



The importance of understanding landscape evolution in studies of terraced agriculture

Cruz Ferro-Vazquez (1), Carol Lang (1), Joeri Kaal (2), and Daryl Stump (1)

(1) Department of Archaeology, University of York, York, UK (cruz.ferrovazquez@york.ac.uk), (2) Departamento de Edafología e Química Agrícola, Universidade de Santiago. Santiago de Compostela, Spain

Before the invention of modern, large-scale engineering projects, terrace systems were rarely built in single phases of construction, but instead developed gradually, and could even be said to have evolved. Understanding this process of landscape change is therefore important in order to fully appreciate how terrace systems were built and functioned, and is also pivotal to understand how the communities that farmed these systems responded to changes; whether these are changes to the landscape brought about by the farming practices themselves, or changes to social, economic or climatic conditions. With this aim, we studied the historic and extensive terraced landscape at Konso, southwest Ethiopia, combining archaeological stratigraphy, soil micromorphology and geochemistry. Our results demonstrated that erosion has not only been the trigger for the inception of the Konso terraced system but also the foundation of its productivity: it was engineered for taking advantage of erosion by controlling it, first by harvesting soils that had washed into watercourses within irrigable riverside sediment traps, and then by effectively ‘repopulating’ the denuded hillsides with new soils through the construction of hillside terraces. From this new perspective, soil erosion has been a necessary enemy which, while managed, has constituted an agronomic resource, the system having initially relied on soil erosion to be productive, and the community having apparently only begun constructing terraces in order to protect the productive alluvial fields that were the legacy of that first phase of erosion. Research that takes into account how terrace systems change through time can thus provide important details of whether the function of the system has changed, and can help assess how the legacies of former practices impact current or future cultivation.