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Late Quaternary Climatic Changes in Semi-Arid Alluvial Plains, Western India

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The exposed fluvial sequences of western India in various river basins suggest deposition under a regime that broadly followed global climatic changes during Late Pleistocene and Holocene. The difference found in the deposition style and sediment architecture is due to responses to the climatic fluctuations which were driven by the SW monsoon. Late Pleistocene and Holocene. In the river basins the fluvial facies are well developed whereas these are overlain by thick lacustrine clay facies in lakes and ponds. In the estuarine zone the fluvial facies are overlain by tidal clays. The base of the exposed fluvial sequence has been dated to $\sim$ 90 ka. There was a period of pedogenesis between 70 to 50 ka. Followed by fluvial activity which dominated between 50 to 30 ka and the climate was dominantly semi-arid. Stratified silts and sands represents arid climate during Last Glacial Maximum. Early Holocene was the period of warm and humid climate which continued upto Middle Holocene . The climate became drier during Late Holocene. Early Holocene sediment exposures are lacking but the Middle and Late Holocene is represented by estuarine sediments in coastal areas and fluvial in the upper reaches of the rivers. Palynological studies of the lacustrine sediments indicate restricted water, low salinity paludal environment. Similar fluvial records in response to climatic changes has also been recorded from other part of the India.