



Modifications to particles as they move through landscapes: connecting soils and sediments

Philip N. Owens

University of Northern British Columbia, Environmental Science Program, British Columbia, Canada (owensp@unbc.ca)

In many areas of the world, soils are eroded leading to the movement of particles towards the global ocean. Along this journey, there are modifications to these particles and we tend to refer to this altered material as sediment in recognition that such material may no longer be fully reflective of its source. These modifications are brought about by physical, chemical and biological processes, and by the inclusion of additional sources of material, such as channel banks. The degree of modification is partly a function of the inherent properties of the original soil material but also reflects landscape type, and the temporal and spatial scales of investigation. This presentation will consider the changes in particles between soil profiles and sediment transported in river systems, drawing on examples from studies in Canada and beyond. It is hoped that by understanding the transformation of such material we can predict better its movement and impacts.