Study of settlement distribution pattern in the Kolkheti lowland (Black Sea coast of Georgia) starting from early Bronze Age - natural and human influence and adaptation to landscape evolution

Mikheil Elashvili (1), Dimitri Akhvlediani (1), Levan Navrozashvili (1), Lasha Sukhishvili (1), Giorgi Kirkitadze (1), Daniel Kelterbaum (2), and Hannes Laermans (2)

(1) Ilia State University, Tbilisi, Georgia, (2) Institute of Geography, University of Cologne, Germany

During the past decades the question of a changing environment/nature became crucial. Actually we are trying to understand its nature or to predict future changes and their possible effects represent the main goals of many interdisciplinary studies. Therefore, the study of paleoenvironmental changes delivers key information for a better understanding of the whole process and especially the influence of these changes on human society.

The selected research topic is dictated by the fact that the Colchis lowland played an important role in the history of old societies (countries and empires). Especially the interaction between developing human societies under the pressure of a changing environment are most interesting in this context. The Kolkheti valley and the Black Sea shore represent a region involved in many global historical events, starting from the Myth of Argonauts and followed by the ancient greek colonization, the Kingdom of Pontus ending at the Roman and Byzantine empires. River Phasis (present Rioni) was an important segment in trade way between the Mediterranean and India and the East in general. In addition it is the area of the "lost or vanished" city of Phasis, an ancient and early medieval city, founded in the 7th or 6th century BC as a colony of the Milesian Greeks at the mouth of the river Phasis, near the modern-day seaport Poti. Considering the local history of Georgia, this is the area of formation of the Kolkhys (Colchis) culture in late bronze-early iron periods, forming Colchis and later on the Lazika kingdoms.

It is important to note that the archaeology and geomorphology of the seashore of Georgia is rather scarcely studied (mainly in the 1970s during soviet era). It is quite clear that the history of the region will not be deciphered without the reconstruction of the paleo and historical environment. The study based on an ongoing collaboration between the University of Cologne and the Ilia State University. Actually, geomorphological and archaeological datasets are collected in the joint-venture project and in addition with known historical and old topographic maps of the region they represent a good start for the research.

There are typical ancient settlements in the Kolkheti lowland, called locally "Dikhagudzuba", which are still identifiable on aerial imagery. Their structure, physical dimensions and locations were analyzed from aerial and on site studies. Data from existing archaeological studies and recent field works were analyzed to create a reliable database on the distribution of Bronze Age settlements. Changes in paleoclimate, sea level and river deltas represent the main components to form a paleolandscape of the study area. Based on the results of recent fieldwork and the analyses of regional historical maps in addition with the general geological and geomorphological settings paleogeographical scenarios were constructed.

Proposed models of past landscape changes and human settlement pattern were merged and analyzed. From one hand the human settlement distribution (taking into account tells relation with the local landscape of the same period) help us to identify the best suitable scenario from the set of paleolandscape patterns. Moreover, paleogeographical scenarios provide a better understanding on the erection of human settlements in the past, and their influence and adaptation to ongoing changes.