Geophysical Research Abstracts
Vol. 15, EGU2013-6267, 2013
EGU General Assembly 2013

Quaternary fluvial archives: achievements of the Fluvial Archives Group

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In their geomorphological and sedimentary records, rivers provide valuable archives of environments and environmental change, at local to global scales. In particular, fluvial sediments represent databanks of palaeoenvironment and palaeoclimatic (for example) of fossils (micro- and macro-), sedimentary and post-depositional features and buried soils. Well-dated sequences are of the most value, with dating provided by a wide range of methods, from radiometric (numerical) techniques to included fossils (biostratigraphy) and/or archaeological material. Thus Quaternary fluvial archives can also provide important data for studies of Quaternary biotic evolution and early human occupation. In addition, the physical disposition of fluvial sequences, be it as fragmented terrace remnants or as stacked basin-fills, provides valuable information about geomorphological and crustal evolution. Since rivers are long-term persistent features in the landscape, their sedimentary archives can represent important frameworks for regional Quaternary stratigraphy.

Fluvial archives are distributed globally, being represented on all continents and across all climatic zones, with the exception of the frozen polar regions and the driest deserts. In 1999 the Fluvial Archives Group (FLAG) was established, as a working group of the Quaternary Research Association (UK), aimed at bringing together those interested in such archives. This has evolved into an informal organization that has held regular biennial combined conference and field-trip meetings, has co-sponsored other meetings and conference sessions, and has presided over two International Geoscience Programme (IGCP) projects: IGCP 449 (2000–2004) 'Global Correlation of Late Cenozoic Fluvial Deposits' and IGCP 518 (2005–2007) 'Fluvial sequences as evidence for landscape and climatic evolution in the Late Cenozoic'. Through these various activities a sequence of FLAG publications has appeared, including special issues in a variety of journals, amassing a substantial volume of information on fluvial archives worldwide. This presentation will highlight some of these data and will describe important patterns observed and interpretations arising therefrom.