

Year One Report on 'Carbon and Geomorphology' Working Group

The BSG 'Carbon and Geomorphology' fixed-term Working Group will run for three years from 2010 to 2012. The main focus of activity in year one was the convening of a major carbon session at EGU. This session was supported by BSG and badged as a BSG event. Two young scientists were supported to attend the event through BSG sponsorship of the session and support from the working group. The sessions were co-organised with the Soil Science section of EGU and provided a useful space for comparison of approaches in the two communities. The session ran over three quarters of a day and included a very successful poster session which was enhanced by BSG provided refreshments. Highlights of the sessions, inter alia, included work by Pierre Andre Jacinthe (Indiana-Purdue) on processing of fluvial carbon in reservoir systems, presentation of work on landscape scale carbon flux by Bob Hilton (Durham) and research on soil carbon distribution by water erosion presented by Zhengang Yang (Leuven). The session concluded with a discussion on key issues arising from the presentations and future challenges for geomorphological work on carbon cycling. The issue of the importance of scale of study as a key control on carbon budgeting was highlighted. Central to this question is the urgent research need to understand the fate of fluvial carbon. Time and space scales for the transformation of eroded carbon in fluvial systems are poorly understood, yet central to understanding the interaction of erosional processes with atmospheric carbon. Understanding these characteristic scales of transformation will allow more sophisticated interpretation of soil carbon budgets and allow a clearer assessment of the impact of soil erosion on carbon cycling at a range of catchment scales. Selected papers from the session are in preparation for a special issue of ESPL.

Plans for year 2 of the carbon working group include a book project, and another EGU session in the Spring addressing some of the issues discussed above. Abstract submissions for this session are invited via the EGU website.

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