



## **Decadal Variability of ENSO Predictability**

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Seasonal prediction of climate depends primarily on the capability to predict ENSO and its teleconnections. Seasonal predictability of ENSO derives primarily from upper ocean initial conditions, so forecast skill is limited, in part, by the quality of the ocean initial conditions available to the forecast model.

Here we report on variations of ENSO forecast skill with the BoM coupled ocean-atmosphere forecast model, for which we have generated hindcasts for the period 1960-2010.

It is found despite the recent dramatic increase in ocean observations (primarily from ARGO), the forecast skill for predicting ENSO events, as measured by correlation skill for Nino3 SST index, is dramatically lower in the most recent decade (2001-2010) compared to the previous two decades (1981-2000), and lower even than the earlier two decades (1960-1979) when there was a dearth of ocean observations.

We argue that the low skill in the recent decade reflects a recent reduction of ENSO predictability, and this reduced predictability is attributed to decadal changes in the coupled mean state. Post 1998, the coupled mean state has not favoured ENSO variability in the central-eastern Pacific (i.e. as measured by Nino3 SST variations), but rather has promoted ENSO variability further to the west (i.e. as measured by Nino4 SST variations).

The underlying mechanisms for this change in ENSO behavior and the implications for decadal prediction of ENSO and its teleconnection to the monsoon will be discussed.