*Environmental Engineering and Management Journal* *April 2015, Vol.14, No. 4, 781-791*
*http://omicron.ch.tuiasi.ro/EEMJ/*

*"Gheorghe Asachi" Technical University of Iasi, Romania*

# WATER RUNOFF, SEDIMENT TRANSPORT AND RELATED IMPACTS IN THE SOUTHEASTERN BLACK SEA RIVERS

**Mehmet Berkun[1], Egemen Aras[2*], Ummugulsum Ozel Akdemir[3]**

*[1]Istanbul Kultur University, Engineering Faculty, Department of Civil Engineering, 34156 Istanbul, Turkey*
*[2]Karadeniz Technical University, Faculty of Technology, Department of Civil Engineering, 61830 Trabzon, Turkey*
*[3]Giresun University, Engineering Faculty, Department of Civil Engineering, 28200 Giresun, Turkey*

## Abstract

The Southeastern Black Sea coastal region in Turkey and Georgia is under threat of severe coastal erosion and shoreline recession. The main reason for this problem is the response of the coast to human activities. While water discharge rates were reduced by dams by approximately 7% only, about 98% of the suspended sediment is being captured by the dams, leading to reservoir siltation over time in the southern Black Sea Region Rivers in Turkey. About 83% of the total suspended sediments are carried by the Coruh River to its mouth, which determines the characteristics of the river and the shape of the coastal region. In this study, the effect of water runoff and sediment transport to the Black Sea Coast was investigated.

*Key words:* Black Sea, coastal erosion, Coruh River, dams, environmental effect, River runoff, sediment load

*Received: February, 2012; Revised final: August, 2012; Accepted: August, 2012*

[*] Author to whom all correspondence should be adressed: e-mail: egemen@ktu.edu.tr