MEDCOF-17 & SEECOF 26

RCC-LRF Météo-France report for DJF 2021-2022

Current state of the climate

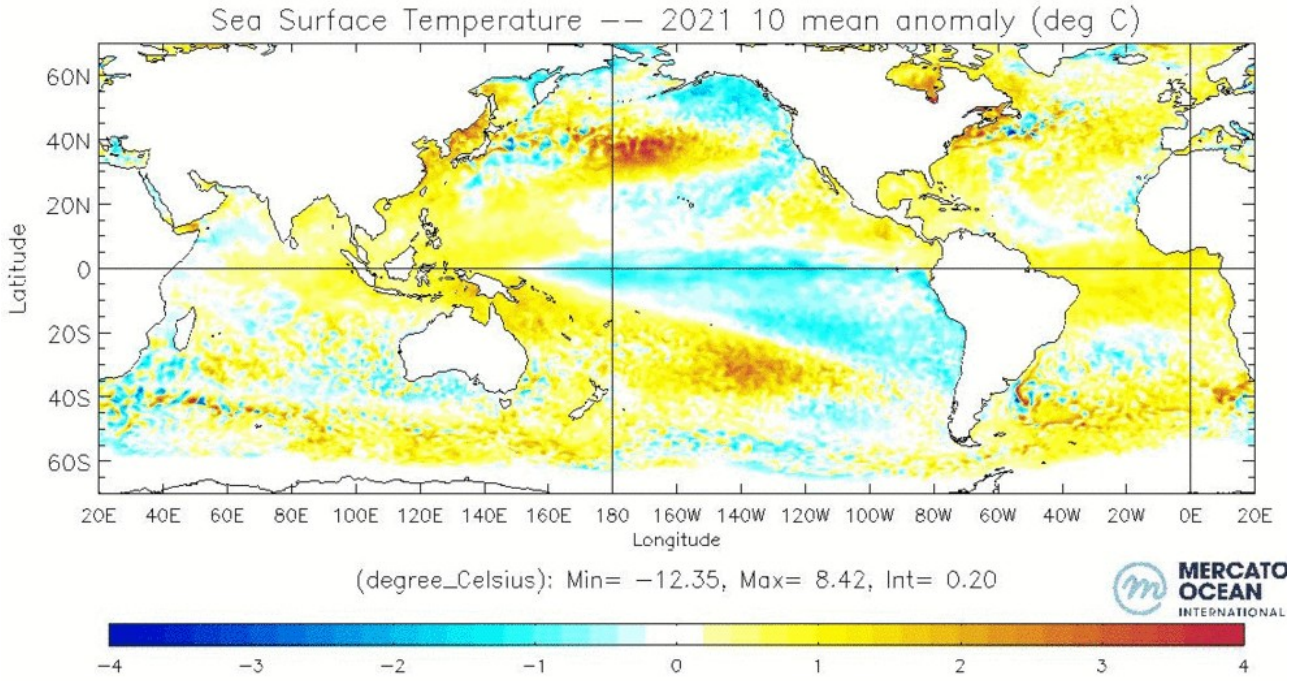
A) Oceanic Analysis

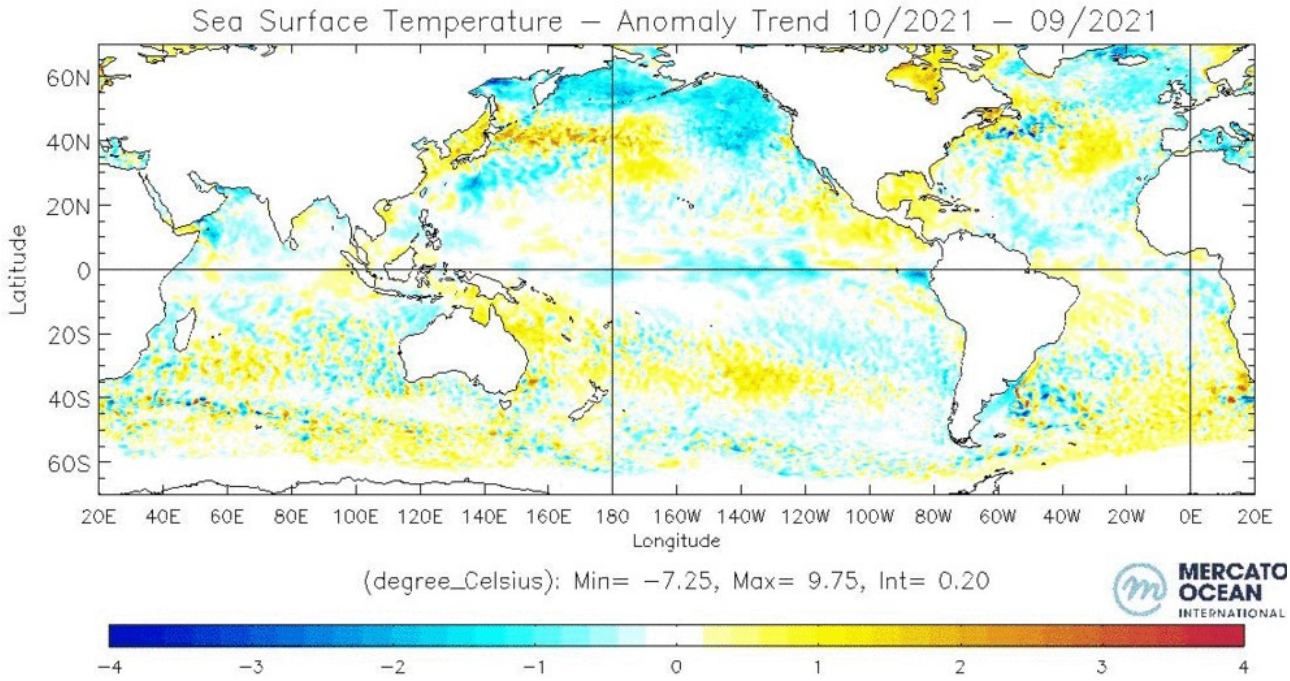
Current ENSO situation: weak La Niña

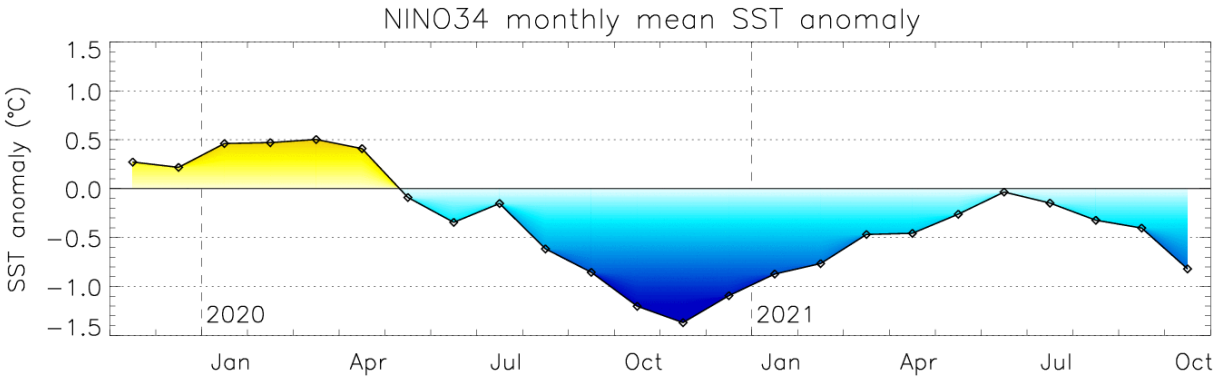
In the Pacific Ocean : the cold anomaly in the Central and East Pacific became stronger, the La Niña pattern is now well marked. Over the North Pacific, there has been a strong cooling over the highest latitudes, leading to a distinct **PDO- pattern** (see October SST anomaly map).

In the Indian Ocean : slight warm anomalies from India to the Maritime Continent, and near normal to the west.

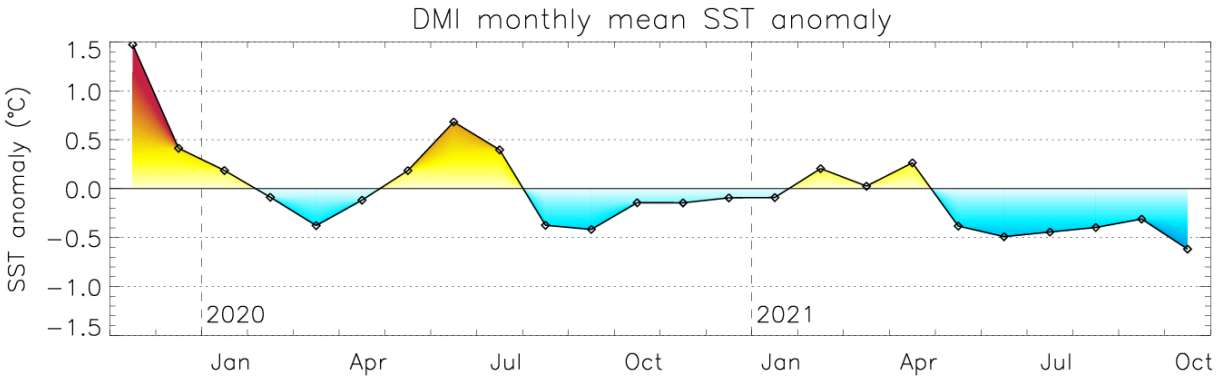
In the Atlantic Ocean : the strong positive anomaly along the equator hasn't clearly evolved in October.







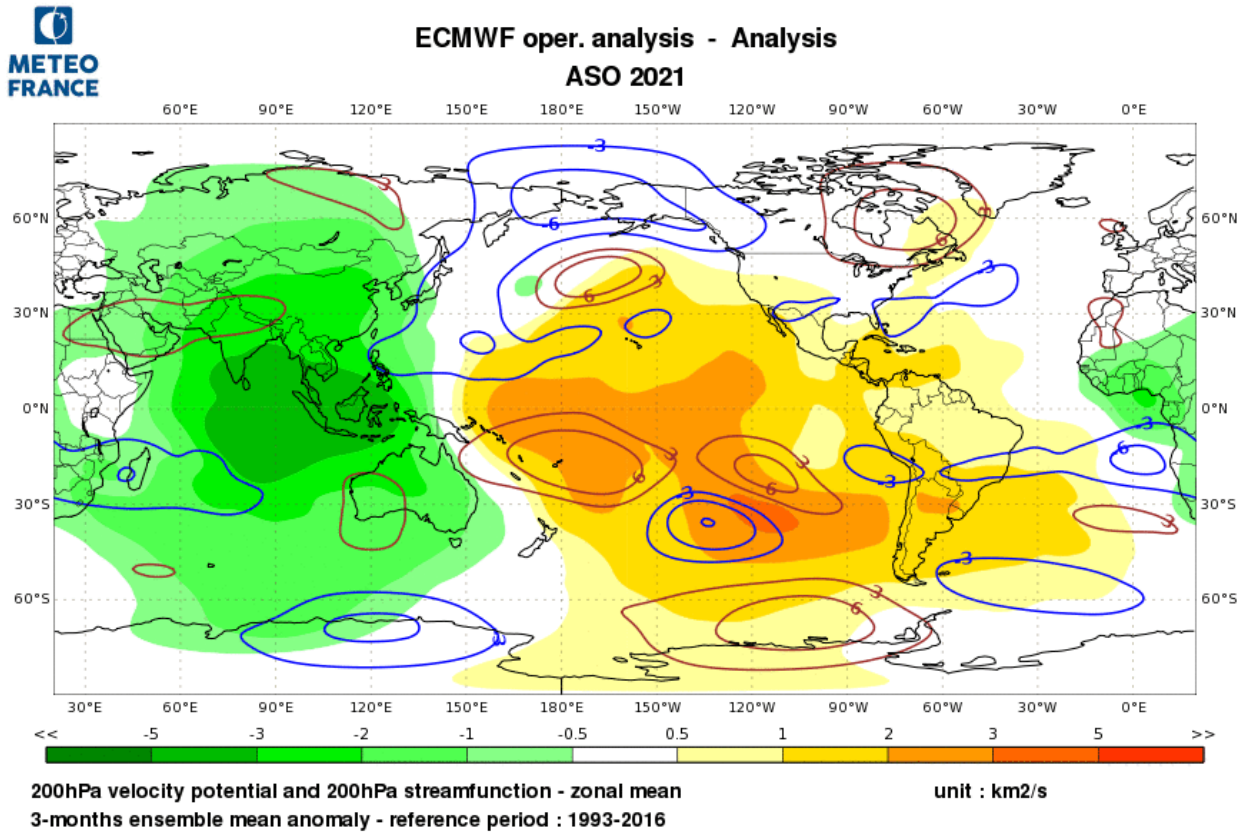
Nino3.4 monthly index issued from Mercator Ocean analysis : **– 0.8°C**



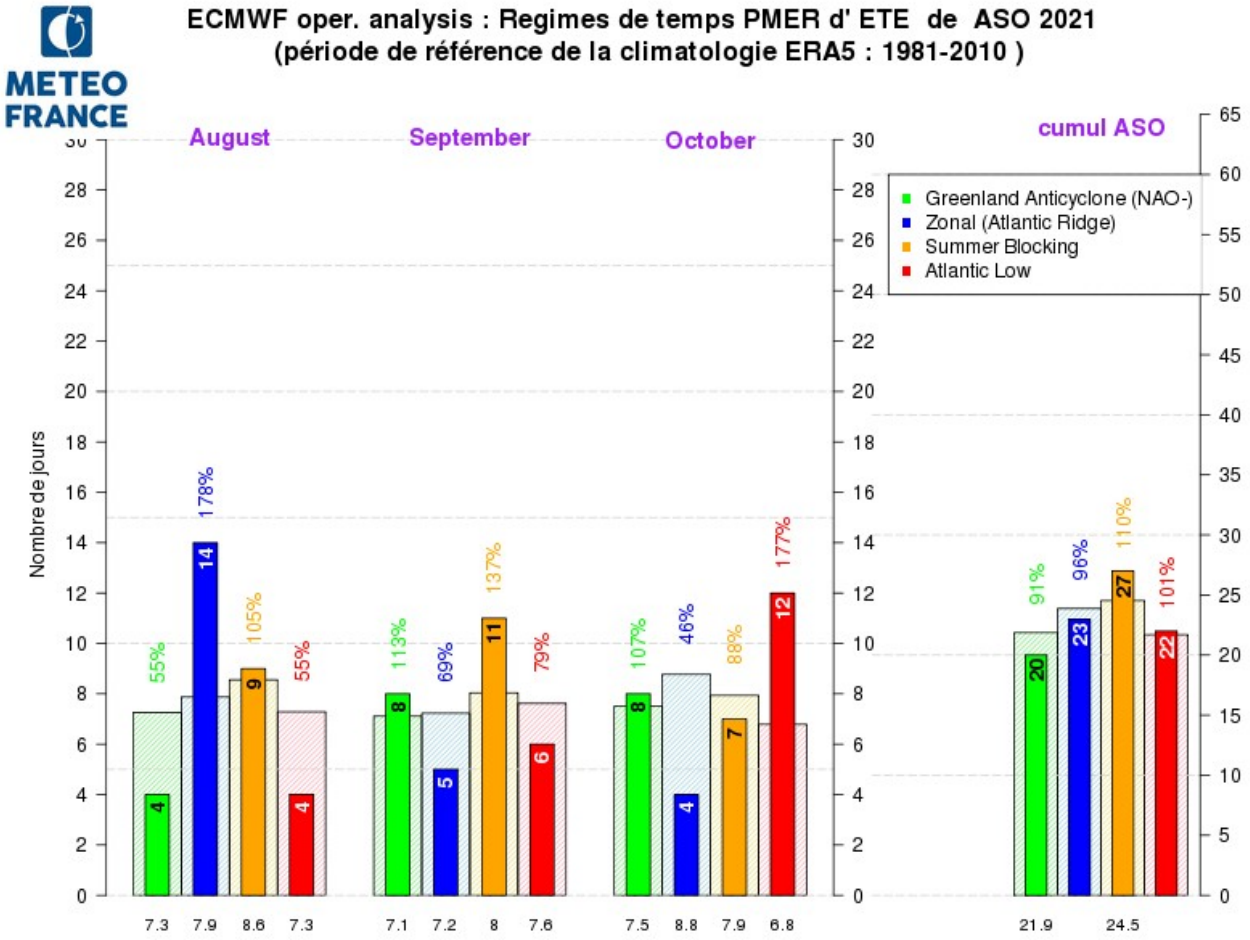
DMI monthly index issued from Mercator Ocean analysis : **– 0.6°C**

B) Atmospheric Analysis

The impact of La Nina and of the negative phase of IOD (probably linked) on large scale convection in the tropics was already present in the last months : see the dipole of anomaly on the ASO VP200hPa chart (coloured areas). However, no clear teleconnexion is in place in the North Pacific in link with this dipole of anomalies.



Over North Atlantic and Europe, weather regime frequencies show an important intra-seasonal variability during the ASO season.



C) Drivers

- Weak La Niña in place, in a strengthening phase ==> it tends to favour Atlantic Ridge circulation for DJF
- East QBO since summer 2021 ==> it tends to slow down the polar vortex, so to enhance SSW probability, so higher probability of NAO- circulations than normal
- negative phase of IOD (cf DMI) and strong positive anomaly over the equatorial Atlantic ==> modification of Hadley-Walker circulation ==> could lead to teleconnections from tropics toward mid-latitudes, so more predictability at seasonal scale over Europe and the Mediterranean Basin
- polar vortex : minor SSW observed in end October. Return to normal conditions at the beginning of November.