



## **Selecting the “best” ensemble members: 1997 Indian summer monsoon rainfall case study**

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A case study of the 1997 Indian Summer Monsoon Rainfall (ISMR) is done to evaluate the importance of individual ensemble members of climate simulation in representing an unusual climate phenomenon. An ensemble of 51 members from the European Center for Medium-Range Weather Forecast (ECMWF) Ensemble Prediction System is utilized.

Coupled models are known to misrepresent the 1997 ISMR, and the ensemble mean of the model used here is no different. However, out of 51 members, five depict reasonable ISMR. The difference between the “best” and other members shows that a realistic representation of the Indian Ocean Dipole is a key for a more realistic ISMR, which is in agreement with previous studies on the interaction between Indian rainfall and the Indian Ocean. Thus, the failure of the ensemble mean to depict one phenomenon does not necessarily characterize the performance of a climate model.