Mediterranean Climate Outlook Forum

Contribution of GPC Toulouse

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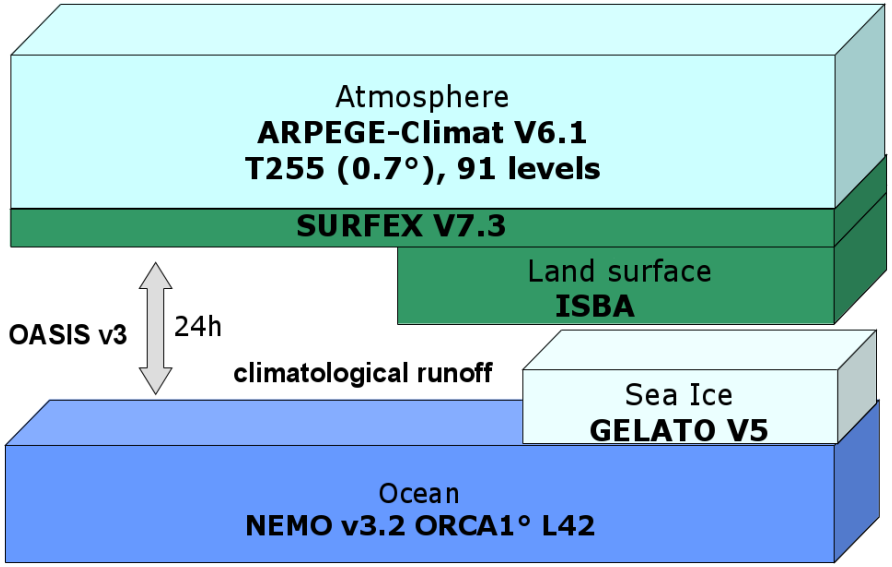
http://seasonal.meteo.fr/

Zagreb, 21-23, November 2017

Current version : MF System 5

Météo-France System 5

- Run in real time since 2015
- Included in EUROSIP since 2016
- C3S "Proof of concept" system since March 2016

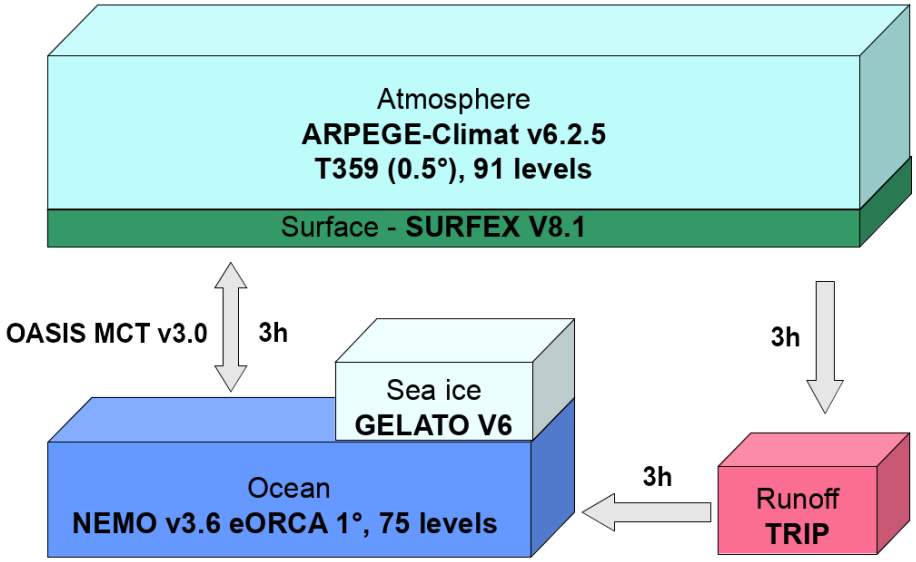


	Re-forecasts	Real-time forecasts
Frequency	Each month 1991-2014	Each month since May 2015
Lead time	7 months	7 months
Ensemble size	15 members (in-run perturb.)	51 members (in-run perturb.)
Initial conditions	Atm./surf: ERA-Interim Oc./sea-ice: Mercator-Ocean PSY2G2V3	Atm./surf: IFS analysis Oc./sea-ice: Mercator-Ocean upscaled analysis

New version : MF System 6

Météo-France System 6

- New atmospheric physics and ocean model version
- Run in real time since March 2017
- Included in Copernicus C3S seasonal forecast data by end 2017

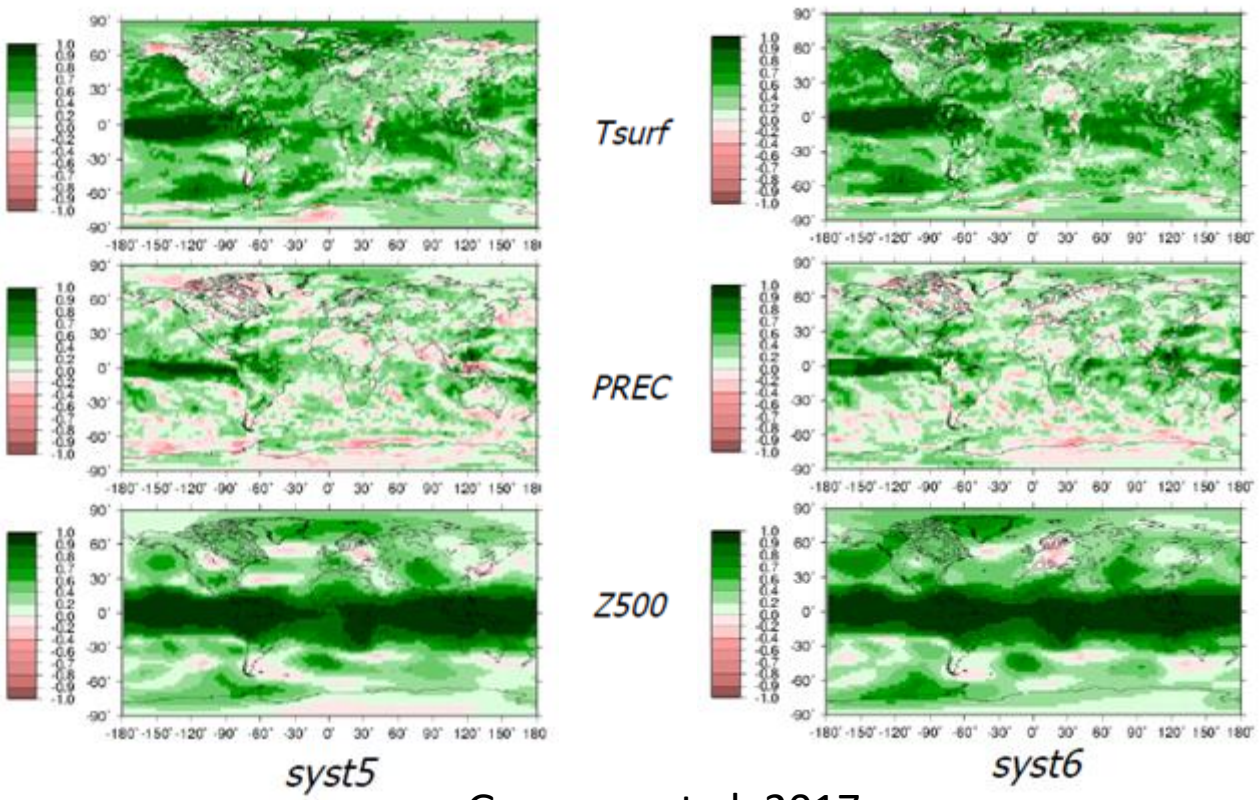


	Re-forecasts	Real-time forecasts
Frequency	Each month 1993-2016	Each month from March 2017
Lead time	7 months	7 months
Ensemble size	**25 members** (in-run perturb.)	51 members (in-run perturb.)
Initial conditions	Atm./surf: ERA-Interim Oc./sea-ice: Mercator-Ocean **new product** (on e-ORCA grid)	Atm./surf: IFS analysis Oc./sea-ice: Mercator-Ocean upscaled analysis

Sensitivity of seasonal predictability to atmospheric and oceanic model evolution

- In winter, improvements concern mainly IT area for T, P and Z500 and also NH even the predictability stays quite weak (over Europe unfortunately)

Winter (DJF) : Temporal correlations over the globe



Gueremy et al, 2017

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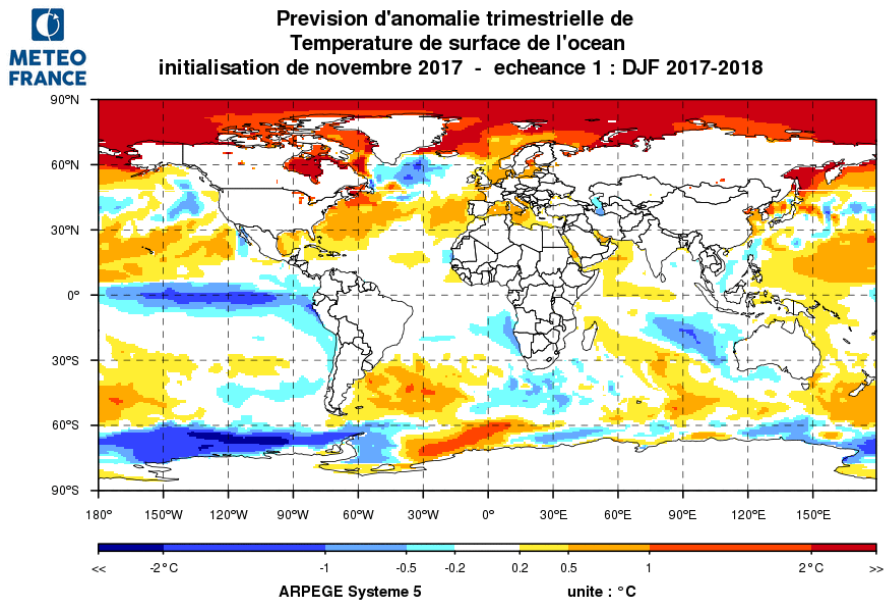
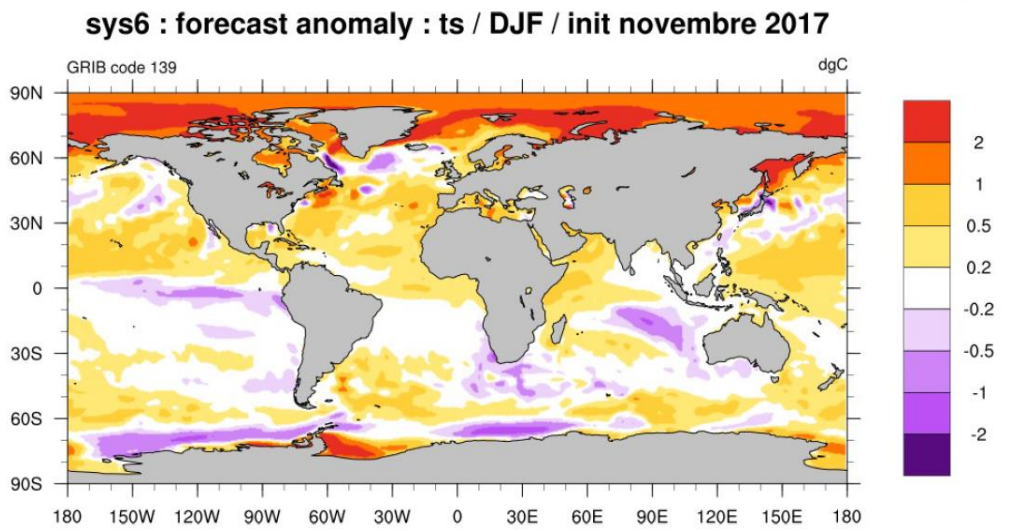
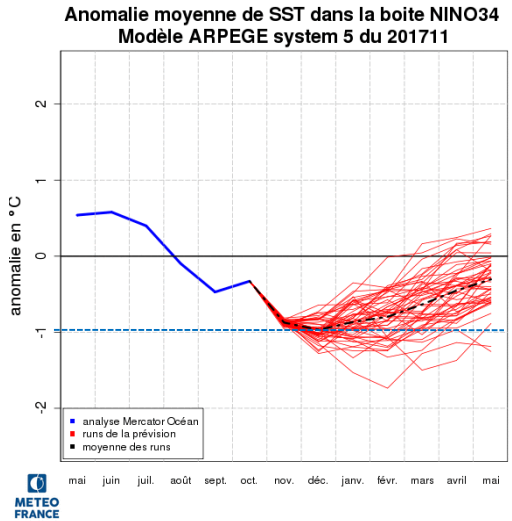
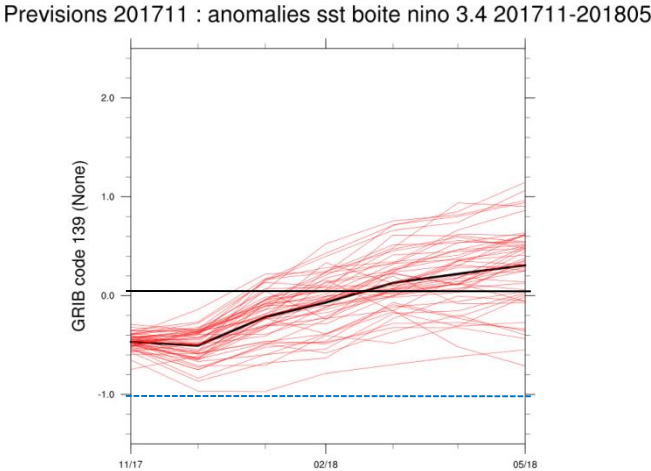
SST Forecast and Niño 3.4 evolution



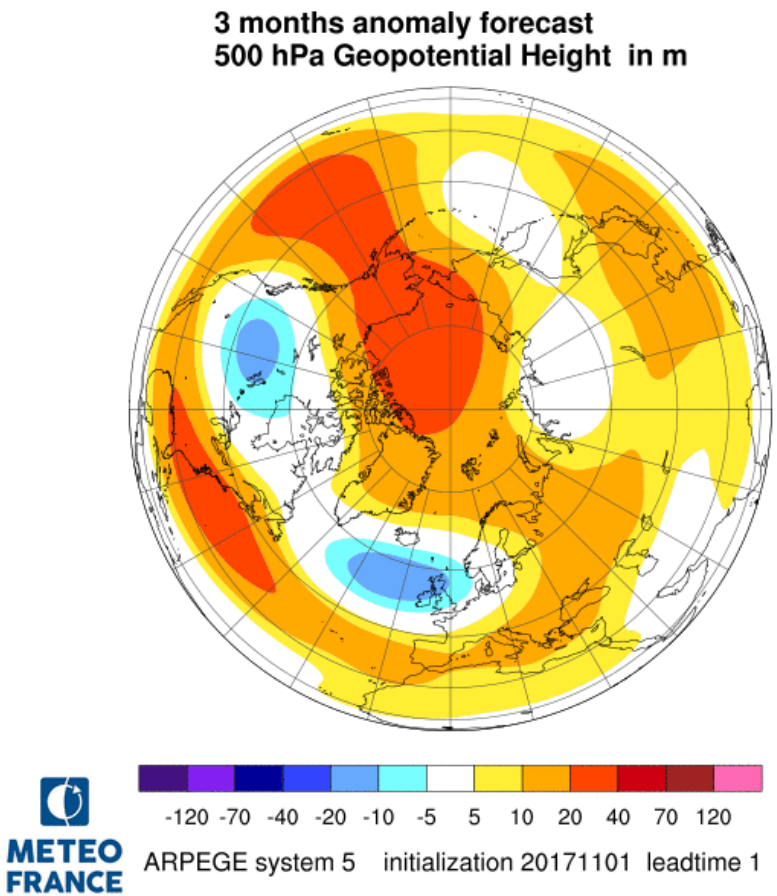


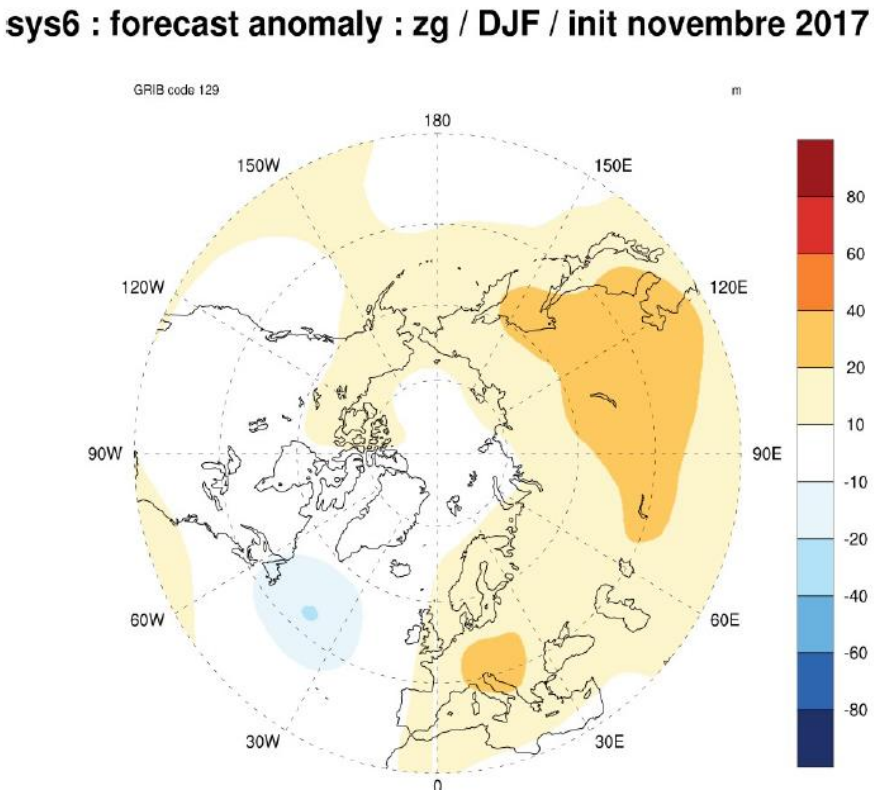


- Same patterns with some differences in term of intensity
- Moderate Niña event with Syst 5 , weak Niña to neutral situation in Spring for Syst 6



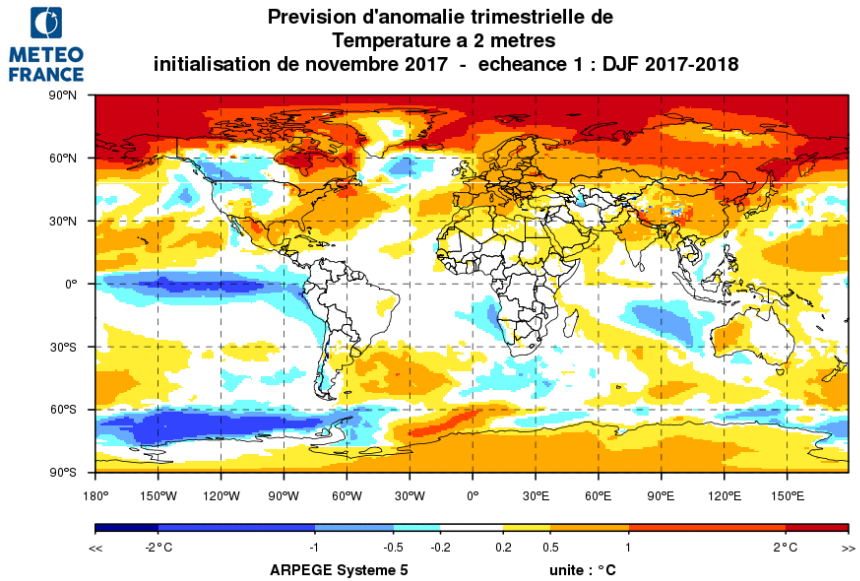
Z500 Height Geopotential

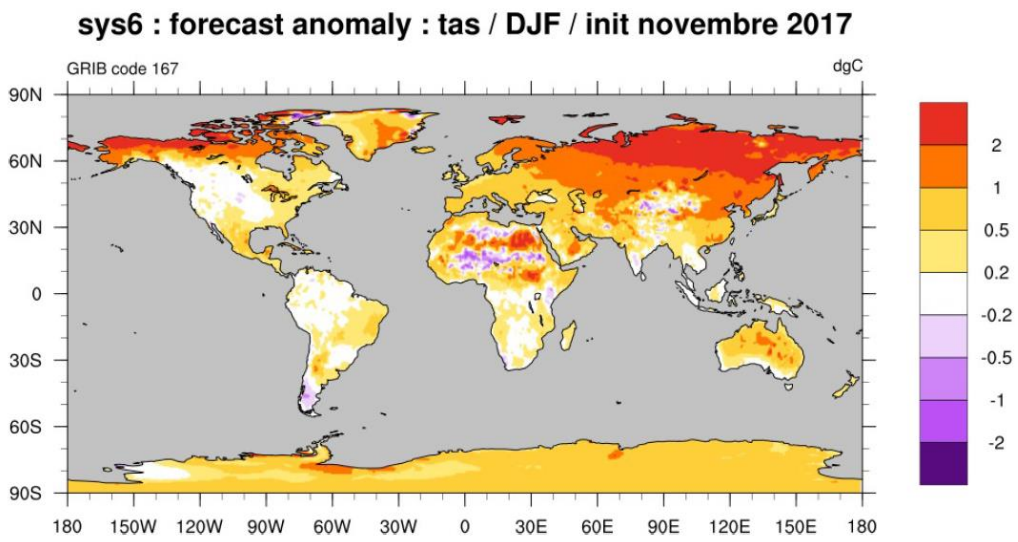


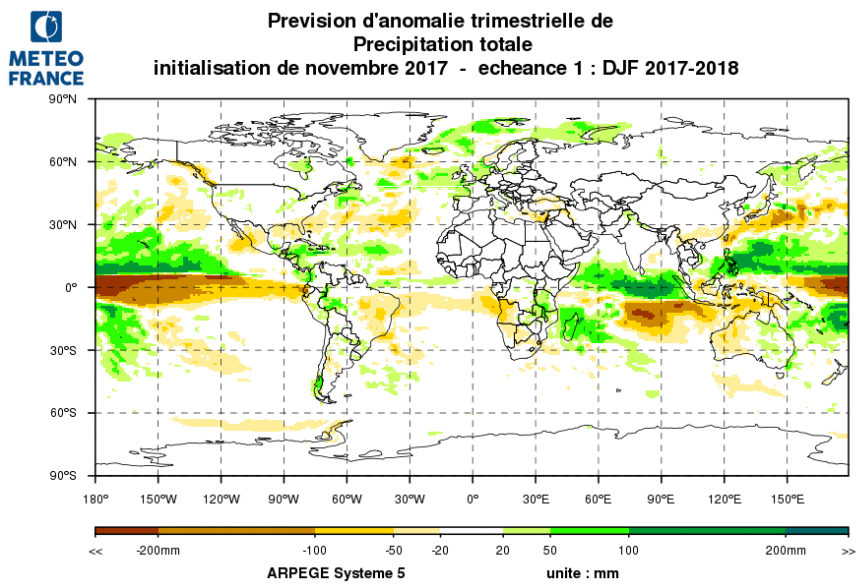


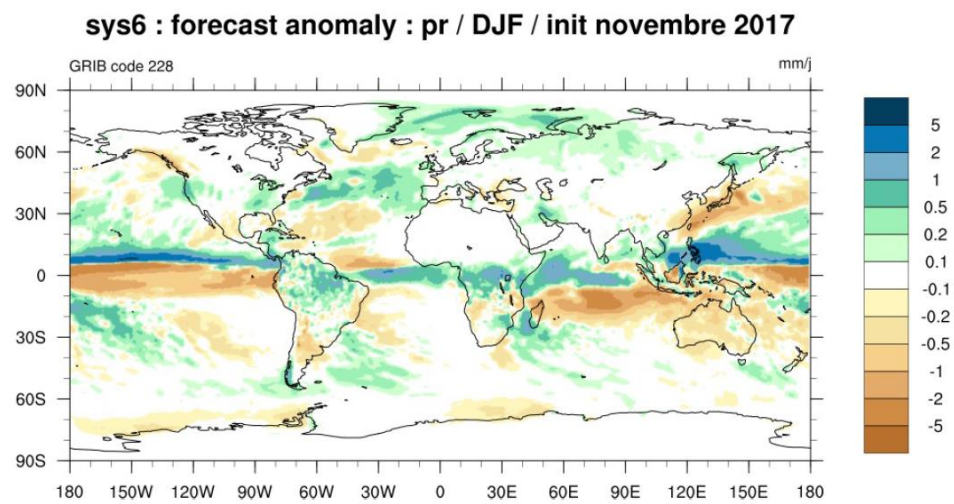
- For Syst 5, a very classical PNA pattern in North America and NAO+ signal in Atlantic
- For Syst 6, PNA pattern weaker and classical EA+ mode over Western Europe

Temperature and precipitations









Synthesis for MedCOF

	System 5	System 6
Oceanic drivers :	Moderate Niña	Weak Niña to Neutral
Atmospheric drivers	NAO+ pattern	EA+ pattern
Temperature	Warm signal, stronger in SW Europe, weaker in N Africa	Warm signal, weaker in NE Africa
Precipitation	Normal signal on Europe, drier in N Africa	Normal (or wet near Oceanic coasts), drier in the East Medit area

Thank you for your attention

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