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Reconstruction of hydrology, climate and human impact during the Holocene in the Burren National Park, western Ireland

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Ongoing palaeoecological studies on sediments from a series of water bodies – a permanent lake and a turlough (seasonal lake) system – at Mullach Mór, Burren National Park, aim to reconstruction of vegetation, climate and human impact during the Holocene. The Burren in north Co. Clare is internationally renowned as a classical karstic region with a distinctive geomorphology, exceptional flora and a rich archaeological heritage. This unique, more or less treeless landscape has evolved mainly through strong interactions of farming peoples with the local environment over the last 6000 years. Pollen analytical investigations enable detailed reconstruction of human impact and resulting environmental changes. The important role of woody vegetation in the Burren for most of the Holocene is confirmed. Additionally, stable isotope analyses facilitate the investigation of environmental responses to climatic changes. Multicore analyses provide new insights into the hydrology and the evolution of the lake-turlough system. Preliminary results indicate at least three major lake-level changes.