

"Evidence of decadal trends observed
in the Pacific and the Indian Oceans and Atmospheres
and their role in the ENSO events predicted with a
coupled ocean-atmosphere model over 1980-2000"

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Sea level and wind data over 1980-2000 give evidence
of decadal trends in the ocean that are coupled
to the atmosphere over the Pacific, whereas the oceanic trends
over the Indian Ocean depend, in addition to the wind,
on the connections with the other oceans,
in particular they are related to important interannual
and decadal fluctuations of the Indonesian ThroughFlow (ITF).
It is striking that the transport across the opening of the
western Pacific boundary is leading the ENSO Nino3 index,
but lagging the zonally averaged sea level of the Pacific.
A coupled ocean-atmosphere model of the Pacific is
used to deliver series of forecasts over 1980-2000
and to study the role of the Indo-Pacific oceanic connection
and the role of Westerly Wind Bursts (WWB) on predictions.
It is shown that in some cases like more than 6 months prior
to big events, the impact of the ITF
on the predicted Nino3 index is very large.
It is also shown that WWB have an impact
on the coupled system that depends on the ocean preconditioning.
It appears that both decadal trends of the oceans and higher
fluctuations of the atmosphere are facts that can no longer
be neglected in a predictive system.