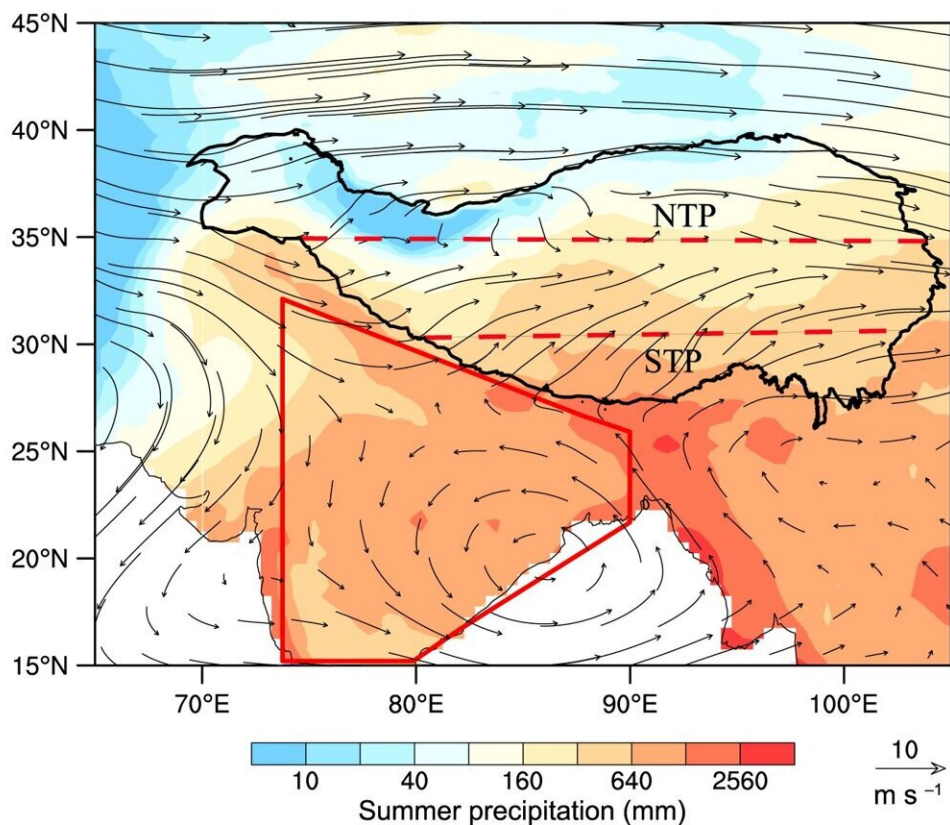


# South Asian black carbon causes glacier loss on Tibetan Plateau

December 29 2022, by Li Yuan



Summer precipitation and black carbon emission characteristics. **a** The spatial pattern of summer precipitation using the Climatic Research Unit (CRU) dataset overlain with summer 500 hPa wind fields for the period 2001–2016, using the ERA-Interim dataset over the Tibetan plateau (TP) and South Asia (denoted by red polygon). NTP and STP delineate the northern and southern Tibetan plateau boundaries. **b** Plots of the accumulative anomaly in summer area-averaged precipitation over the southern Tibetan plateau, the northern Tibetan plateau, and South Asia using the CRU dataset (1961–2016) along with, South Asian area-

averaged black carbon (BC) emissions using Peking University's emissions dataset (1961–2014). **c** Plots of observed summer area-averaged precipitation over the southern Tibetan plateau and South Asia using the CRU (1961–2016) and Asian Precipitation—Highly Resolved Observational Data Integration Towards Evaluation of Water Resources (APHRODITE, 2004–2015) datasets. Dashed lines represent linear trends broken into three separate periods (1961–2016, 1961–2003, and 2004–2016). Trends are statistically significant ( $p$ -value

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