

Impact of geosphere-biosphere interactions at the sediment-basement interface

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Ocean floor element fluxes predominantly focus on the water-sediment interface, yet appreciable elemental transfer can also occur at the sediment-basement interface. These transfers can alter the elemental composition of crustal fluids to such a degree that the elemental fluxes can rival riverine inputs to the ocean. Whether or not microbial processes within deep sediments and/or basement appreciably contribute to the elemental transfers is unclear. In this presentation I will review what is known about elemental transfer and microbial processes at the sediment-basement interface, including new results from recent IODP Expeditions.