

## **Impact of salinity on ocean/atmosphere interactions in the tropical Indian Ocean**

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Variability of the sea surface temperature plays a crucial role in the coupling between the ocean and atmosphere. SST variability is particularly strong in the southern tropical Indian Ocean on intraseasonal timescales as well as during Indian Ocean Dipole events. Here we consider controls on SST in this region using data from CINDY, moored buoys, satellites, and an ocean reanalysis. A major player is the near surface salinity which is found to have a large effect on upper ocean stratification and SST. Surface salinity is affected by local and remote rain events, eddy and mean flow advection as well as changes to precipitation and surface circulation during IOD events. How well these processes are captured in coupled models needs consideration.