



## **Holocene Floods and Sediment Sources in the Desert Nile: a Strontium Isotope Record from Northern Sudan**

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Strontium isotope ratios can be used to explore changes in Nile sediment sources and flood regime because the Blue Nile/Atbara and White Nile headwater catchments lie in markedly contrasting geological settings. Most of the existing Sr isotope data for the Holocene Nile has been obtained from lagoonal/lacustrine environments rather than directly from the fluvial sediments of the desert Nile. Northern Sudan contains some of the best preserved Holocene river deposits and landforms in the desert Nile. Using Optically Stimulated Luminescence (OSL) and radiocarbon dating, we have compiled a detailed record of Holocene river history in the Northern Dongola Reach (NDR) that spans the last c. 8500 years. This period includes major changes in global climate and Nile hydrological regime. In the palaeochannel fills and floodplain deposits of the NDR, we have sampled sedimentary units that represent discrete flood events. We have measured Sr and Nd isotopes on the fine-grained fraction of dated alluvial units. The Sr isotope signature of the NDR fluvial sediments is discussed and compared to published datasets for the Nile delta.