



## The impacts of Tibetan uplift history on palaeoclimate proxies

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Several palaeoclimate proxy records have been interpreted as representing the direct effects of Tibetan uplift on climate, and particularly the Asian monsoon. However, there are possible other causes for the transitions and changes which have been observed, such as varying CO<sub>2</sub>, nodes in orbital forcing, or changing continental positions. In this study we model the direct effects of Tibetan uplift on climate and three main palaeoclimate proxies - SSTs, vegetation, and river discharge. We investigate whether the climatic effects of uplift are likely to be detectable in the various proxy records, and also whether the proxies could be used to distinguish between different paradigms for the history of plateau uplift. We find that the SSTs in the western Pacific and Indian Ocean are generally insensitive to Tibetan uplift; however, vegetation in the region of the plateau itself, and river discharge from the Yangtze, Pearl, and in particular the Ganges/Brahmaputra, can give a strong indication of Tibetan uplift history.