Research Data Availability Statement

The meteorological data are sourced from China meteorological administration (available at <http://data.cma.cn/>). Elevation data are obtained from the Shuttle Radar Topography Mission (SRTM) at a resolution of 90 m (available at <https://search.earthdata.nasa.gov>). Soil information is sourced from the Harmonized World Soil Database (HWSD) at a 1 km resolution (available at <https://iiasa.ac.at>). Land use data with a 1 km resolution are acquired from the Resource and Environmental Science Data Platform (available at <https://www.resdc.cn>). The snow cover data are derived from the MODIS monthly snow cover (MOD10CM) (available at <https://search.earthdata.nasa.gov>). The authors do not have permission to share runoff and sediment data.