

Geoarchaeological research on Bronze Age settlement mounds in the Kolkheti lowlands at the Black Sea coast of Georgia

Hannes Laermanns (1), Arne Heisterkamp (1), Giorgi Kirkitadze (2), Mikheil Elashvili (2), Jan Verheul (1), Daniel Kelterbaum (1), and Brückner Helmut (1)

(1) Institute of Geography, University of Cologne, Germany (h.laermanns@uni-koeln.de), (2) School of Natural Sciences and Engineering, Ilia State University, Georgia (mikheil_elashvili@iliauni.edu.ge)

- 0.0.1** Situated between the Rivers Enguri in the north and Khobistsqali in the south, more than 20 settlement mounds (local name Dikhagudzuba), identified by field survey and remote sensing techniques, give evidence of a densely populated landscape in the coastal lowlands of eastern Georgia during the Bronze Age. While the existing chronology of these mounds is based on ceramic evidence obtained during a previous archaeological research, only limited information is available on their internal architecture and their palaeoenvironmental context, and the chronology of the different layers is as yet lacking.
- 0.0.2** Within the framework of a geoarchaeological research project, we carried out eleven vibracores on and in direct vicinity of three of the most prominent mounds, situated close to the villages of Orulu and Ergeta. Based on these sediment cores, our study aims at (i) establishing a chronostratigraphical framework for the settlements based on radiocarbon dating; (ii) reconstructing possible phases and gaps of occupation; and (iii) identifying the environmental conditions during the time of their existence. Geochemical and sedimentological analyses were carried out to decipher element contents (XRF), granulometry, and organic contents (LOI, C/N) of sediment samples, supporting the interpretation of the mounds' stratigraphical evolution and related human occupation.

The three investigated settlement mounds are similar in dimension and stratigraphy, and different settlement layers could be identified in each of them. The ^{14}C age estimates indicate that their formation occurred during the second half of the 3rd and the first half of the 2nd millennium BC, thus confirming the archaeological interpretation of their Bronze Age origin. Based on the granulometric and geochemical data, palaeoenvironmental conditions in the vicinity of the settlements were dominated by fluvial processes.