



Exogenous processes study in the coastal zone of the large reservoirs in the archaeological monuments placement (Volga-Kama region)

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The problem of conservation of archaeological heritage is highly relevant for the Republic of Tatarstan (RT), because in its territory identified, studied and registered around 4,300 archaeological sites. Most of archaeological sites from the Mesolithic to the late Middle Ages, now situated in the coastal zone of reservoirs where archaeological objects destroying because of intensive abrasion processes.

The Volga and Kama rivers region attracted people for millennia. This territory of the Russian Plain is abounding in archaeological sites of various ages. During the Upper Paleolithic study region was quite convenient for living activity of the first inhabitants because of its situation out of the glacier limits. The sites on the banks are deposited within deluvial sediments of the Late Valdai glaciation which have been accumulated on the slope of the Volga and Kama valleys, placing the third terrace and the segmentations of the second terrace over the flood-plain and now completely or fragmentary destroyed by reservoir waters.

The analysis of remote sensing (1958-2013) and field survey (2011-2013) data performed. Georeferencing and alignment of the historical maps with remote sensing data makes possible to reveal mistakes in old site plans and re-create the shape of the destroyed archaeological objects, as well to get the exact size of the monument and its correct orientation. Results showed also that the studying sites caused a great rate of destruction of coastline.

Cultural heritage sites monitoring, with information about the chronology, cultural layer value, settlement specifics, etc., taking into account the methods used in landscape ecology and field archaeological survey, allows to evaluate damage and the intensity of archaeological sites destruction through the dangerous exogenous processes estimation. Exogenous processes data and archaeological GIS integration will form unified system of archaeological rescue works, will provide analysis of large amount data in a short time, to update and enter new data, etc.

This approach will help to determine the most problematic areas, in their funding valuation and archaeological excavations planning and broaden knowledge about the past of the peoples living in study region.