



Sediment Archives and the Reconstruction of Landslide Dams

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River-blocking landslides create transient lakes which act as impoundments accumulating sediment until the landslide dam is breached. Seismic events, such as the Wenchuan Earthquake in Sichuan, China (2008) trigger multiple landslides resulting in widespread dam formation which poses a considerable hazard. Though there are many descriptions of contemporary and historic landslide dams in the literature, the influence of dam formation on the development of the fluvial landscape has not been fully explored. The sediment accumulation can act as a buffer to arrest rates of bedrock incision and control the distribution on knick points in the river system. The remnant sediment deposited in landslide dam lakes can act as an archive retaining information about sediment source areas, sedimentation processes and accumulation rates as well as providing field evidence to infer the locations of the landslide dam and the extent and dimensions of the lakes. However, in mountainous terrain preservation and exposure of palaeo-lake sediments is limited and may have been overlooked. The recent discovery of a giant palaeo-lake on the main branch of the Yangtze River in Yunnan, China illustrates this point and suggests that the significance of the landslide dam process may have been under-estimated