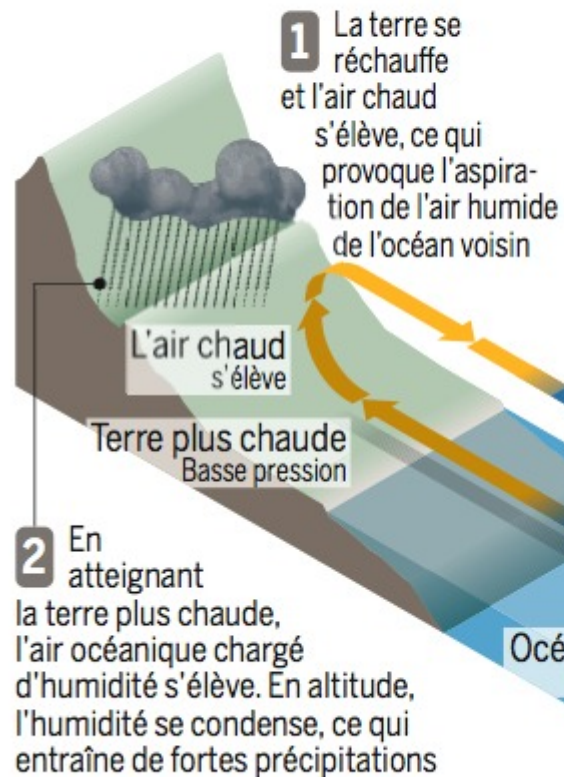


Mousson - ZCI

Brise de terre/mer à l'échelle du continent asiatique.

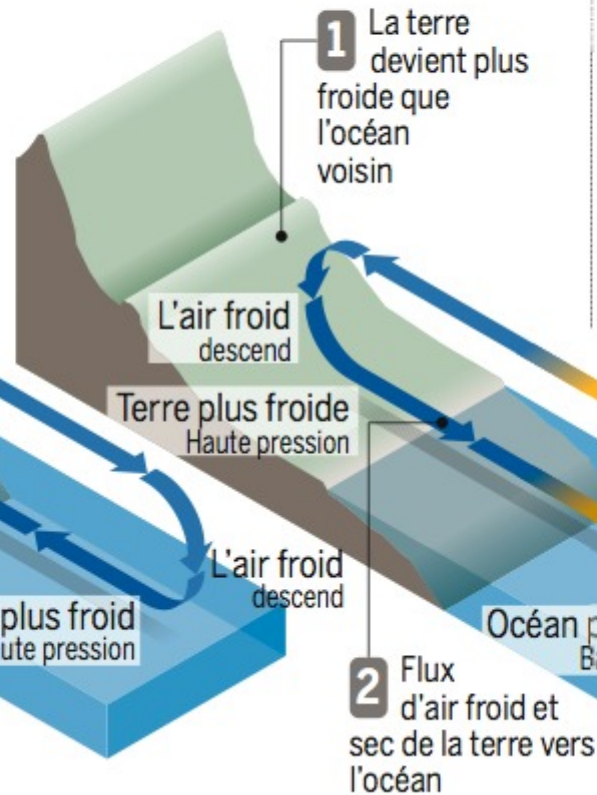
Mousson d'été

► Période Mai à septembre



Mousson d'hiver

► Période Octobre à janvier



Mousson en Asie

Le terme de mousson d'Asie regroupe les moussons indienne et d'Asie de l'Est

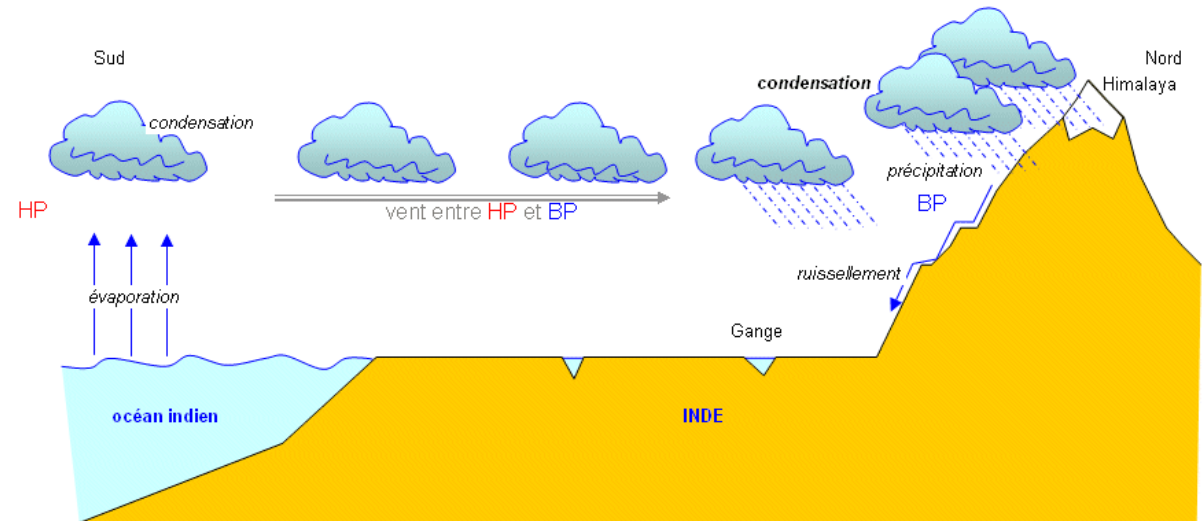
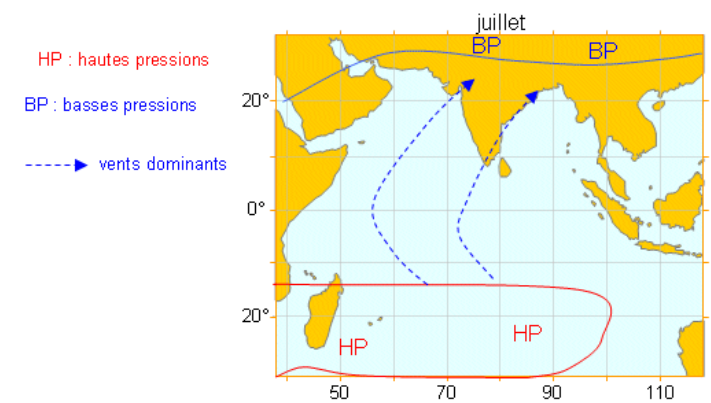
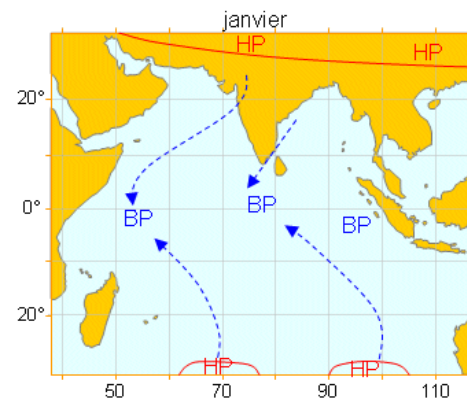
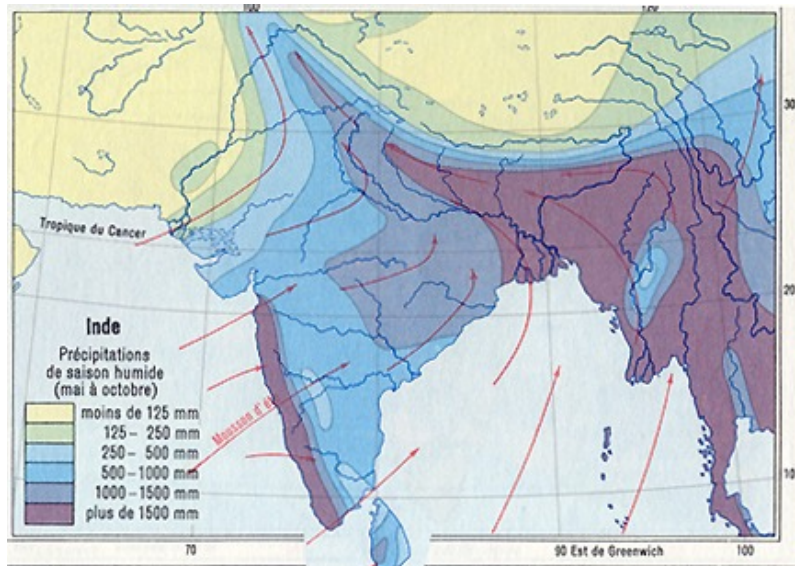
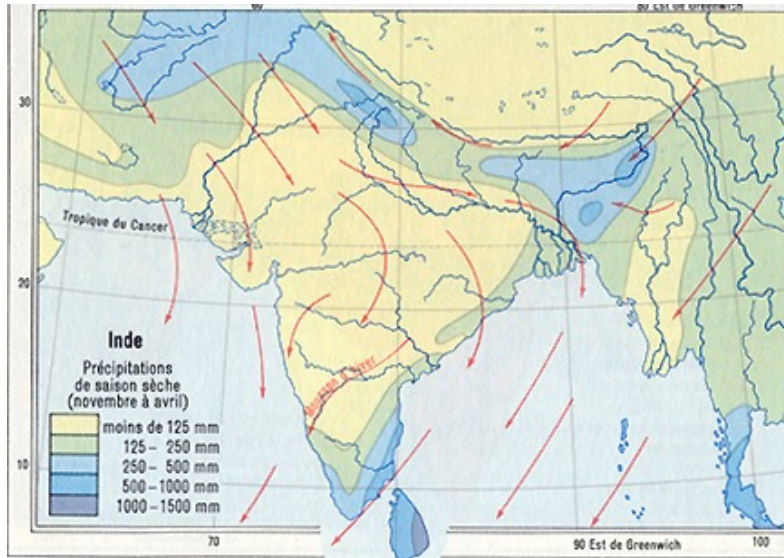


← Air froid
→ Air chaud

REUTERS

Sources: NOAA, National Geographic, Quaternary Science Review

Mousson - ZCI

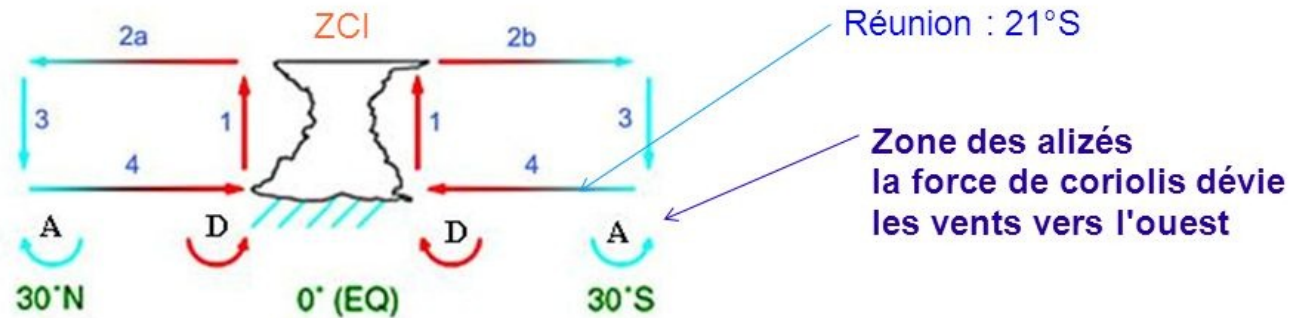


cycle de l'eau lors de la mousson d'été en Inde

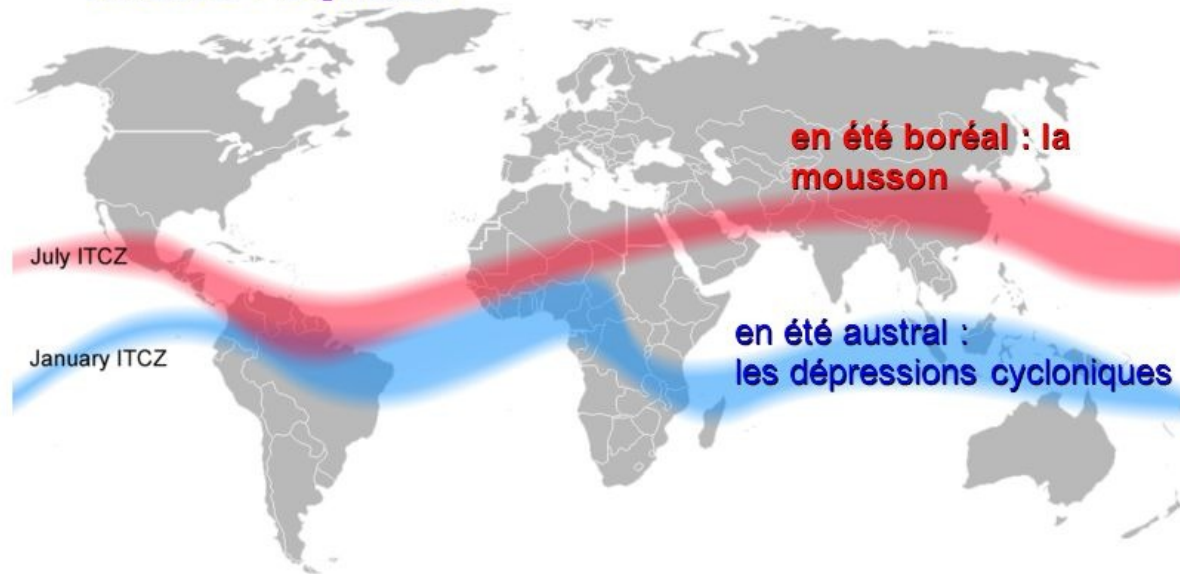
Mousson - ZCI

ZCI ou ICTZ: Zone de convergence intertropicale = équateur météo

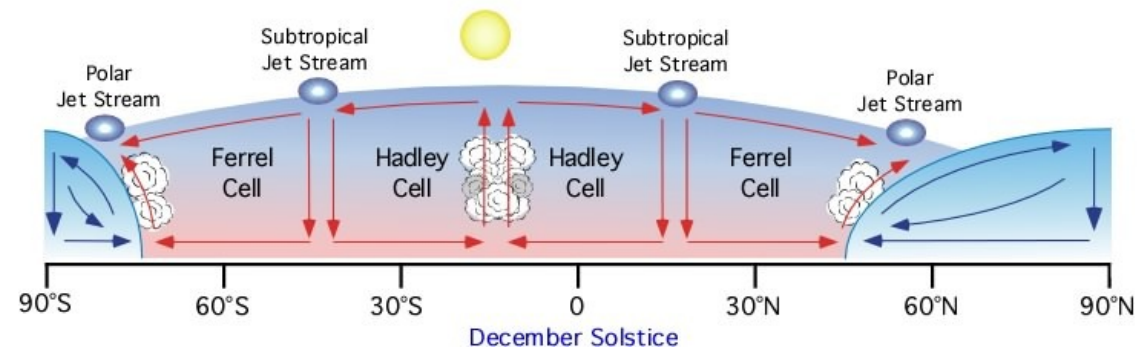
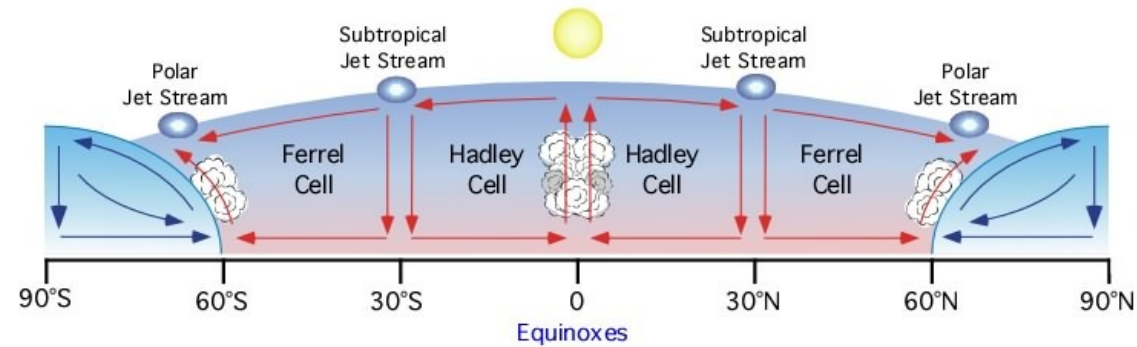
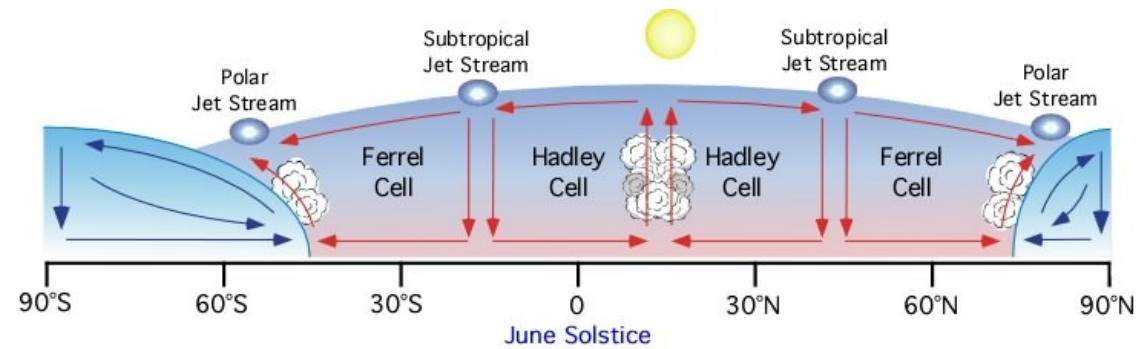
COUPE VERTICALE DE LA CELLULE DE HADLEY



LA ZCI est une zone instable humide qui fluctue selon la saison
elle est à l'origine de :

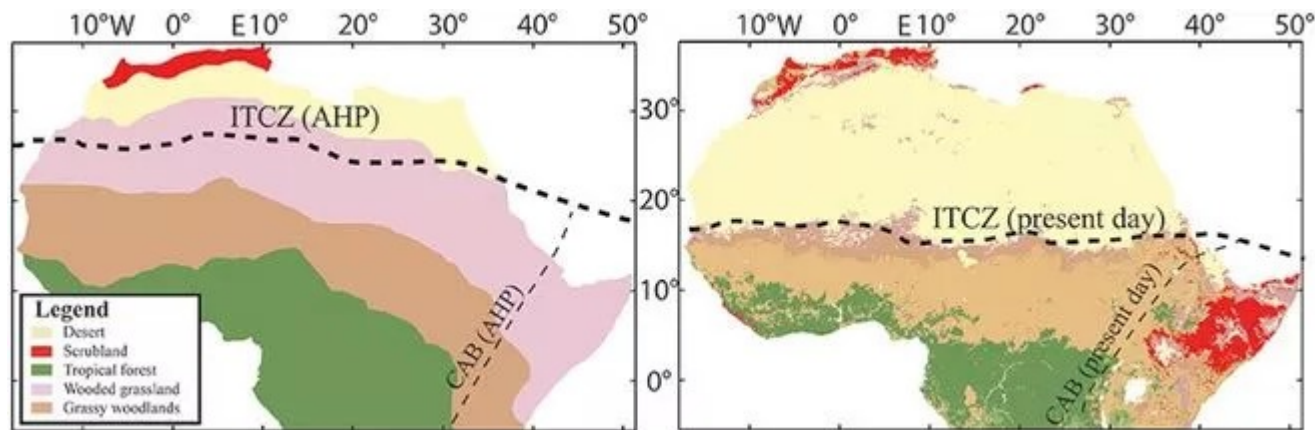


Mousson - ZCI



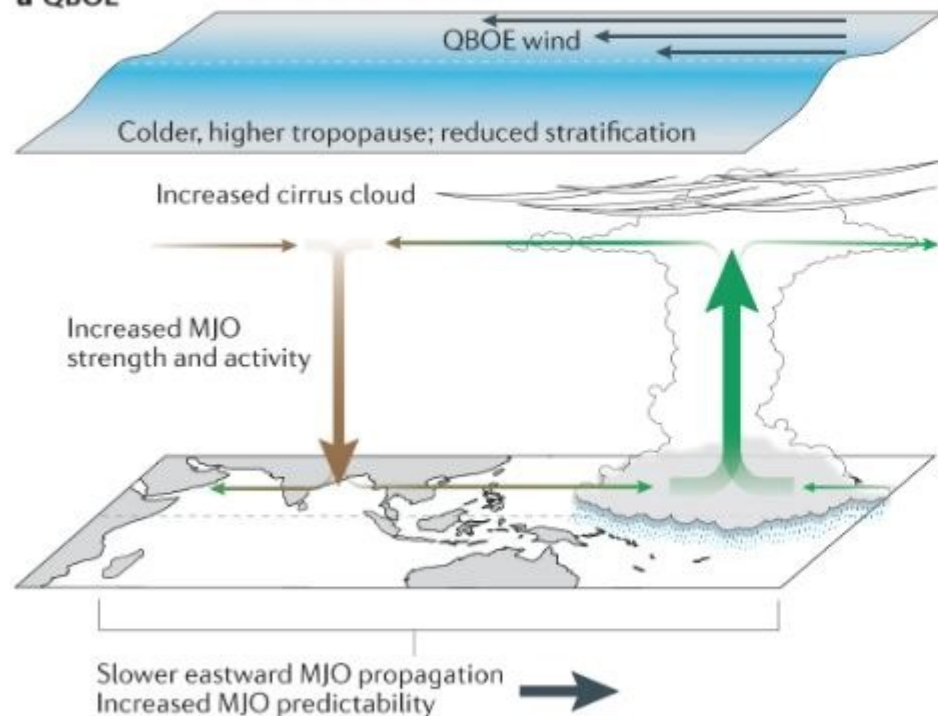
Mousson - ZCI

ICTZ dans le passé ...

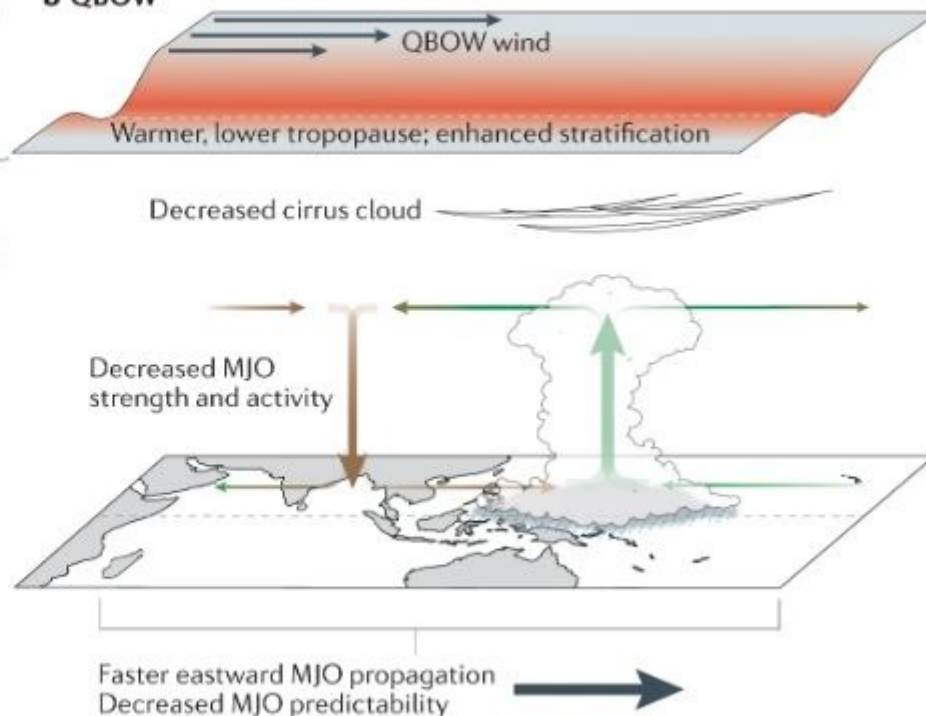


From: The influence of the quasi-biennial oscillation on the Madden-Julian oscillation

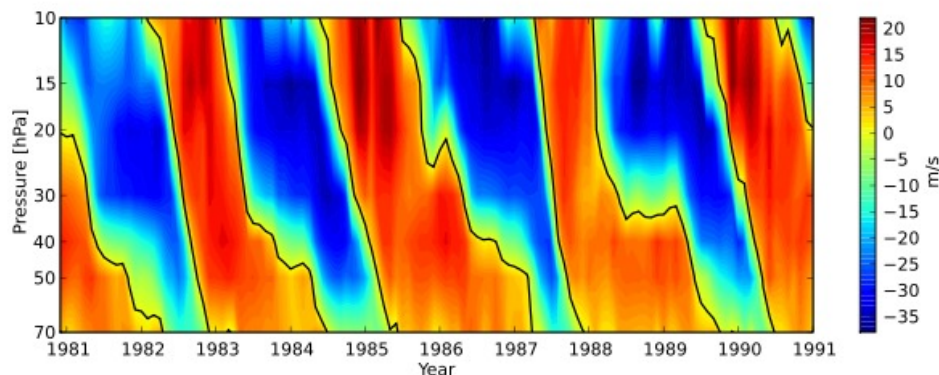
a QBOE



b QBOW



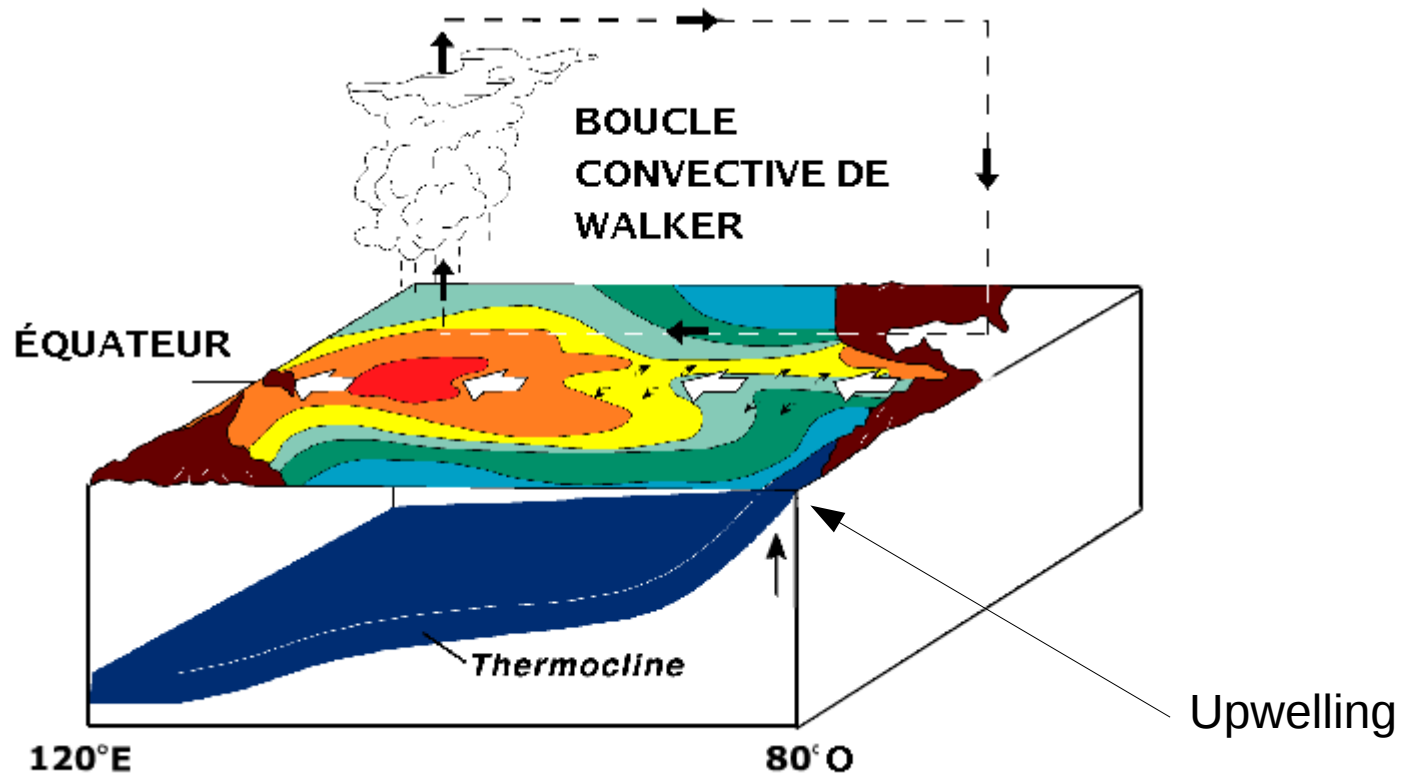
Mechanisms and impacts of quasi-biennial oscillation (QBO)-Madden-Julian oscillation (MJO) coupling during QBO easterly (QBOE; panel a) and QBO westerly (QBOW; panel b) winds.



	QBO EST PHASE	QBO WEST PHASE
SOLAR MAXIMUM	COLD-POLE WARM	WARM-POLE COLD
SOLAR MINIMUM	WARM-POLE COLD	COLD-POLE WARM

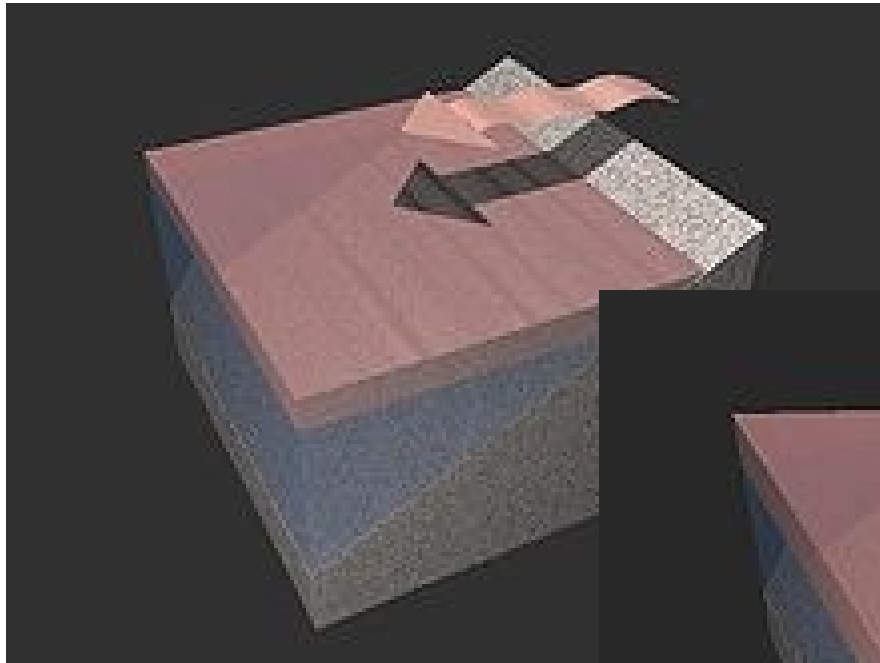
ENSO

El Nino Southern Oscillation (ENSO)

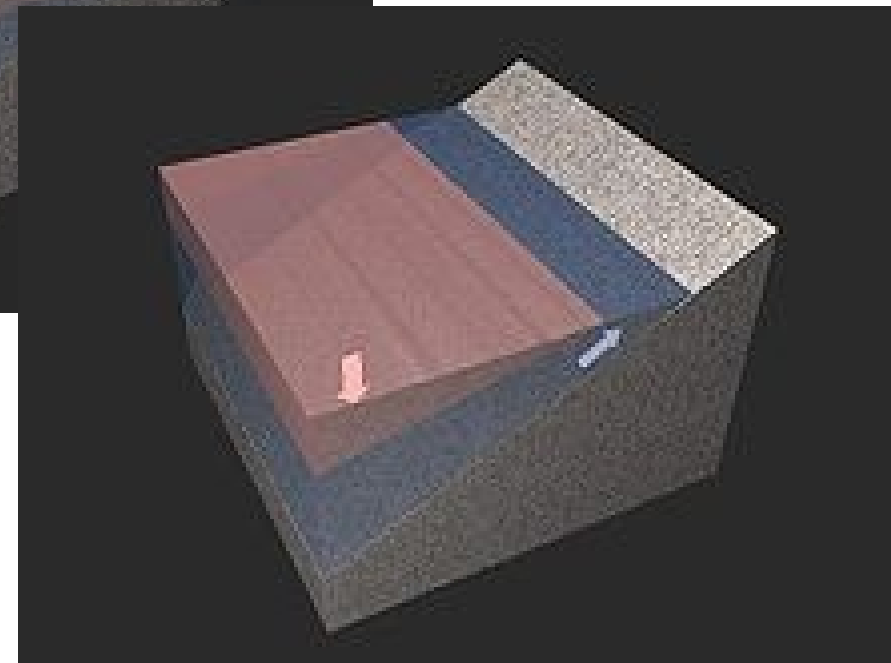
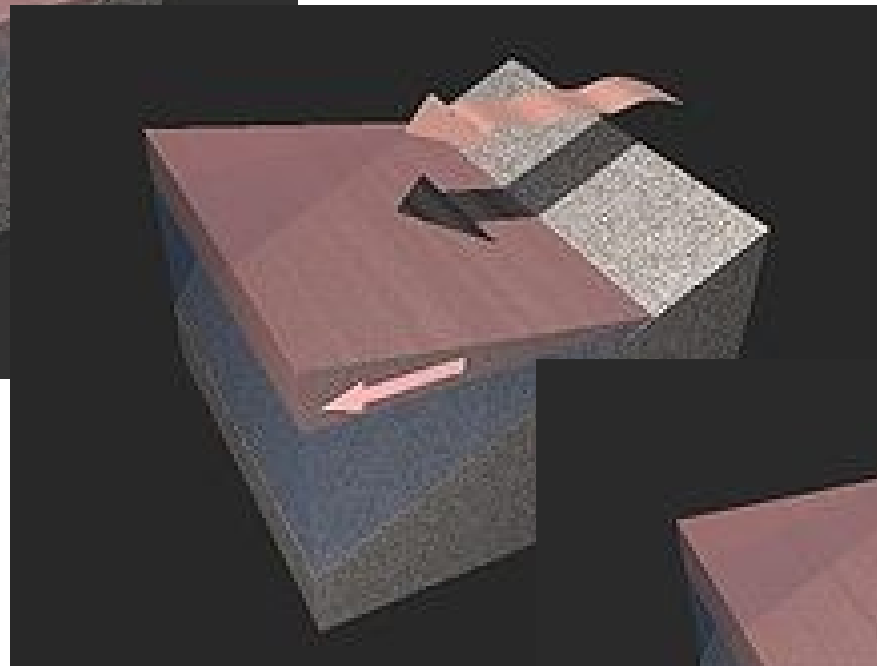


Southern Oscillation Index (SOI) : différence de pression entre Tahiti et Darwin.

ENSO

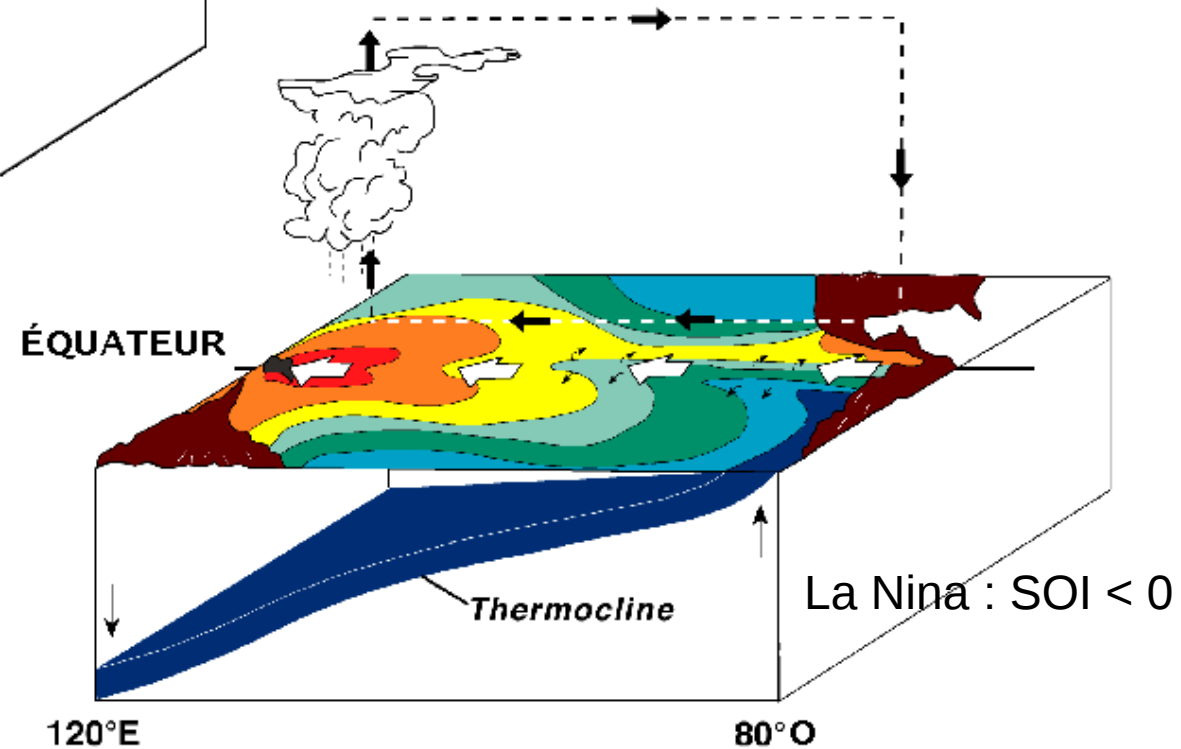
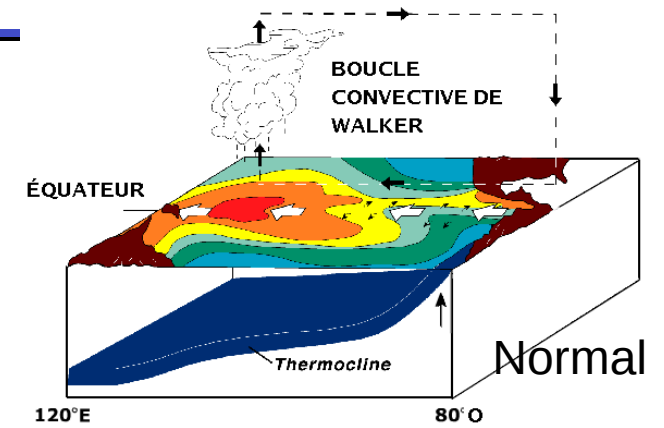
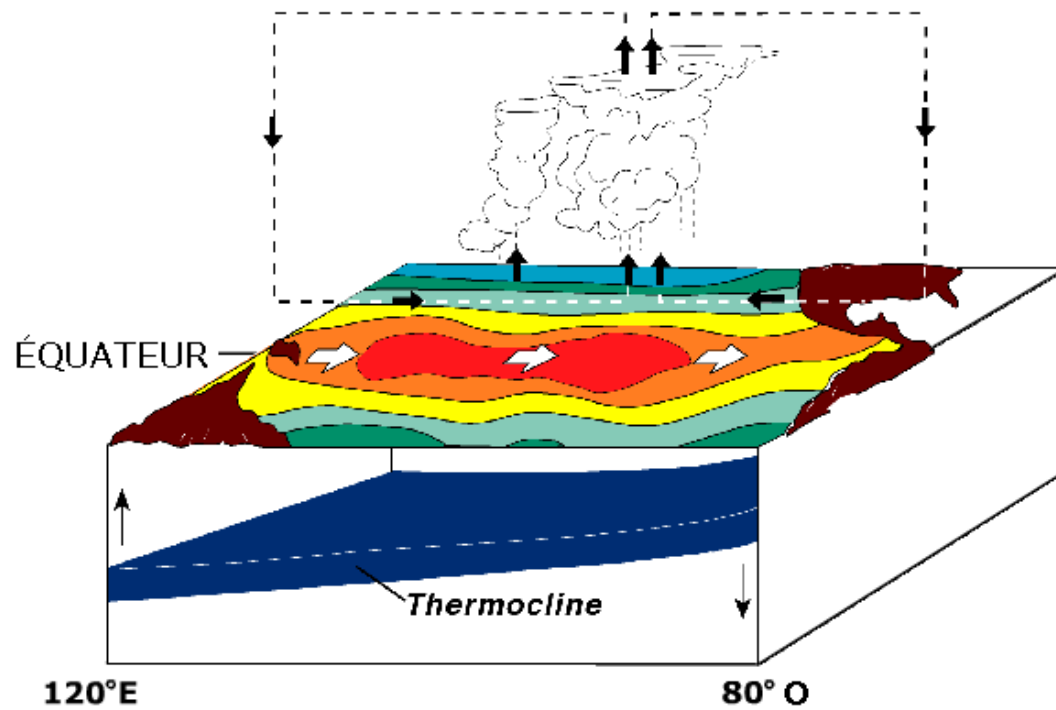


Upwelling = remontée d'eau froide
=> désert !

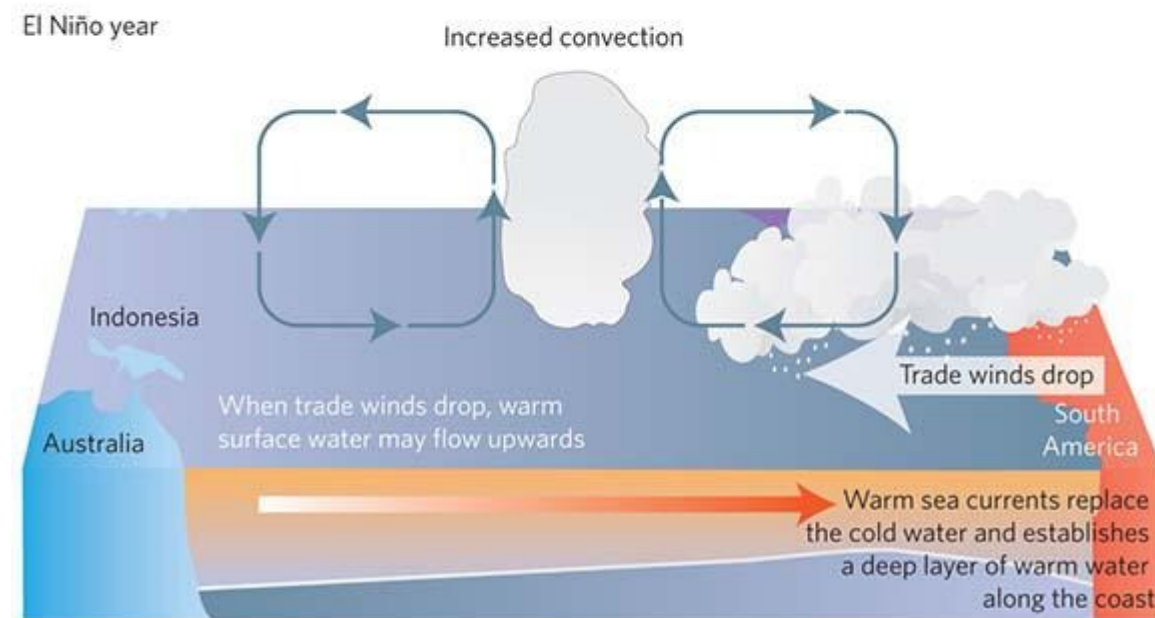
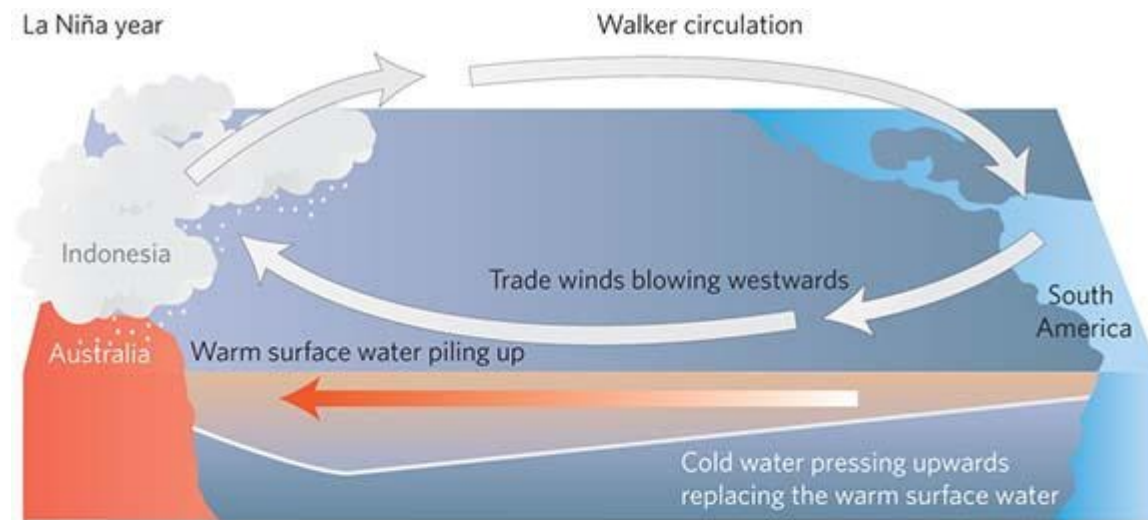


ENSO

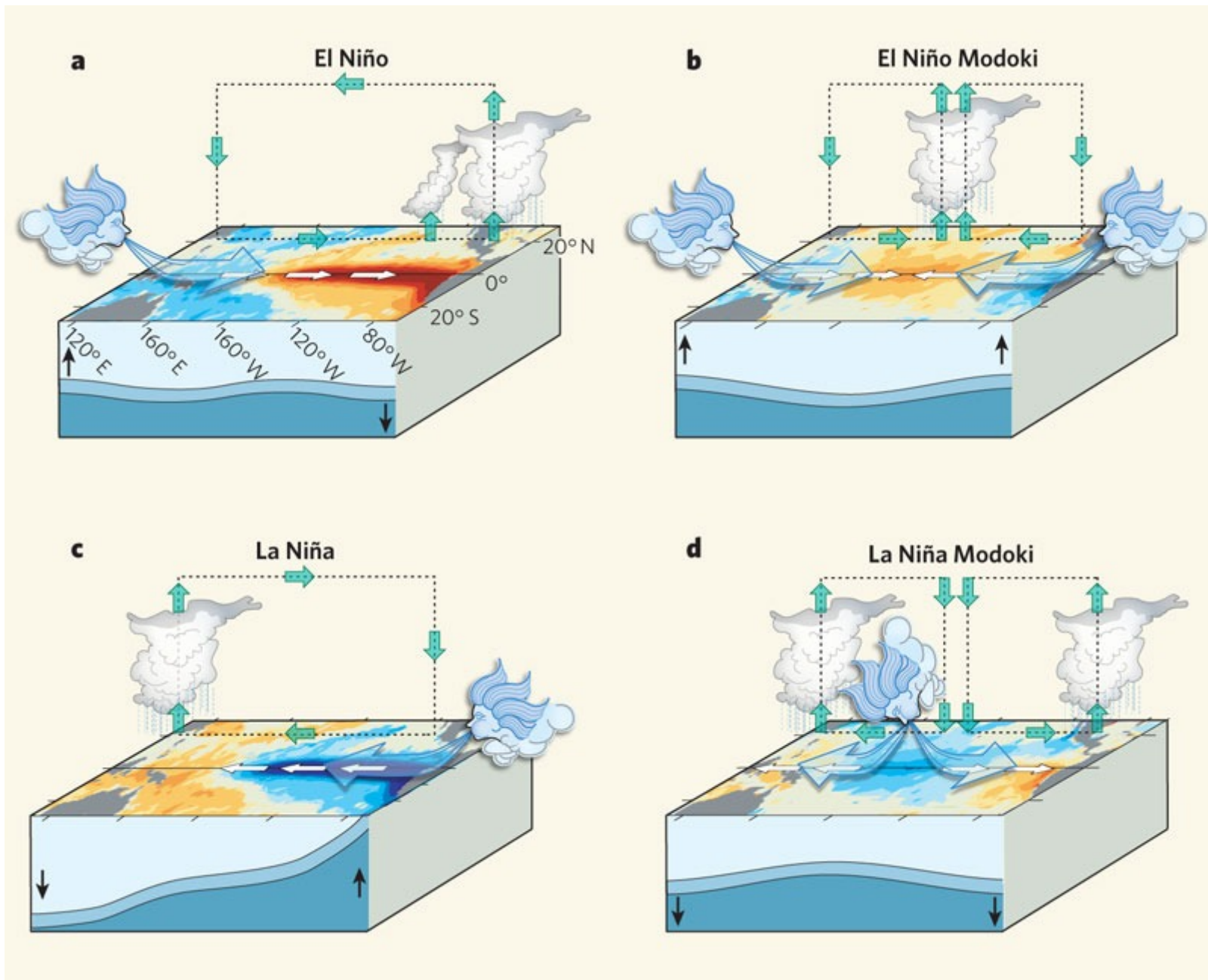
El nino : $SOI > 0$



ENSO



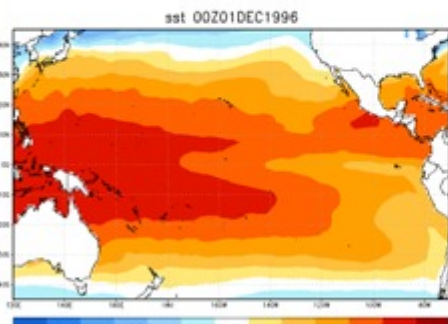
ENSO



ENSO

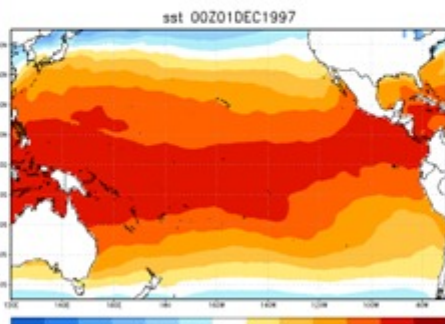
Three Phases Of ENSO - Pacific Sea Surface Temperatures

(a) ENSO Neutral



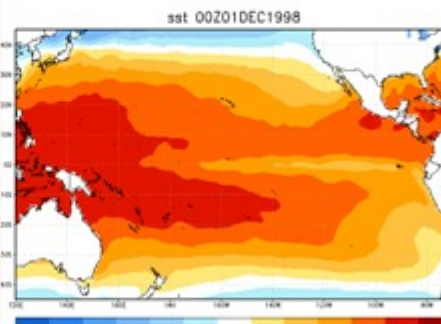
Dec 1996

(b) El Nino

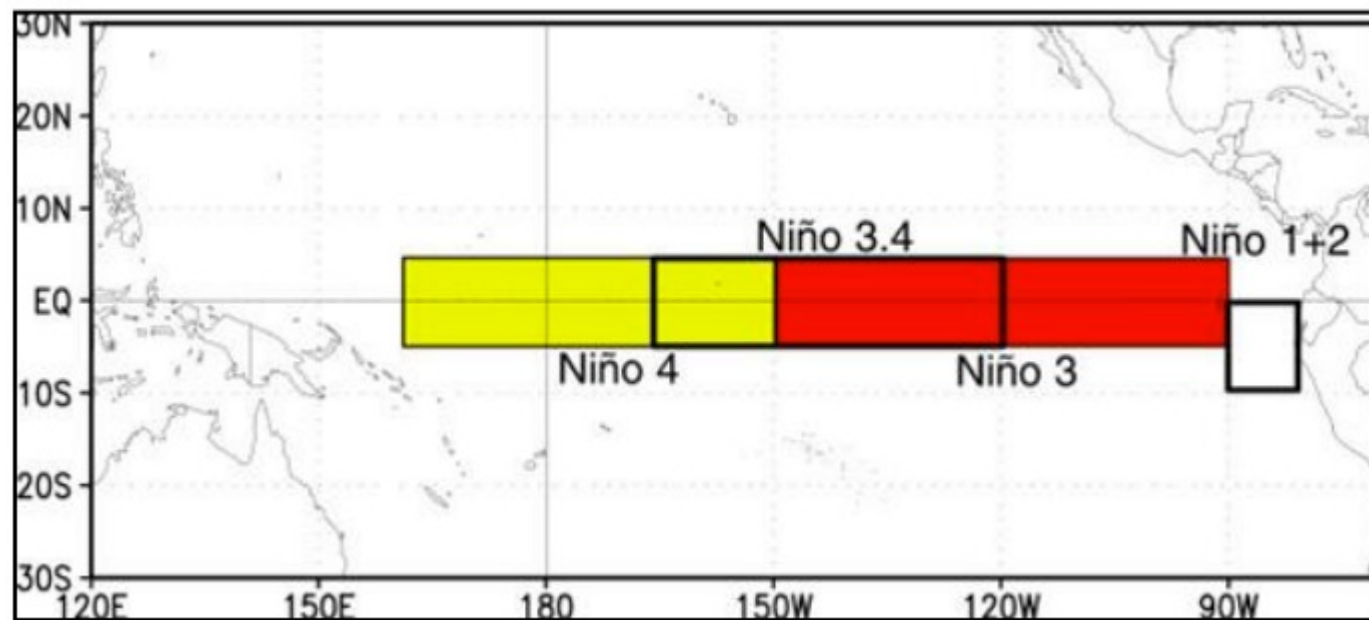


Dec 1997

(c) La Nina

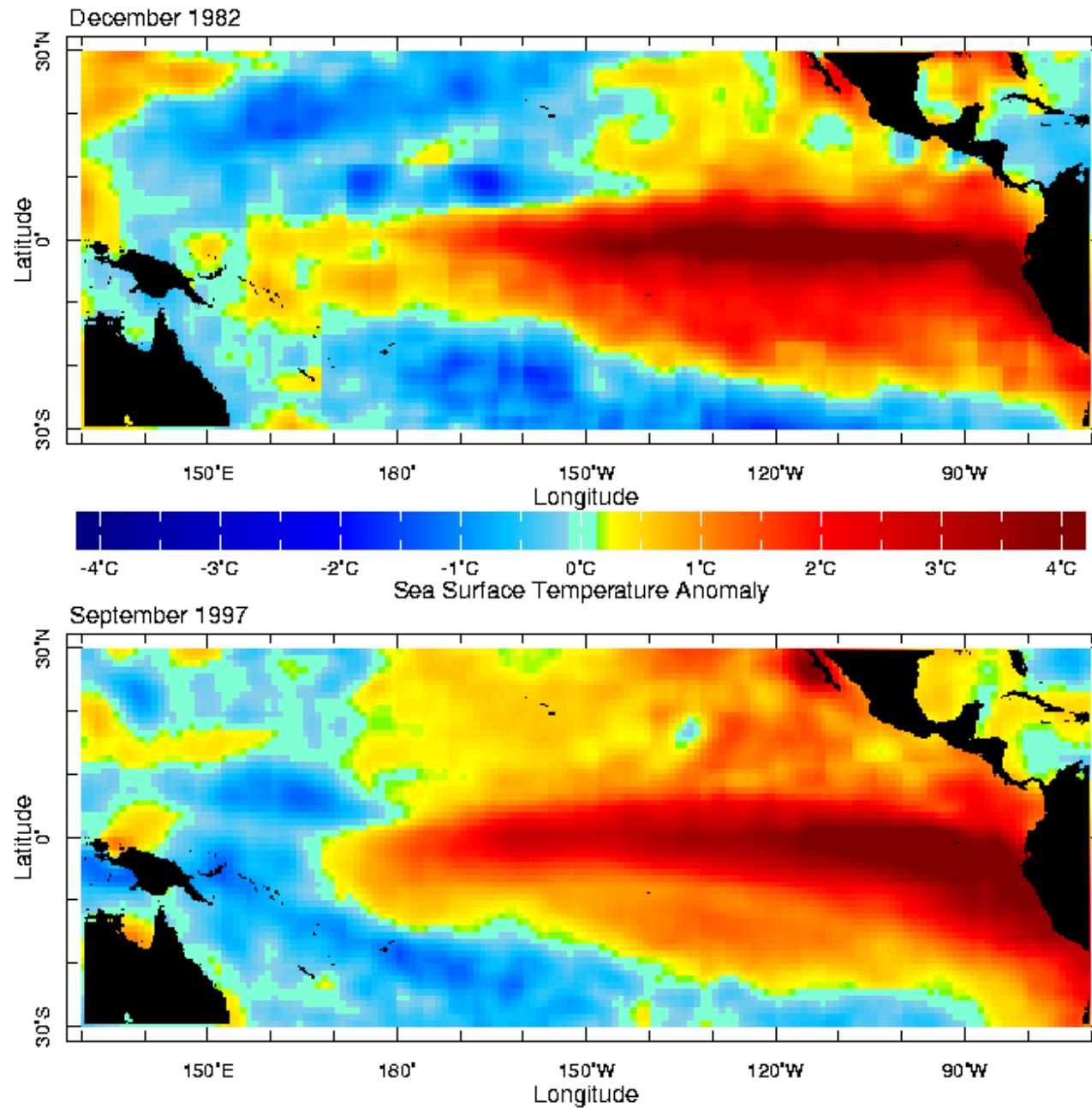


Dec 1998



Anomalies de température (NINO 3.4) ou de pression (SOI)

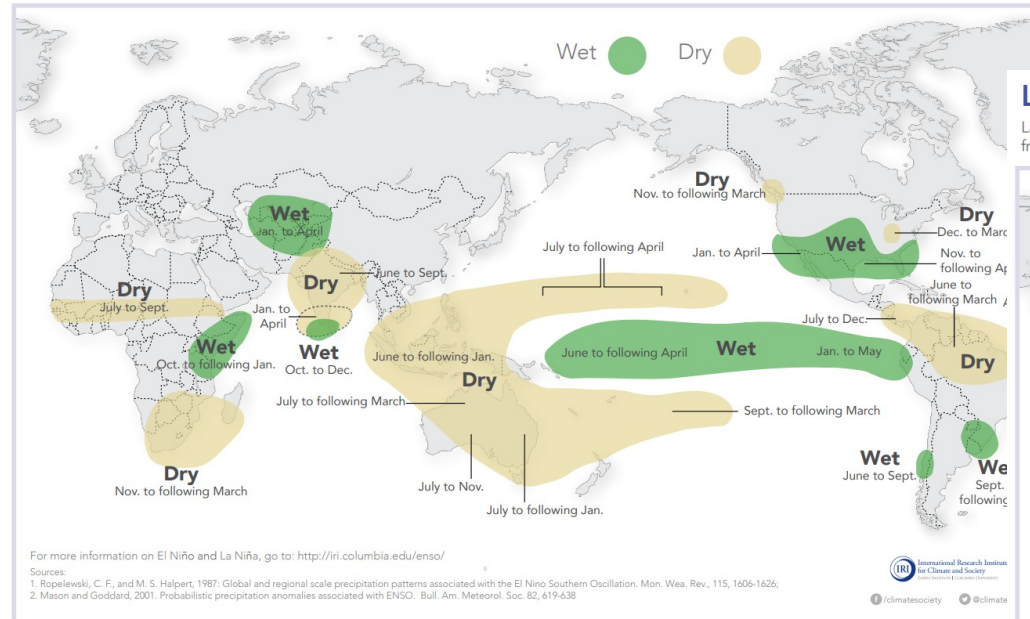
ENSO



Téléconnections ...

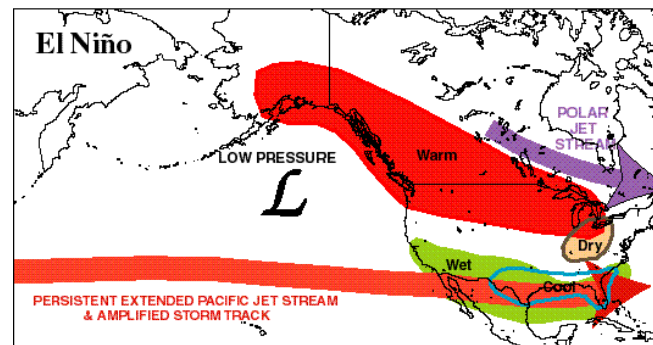
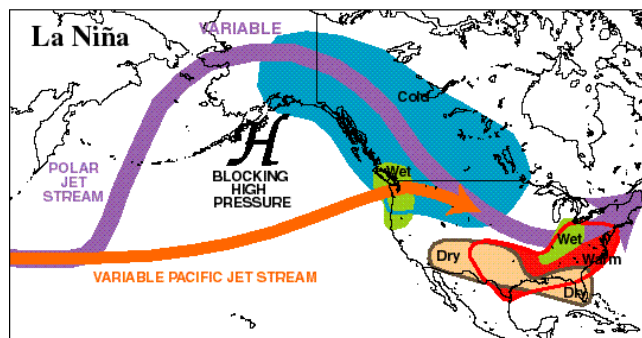
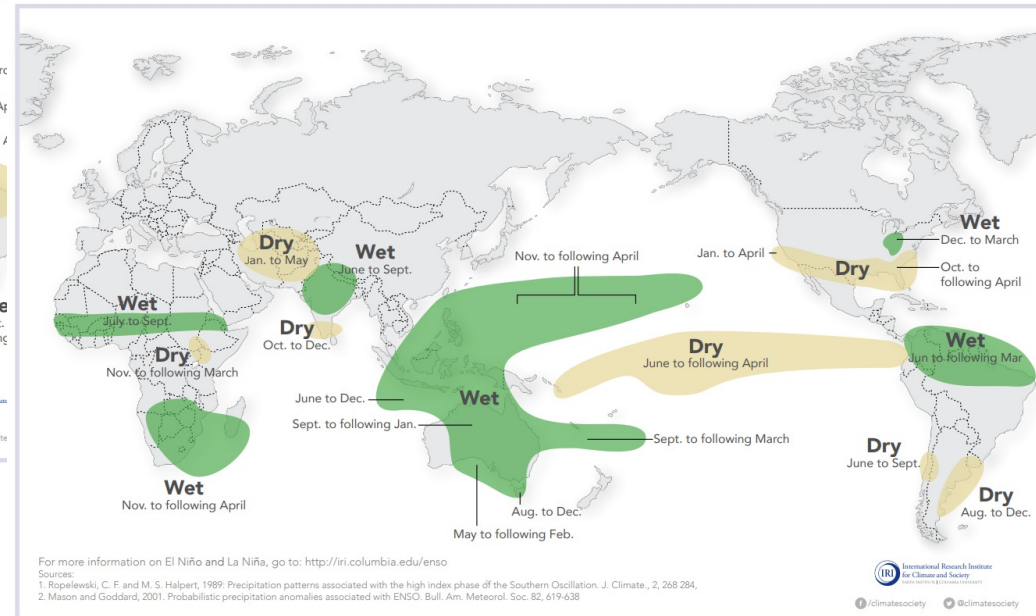
El Niño and Rainfall

El Niño conditions in the tropical Pacific are known to shift rainfall patterns in many different parts of the world. Although they vary somewhat from one El Niño to the next, the strongest shifts remain fairly consistent in the regions and seasons shown on the map below.



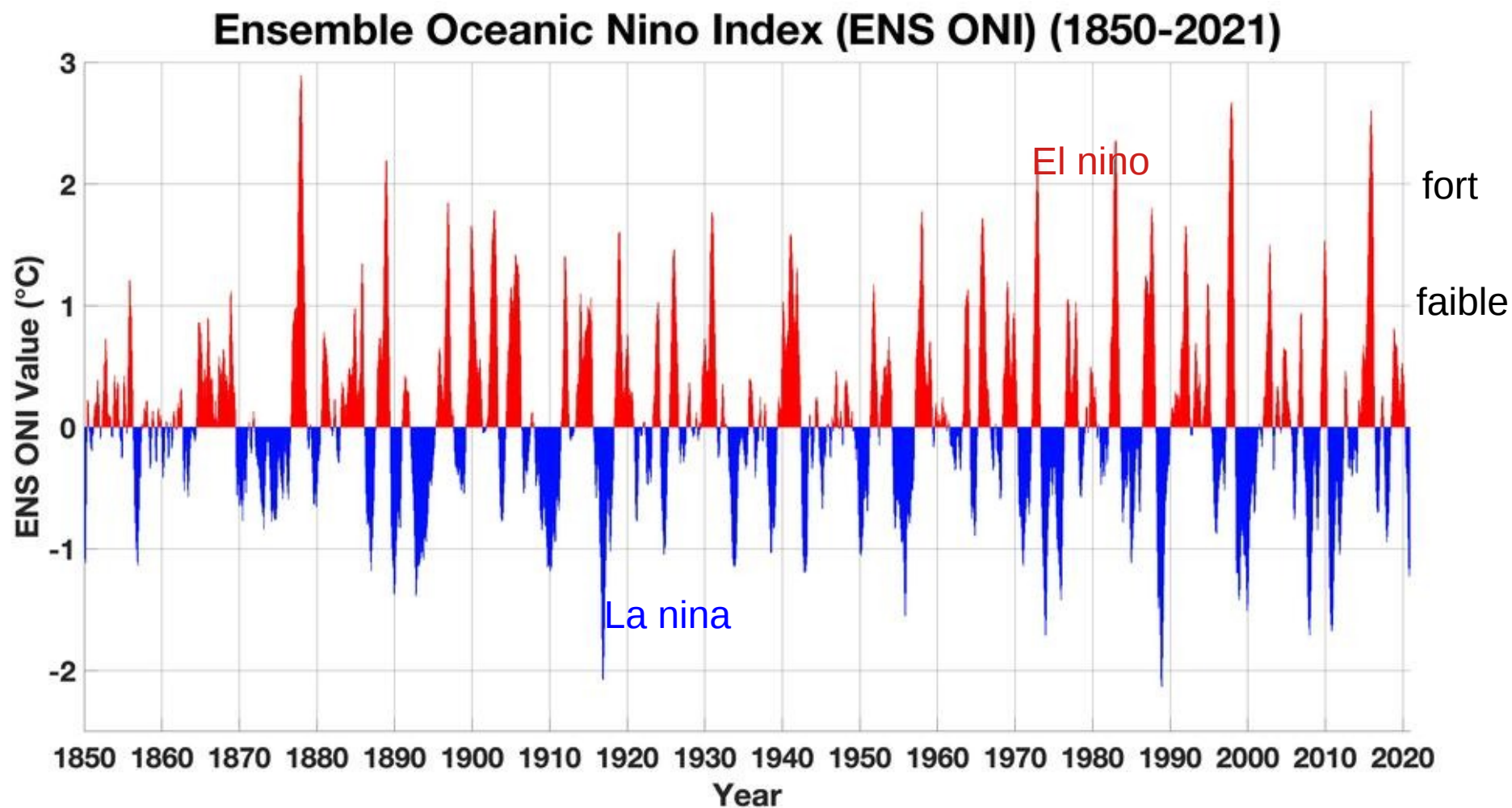
La Niña and Rainfall

La Niña conditions in the tropical Pacific are known to shift rainfall patterns in many different parts of the world. Although they vary somewhat from one La Niña to the next, the strongest shifts remain fairly consistent in the regions and seasons shown on the map below.

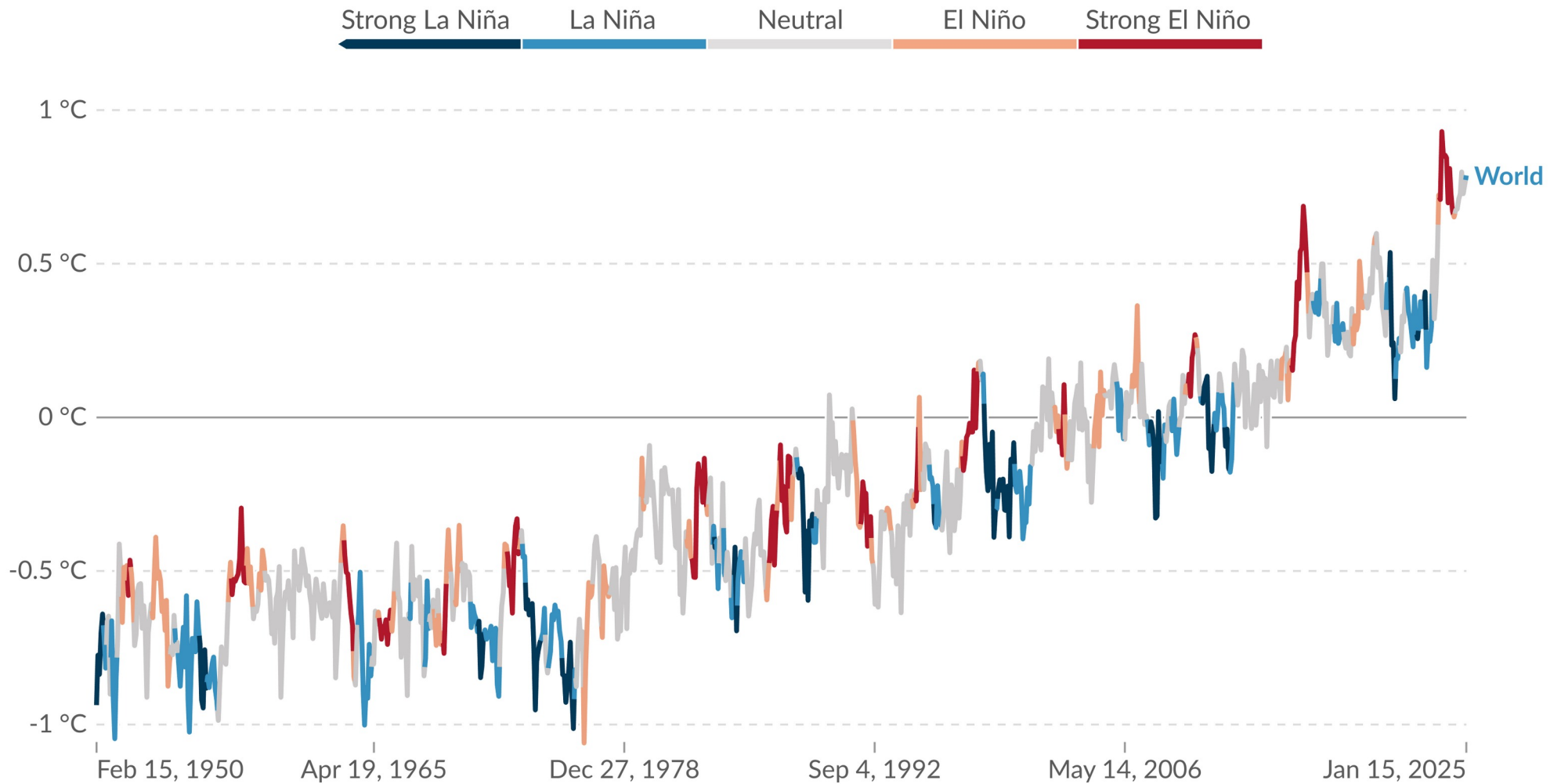




ENSO

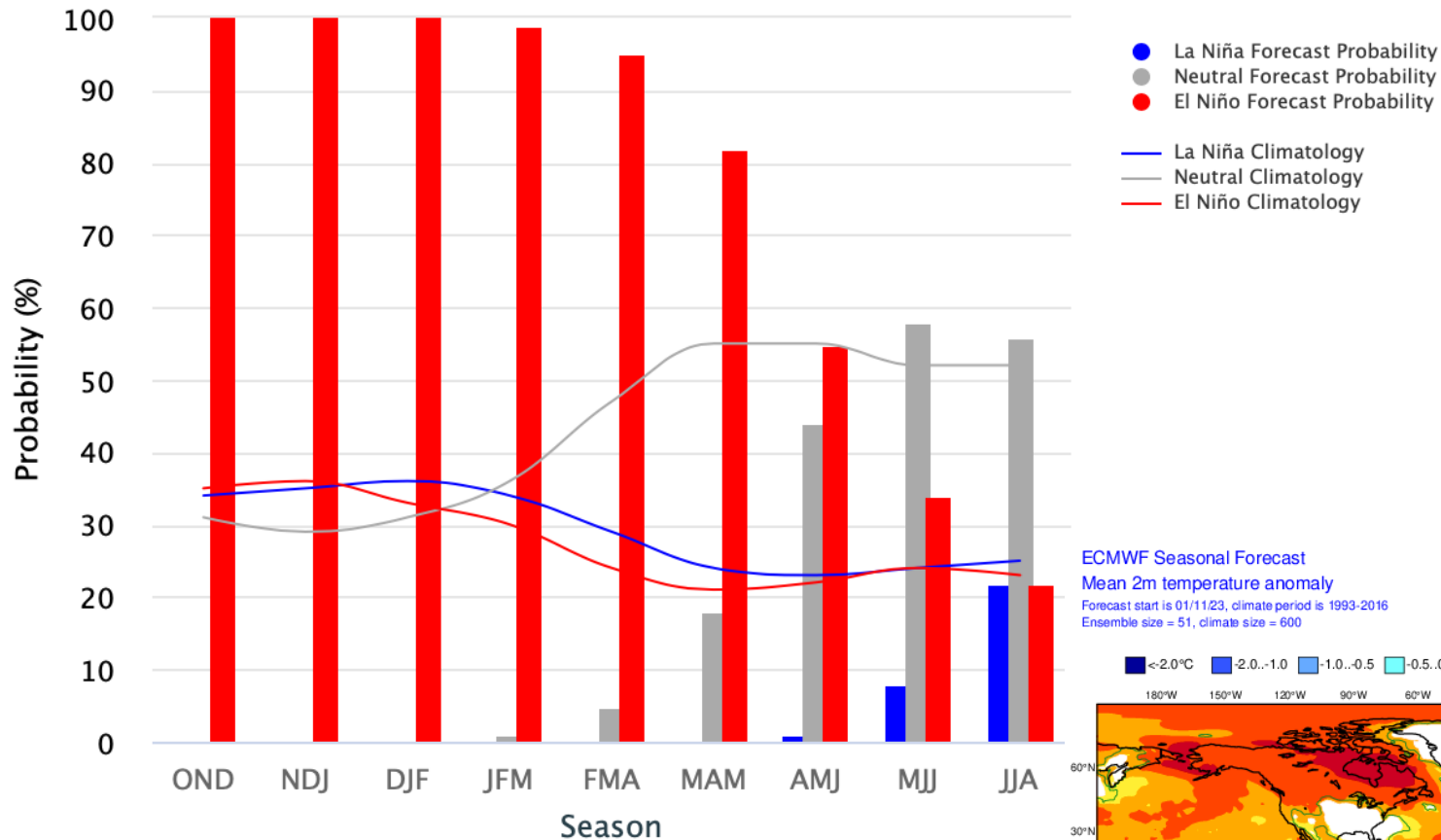


ENSO



Mid-October 2023 IRI Model-Based Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly Neutral ENSO: -0.5°C to 0.5°C



ECMWF Seasonal Forecast
Mean 2m temperature anomaly
Forecast start is 01/11/23, climate period is 1993-2016
Ensemble size = 51, climate size = 600

