

Influence of spring-time Eurasian-Himalayan snow on the evolution of the Indian summer monsoon

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The snowpack over the Eurasian-Himalayan region in spring has been suggested to be an influential factor in the seasonal predictability of the Indian Summer Monsoon. However, many observational and modelling studies remain inconclusive as to the reliability and the stationarity of this snow-monsoon relationship, and the nature of the spatio-temporal teleconnection patterns involved. In this study, we revisit this snow-monsoon relationship using recent observational datasets such the ECMWF ERA-Interim and ERA-Interim land model re-analyses, and the NOAA 20th Century Reanalysis Project. We examine the respective role of snow cover and snow depth, and the sensitivity to several monsoon indices.