

Water resources management for the Terek River delta (Western Caspian Region)

OLGA GORELITS¹, IGOR ZEMLIANOV¹ & VLADIMIR KRYJOV²

1 State Oceanographic Institute (SOI), 6, Kropotkinsky Per., Moscow 119034, Russia
gorelits@geocentre.ru

2 Hydrometeorological Research Centre of the RF, 11-13, B.Predtechensky Per., Moscow 123242, Russia

Abstract The changes in hydrological conditions in the Terek delta occur against a background of global climate changes. The climate warming and humidity increase causes the intensification of erosion processes in the Terek watershed, the essential increase of the water runoff and sediment load. Regulation of the delta channel network should be carried out by restoration of existing and construction of new artificial canals and usage of natural delta branches and lakes. The main factors of the Terek delta channel network formation are considered. The recommendations for the optimum reserve tracts of water distribution have been developed. These new canals are able to pass up to 50% of the flood waters and significantly reduce the risk of destruction of the protective levees and dams in the delta. At the same time these tracts have important ecological value for the delta environment.

Key words flooding; river delta formation; hydrological regime; runoff distribution; remote sensing