



## **Detecting the role of land use / land cover on river bank processes (Study area: Talar River, Iran)**

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In present study the land use evolution in two sides of Talar River that is one of the most important rivers in Caspian Sea watershed, have been investigated during about a 60 years period by interpretation of archive aerial photographs. The effects of land use change on bank retreat of the study reach have been considered too. Results show that during study time the types of land use at river sides and along the Talar River have been changed extremely. The length of study reach is 43 km (meandering and braided form). During study period (1955-2013) land use types in braided reach have been changed more than meandering reach, especially in natural covers (forests and grasslands). In addition, results of this part show in study site that the forest lands have been totally disappeared along the river and residential area increased from 4.3% to 24.7% during study period (1955-2013). Rate of bank retreat along agriculture and orchards was higher than the banks observed along other type of land use, generally. Results show that the bank retreat in braided reach in all land use types is more than meandering reach. Results of statistical analysis have revealed that there is a significant difference among different type of the land use change in bank retreat. In the study area the higher bank erosion was measured at banks that have been occupied with orchards and agricultural lands, in contrary sides of the river that have been occupied with grasslands and forests have more stability and the value of erosion in these parts is less.