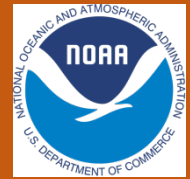


The Current State of CLIMATE FORECAST SKILL

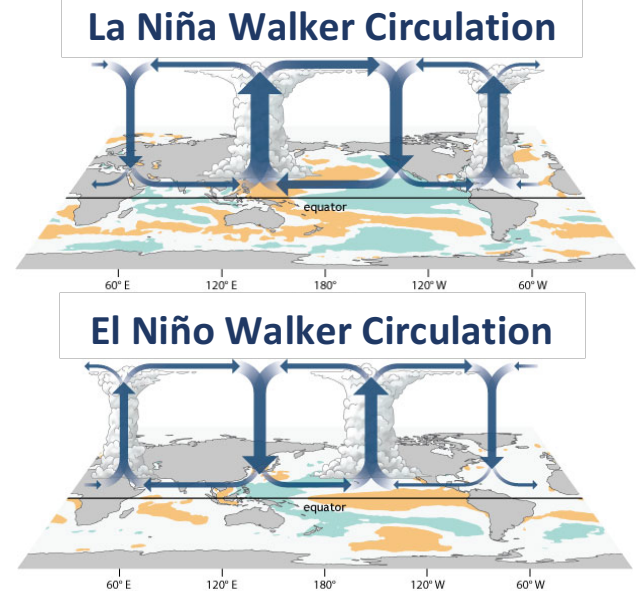
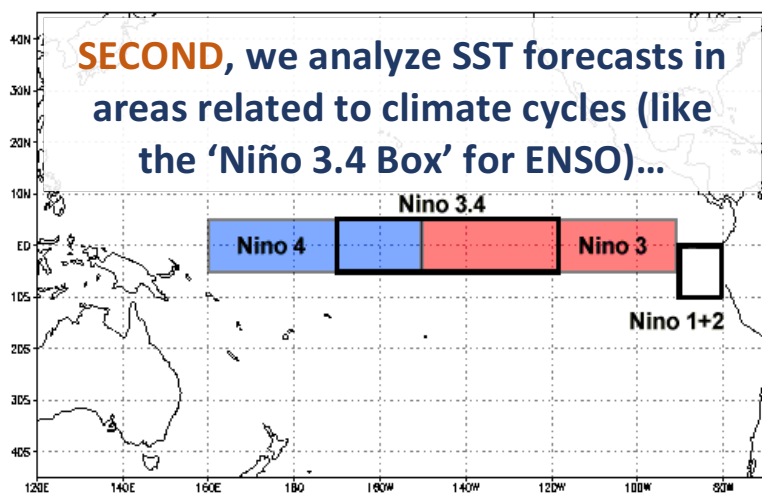
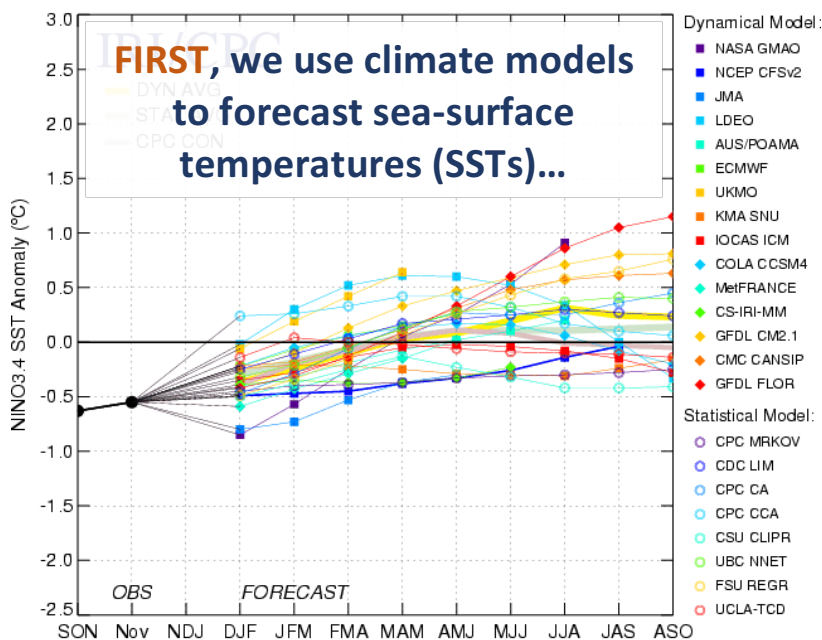
WE GIVE SPECIAL THANKS TO:



FOR FIGURES AND CONTENT

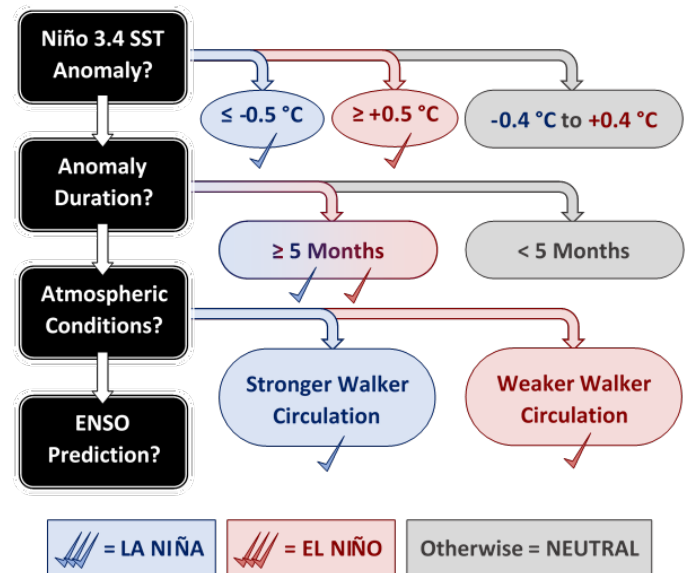
1. HOW DO WE FORECAST 'CLIMATE CYCLES'?

A climate cycle is a natural 'rise and fall' pattern in the Earth's climate system.



LASTLY, we confirm atmospheric circulation before issuing a prediction.

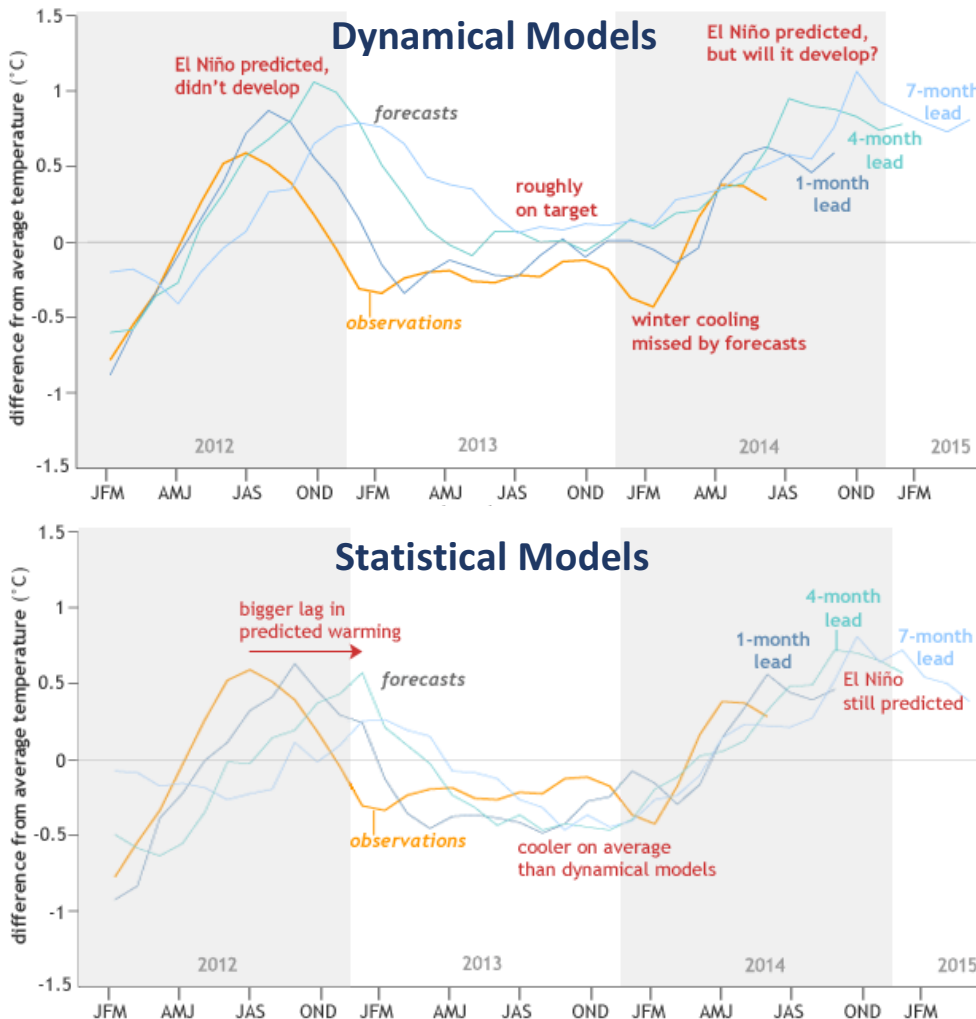
THE ENSO PREDICTION PROCESS



El Niño Southern Oscillation (ENSO) is forecasted and available at: cpc.noaa.gov

The Current State of CLIMATE FORECAST SKILL (Continued)

2. HOW RELIABLE ARE FORECASTS?



Model Mathematical Performance

Model Type	Correlation Coefficient			Mean Absolute Error		
	Lead 1	Lead 4	Lead 7	Lead 1	Lead 4	Lead 7
Dynamical	0.89	0.6	0.14	0.17	0.32	0.44
Statistical	0.79	0.46	0.12	0.22	0.29	0.31

Correlation Coefficient = 1 and Mean Absolute Error = 0 is a perfect model.

Note: Lead 1, 4, and 7 refer to 1-, 4-, and 7-month lead times.

3. ARE THEY USEFUL?

General Climate Forecasts:

- Vary significantly in their reliability and usefulness.
- Cover several climate cycles that impact regions all around the globe.
- Are currently focused on short-term climate cycles such as ENSO, MJO, AAO, AO, etc.
- May or may not be derived similarly to ENSO forecasts.

The ENSO Climate Forecast:

- Lead times up to 4 months can be considered reliable.
- Is already utilized by the Army Corps of Engineers to manage reservoirs in the ACF River Basin.
- Can be improved by coupling with forecasts of long-term climate cycles such as AMO, PDO, and NAO.
- Is particularly useful for drought early warning and planning activities.

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