AG-Seminar Sedimentary Systems

Connectivity of sedimentary systems in the marine realm



A process-based perspective

Environmental forcings (such as climatic variations, earthquakes, uplift events...) can create sediment-supply signals that propagate through complex sediment-routing systems into the final marine sinks. However, the details of signal preservation in the sediment transfer zone and the sink is majorly controlled by sediment- transport processes. Deep-marine sediment transport processes are notoriously difficult to study, as direct observations are technically very challenging and, therefore, rare. However, recently novel numerical simulation techniques and direct observation of submarine sediment flows lead to new insights about the details of sediment transport and deposition in the deep ocean.

In this seminar, we will explore the recent literature on marine sediment transport and depositional processes. In this context, we will discuss the implications of these new insights for sediment-system connectivity in the marine realm. The concept of sediment connectivity describes how efficiently sediment can be transported through all compartments of a sedimentary system. Highly connected systems can efficiently transport environmental signals towards the final sink.

By learning about the details of sediment transport in the marine realm and the implications on sedimentary system connectivity, we will approach the overarching central question:

"How do we read marine sedimentary archives?"

SC001 Geowissenschaftliche Themen B139 Seminarraum Geologie Wednesday 12:30-14:00