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## **6.15 Varved sediments and the Anthropocene**

Human activity is the dominant cause of most contemporary environmental change with profound effects on mass transfer on land as recorded in sedimentary archives. Anthropogenic activities have caused rapid change in erosion, transfer and storage of sediment along hydrological pathways, altering the lateral export of nutrients, carbon (C) and contaminants. They also influence terrestrial and aquatic ecosystems, turnover times of C on land and, ultimately, long-term changes in climate. This session appeals to a multidisciplinary audience of sedimentologists and invites contributions on the transformation of sedimentary systems during the Anthropocene. More specifically, the theme aims to attract studies contributing to the timing, amplitude and spatial extend of human impact on the environment.

Particular attention will be placed on annually laminated sediments, i.e. varves, because they increase our understanding of climatic and human impacts on sediment records. They document frequencies and rates of change for environmentally relevant processes with high temporal resolution. When applied together with sediment trapping and instrumental monitoring of local climatic and limnological conditions, they allow calibrating sedimentary parameters, enhancing the validity of proxy-based reconstructions.

We welcome reconstructions related to human impacts and climatic conditions, runoff, flooding, catchment erosion, sediment transfer, solar forcing, as well as environmental monitoring. We also welcome contributions that discuss impacts of changes in land cover, hydrological pathways, and use well-established or innovative proxies such as DNA. This session is a contribution to the PAGES "Varve Working Group".