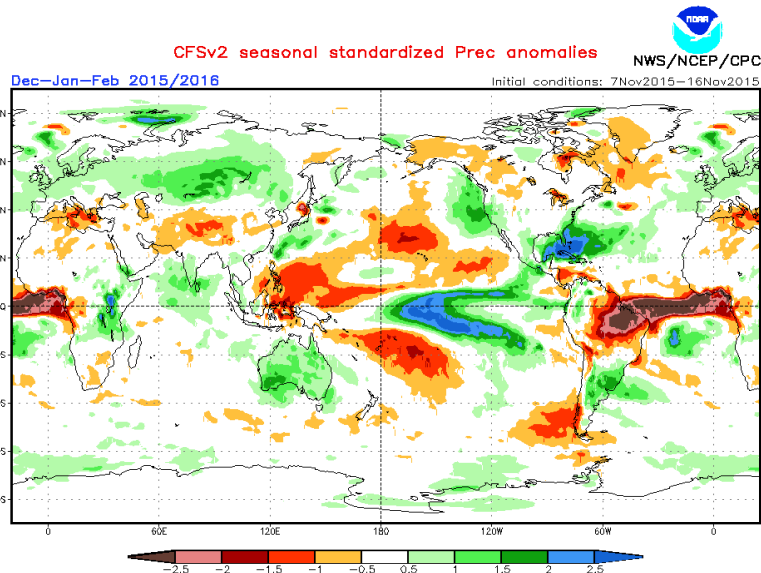
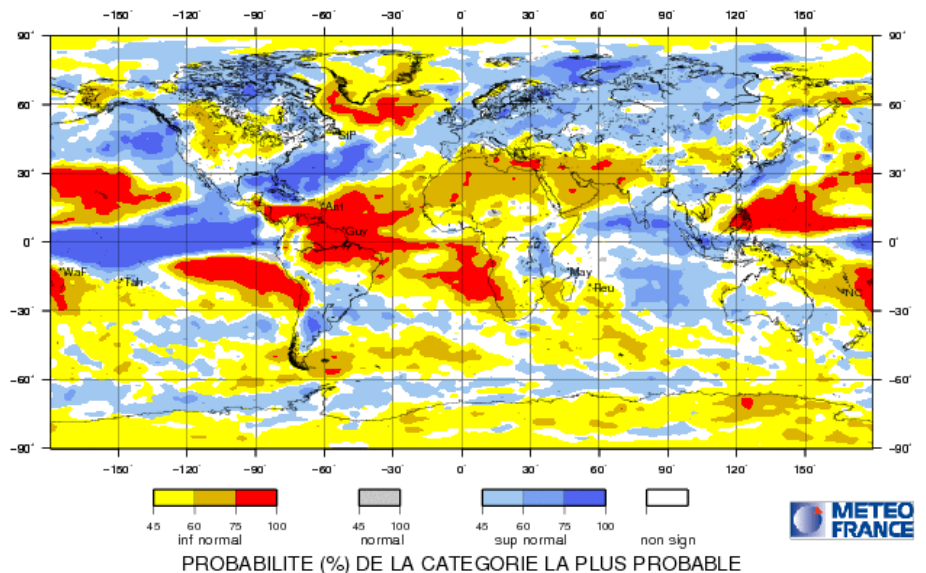
Probability of tercile categories Dec/Jan/Feb Issued Nov 2015
above-normal precipitation



ECMWF Seasonal Forecast
Prob(most likely category of precipitation)
Forecast start reference is 01/11/15
Ensemble size = 51, climate size = 450



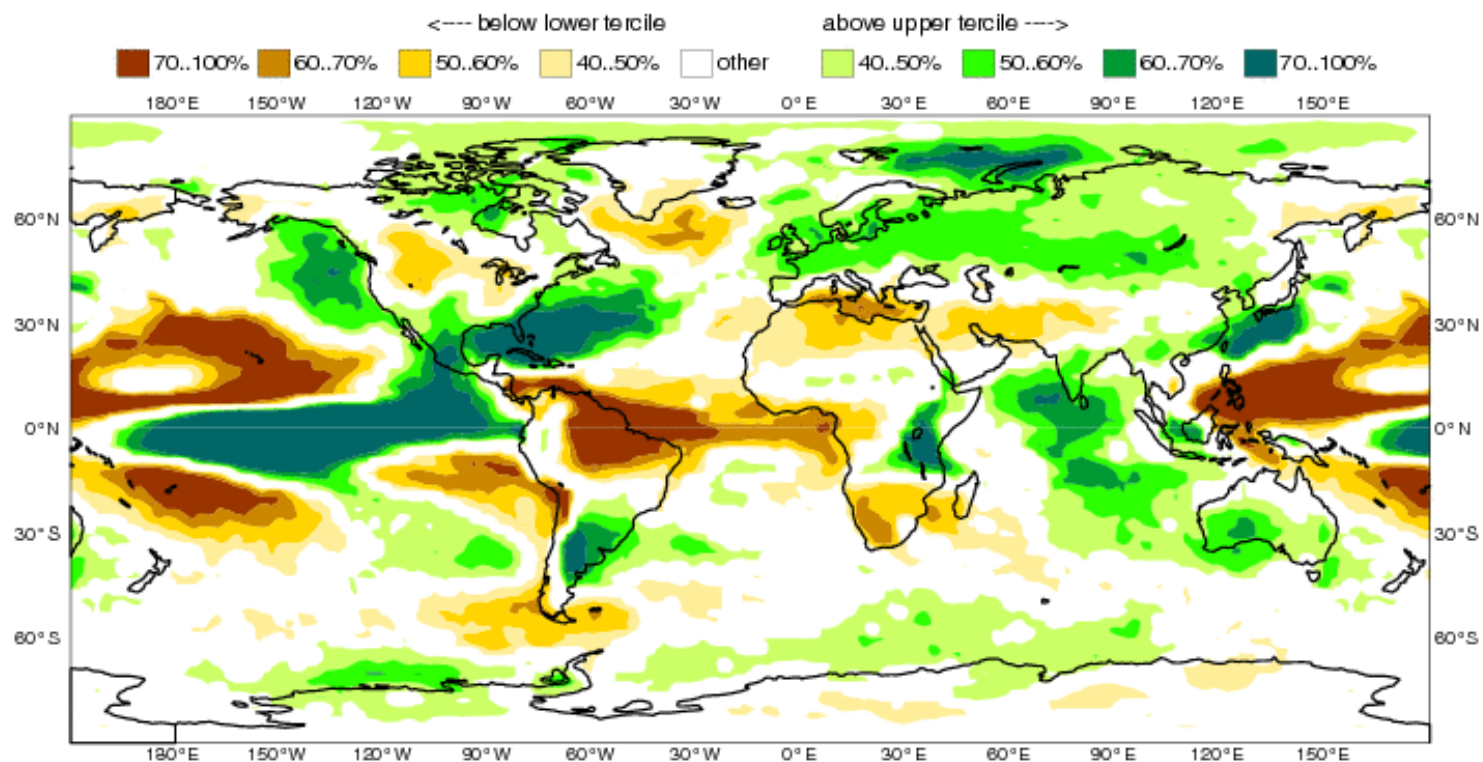
RECIPITATIONS PREVISION ARPS4 DECEMBRE - JANVIER - FEVRIER RUN DE NOVEMBRE 2015



Precipitation probability : DJF

EUROSIP multi-model seasonal forecast
Prob(most likely category of precipitation)
Forecast start reference is 01/11/15
Unweighted mean

ECMWF/Met Office/Meteo-France/NCEP
DJF 2015/16



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23-26/11/2015 – Marrakesh, Morocco



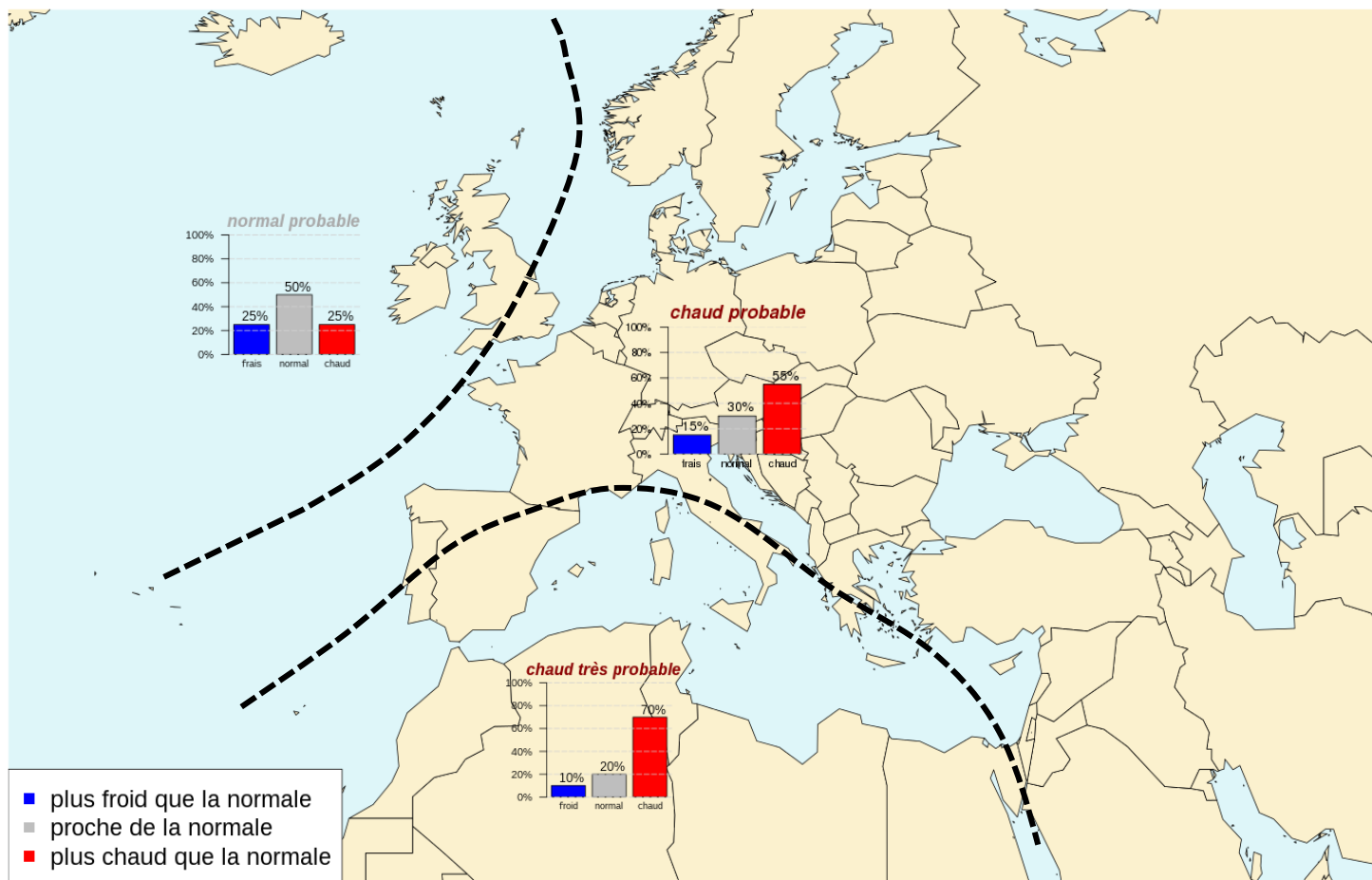
METEO FRANCE
Toujours un temps d'avance

Outline

■ Regional forecasts

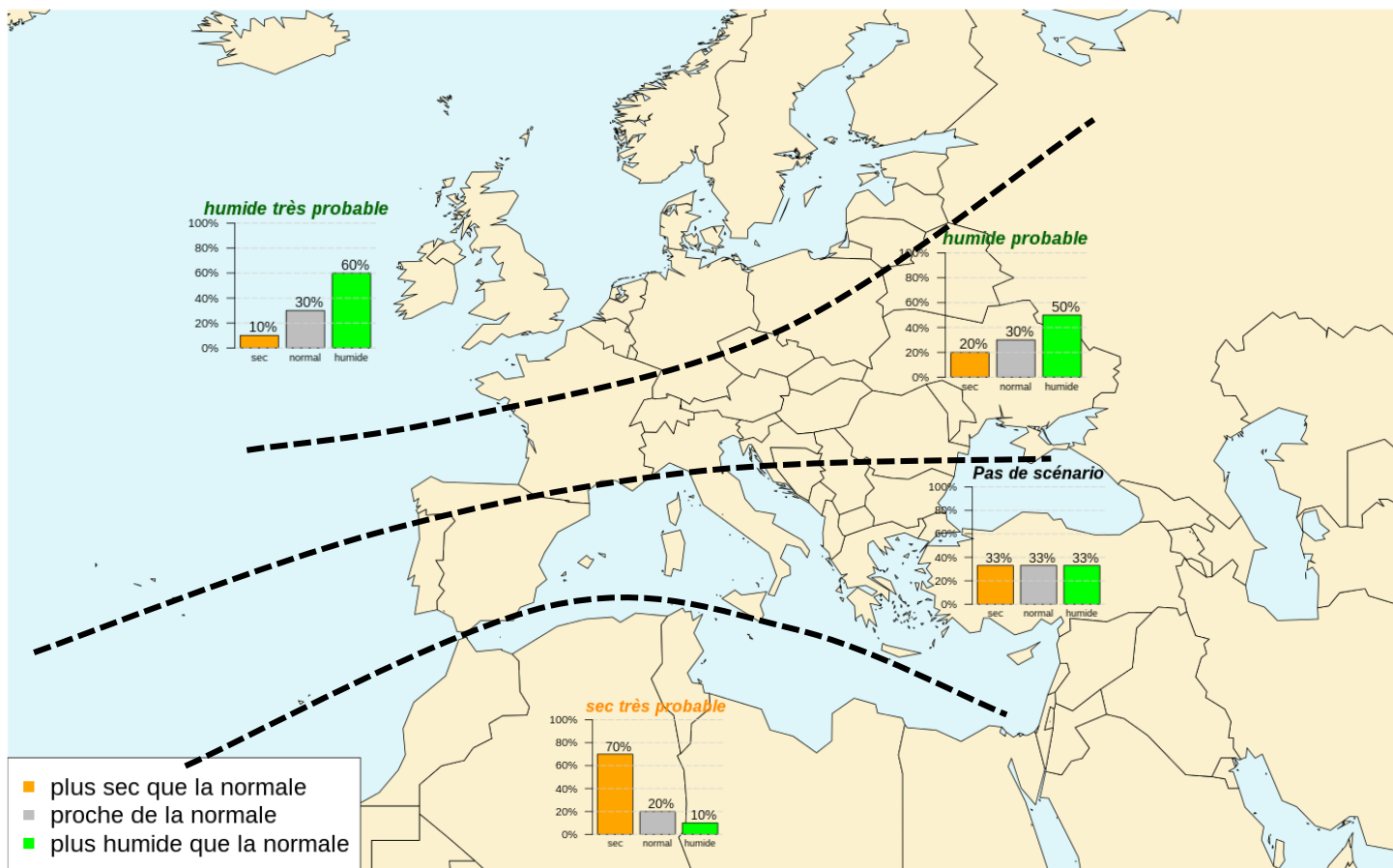
Temperature Scenario for Europe : DJF

Prévisions saisonnières probabilistes de températures pour le trimestre prochain



Rainfall Scenario for Europe : DJF

Prévisions saisonnières probabilistes de précipitations pour le trimestre prochain



Questions