



Transfer of dissolved and particulate organic matter from terrestrial to aquatic systems and its in-stream transformation.

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The transfer of organic matter from terrestrial to aquatic ecosystems is an important part of the global carbon cycle. Furthermore, it is important to understand in-stream processing of organic matter and how different source catchments affect organic matter composition and cycling. This study focuses on the transfer of organic matter through the River Trent and its tributaries, located in the midlands, England, UK. We present data on the composition of terrestrial soil and vegetation organic matter sources and dissolved (DOM) and particulate organic matter (POM) from the River Trent at different stages in the river system. The study included: rivers draining organic peatland catchments, rivers draining mineral soils; sites at the confluence of different river sources and further downstream; and the soils and vegetation of the catchment. Samples have been analysed using elemental analysis for CHNO content, and thermogravimetric analysis is used to understand the source of organic matter. Long-term river flow and water chemistry datasets are also used to determine the flux of dissolved organic carbon (DOC) and its in-stream processing throughout the River Trent catchment, towards the tidal estuary.