Geophysical Research Abstracts Vol. 12, EGU2010-834, 2010 EGU General Assembly 2010 © Author(s) 2009



## **River systems: basin-scale responses to human and climate forcing**

## **Richard Chiverrell**

University of Liverpool, Geography, Liverpool, United Kingdom (rchiv@liv.ac.uk, +44 (0) 151 7942866)

Geomorphological processes at a drainage basin scale operate on a continuum over environments from hillslope, piedmont, lowland alluvial to estuarine zones. During the Anthropocene the depositional or landform record typical reflects the cumulative effects of climate or extreme event forcing and conditioning by human-mediated landscape change, though tectonic and basin morphometry are other actors impacting on long-term landscape evolution. The sediment conveyer or cascade behaviour of the fluvial system, with spatially and temporally variable patterns of sediment delivery and storage punctuated by cycles of (dis)connectivity between depocenters, moderates the sediment and morphological regime. The well resolved and dated archives of change preserved in hillslope, alluvial and lacustrine sediment-landform assemblages offer some prospect for disentangling this integrated array of conditioning factors to better understand cause and effect. This paper explores these issues using several landform and sediment archives from the northwest British Isles.