**Chew Bahir, the HSPDP drill site:**

**half a million years of environmental history from southern Ethiopia**

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The Chew Bahir drilling project (southern Ethiopia) is part of the Hominin Sites and Paleolakes Drilling Project (HSPDP). The deep drilling initiative was co-financed by ICDP-Germany, the Collaborative Research Center (CRC806) “Our Way to Europe” at Cologne University, Germany, as well as NERC (UK). The coring site, a sediment-filled deep tectonic basin in the Southern Ethiopian Rift, is close to the Lower Omo valley, well known for the Omo – Turkana key palaeonanthropological site of anatomically modern humans. Chew Bahir was cored in Nov-Dec 2014, when two overlapping cores (280 m and 270 m long) of mostly clayey silts, were collected, from the NW margin of the Chew Bahir basin. The record covers the last 550,000 years of environmental history, as first Ar/Ar ages on cryptotephra and OSL age determinations show. The composite record presented here was constructed by using MSCL, XRF and lithologic data, providing a potential archive of environmental history during the evolution and dispersal of anatomically modern humans. Initial sedimentological and geochemical results show that the Chew Bahir deposits respond sensitively to changes in moisture by sediment influx, provenance, transport and diagenetic processes, evident from mineralogy, elemental concentration and physical properties. The potassium record for example clearly traces dry-wet cycles on orbital to at least millenial timescales, as clearly evident for the youngest precession controlled cycle, the African Humid Period. Therefore, the Chew Bahir record will allow us to test different hypotheses concerning the influence of environmental change on the development and dispersal of *Homo sapiens* and his technological innovations such as Middle Stone Age tools.