

# Predictability of the super IOD event in 2019 and its link with El Niño Modoki

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A positive Indian Ocean Dipole in 2019 reached the level of the strongest events occurred in 1994 and 1997 and caused disasters in countries around the Indian Ocean. Using a quasi-real-time ensemble seasonal prediction system based on the SINTEX-F climate model, its occurrence was predicted a few seasons ahead and the possible impacts were warned by overcoming the so-called winter predictability barrier. The successful prediction of such a super event at long lead-time may contribute to reducing the risks of socio-economic losses by introducing suitable measures for adaptation. Here, we have investigated possible sources of the successful prediction by analyzing co-variability of inter-member anomalies defined as deviations from the mean in the ensemble reforecasts. Interestingly, it is found that the potential predictability of the 2019 super positive event is linked with the preexisting El Niño Modoki in the tropical Pacific.

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