



A recipe for simulating the interannual variability of the South Asian Summer Monsoon

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This study investigates numerically if (and how) the interannual variability over the Indian Ocean basin and the relationship between the Indian summer monsoon and the El Nino Southern Oscillation (ENSO) can be properly simulated.

With a hierarchy of models, from an atmospherical general circulation model (AGCM) forced by observed SST, to a coupled model with the ocean component limited to the tropical Pacific and Indian Oceans, the role of heat fluxes and of interactive coupling is analyzed.

Whenever sea surface temperature anomalies in the Indian basin are created by the coupled model, the inverse relationship between the ENSO index and the Indian summer monsoon rainfall is recovered and it is preserved if the atmospherical model is forced by the SSTs created by the coupled model.