Geophysical Research Abstracts
Vol. 14, EGU2012-1725, 2012
EGU General Assembly 2012

From the Field to the Classroom: A Web-Based Teaching Tool on Depositional Environments and Landscape Development

M. Krzic (1), K. Watson (2), S. Grand (1), C. Crowley (3), S. Dyanatkar (3), A. Bomke (1), and S. Smith (4)

(1) Faculty of Land and Food Systems, University of British Columbia, Vancouver, Canada (sgrand@interchange.ubc.ca), (2) Thompson Rivers University, Kamloops, Canada, (3) Centre for Teaching, Learning and Technology, University of British Columbia, Vancouver, Canada, (4) Agriculture and Agri-Food Canada, Summerland, Canada

The relationship between sedimentary deposits, landforms and soil profile development is difficult for students to grasp in a conventional classroom setting. The ideal way to solve this is to take the students on extended field trips; however, field trips are expensive, have to be conducted during specific time periods, and can only handle a limited number of students. The objective of this project was to bring the field to the classroom via a virtual, dynamic web-based teaching tool illustrating common depositional environments and associated landforms and soils.

The teaching tool was largely based on video footage obtained in the Canadian Rocky Mountains and in the grasslands of the southern interior of British Columbia. The Canadian Rockies are undergoing rapid deglaciation and provided excellent examples of new glacial deposits and early landscape development processes. On the other hand, British Columbia's grasslands became ice-free about 10,000 years ago and were used to illustrate landscape evolution and post-glaciation soil profile development. To bring these two environments together, video footage of corresponding landforms was shot at both locations and edited into a series of short video clips illustrating the link between depositional processes, resulting landforms and soils and their post-glacial evolution. Soil scientists, survey specialists and geomorphologists provided live commentary.

The teaching tool (http://soilweb.landfood.ubc.ca/landscape/) is an open-access website merging video clips, sound recordings, text, photos and graphics intended to help students situate landforms within their geomorphologic context. This online teaching resource allows students to observe, on their own time, conditions under which sediments are deposited and soils are formed, and to witness the transformation of a barren, glacial landscape into a vegetated soil landscape. The tool can be used in various geomorphology, soil, agriculture, forestry, and natural resource management courses. An interactive overview of the tool will be given during the presentation.