Geomorphology and effective factors on lateral erosion in Hor Rood River, Lorestan province

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Extended abstract
1- Introduction
Rivers affected by many factors such as geological features, hydrologic, geomorphologic, and how they exploit are subject to change. The most marked effects of changes in direction to channel erosion and lateral movement occurs as meanders. Obviously, unstable bed of a river channel and changes each year, a lot of damage to agricultural land, roads, bridges and generally to enter human structures. On the other hand a considerable amount of sediment to the reservoir of dams to pass. Hence, due to practical purposes the matter goes to the settlements around their homes have always been of interest to researchers. Methods and techniques used in the study centered on two general axes.

2- Methodology
In this study, to check the instability and erosion of Hor Rood River used aerial photographs (1955) and satellite images IRS (2006) as a comparison tool for Periodical changes. Furthermore, the geometric parameters used for show changes in river morphology and draw, measure, and has been calculated them. In this regard, we used software for calculating the geometric parameters, such as curves radius, the wavelength, the...
coefficient of curvature, bed width and depth for the river changes direction in the study period. Also sediment samples taken from the river route and analyzed them in laboratory by granulometry and morphometry methods and then compare with geological maps. The hydrological factors affecting geometrical changes and subscription funds, the path to the river was divided into three specific sections. Then the periodical changes of Bed River correlated with the variables studied during a study period and communicate analytical methods and conclusions are given.

3- Discussion
Sediment samples taken at intervals of approximately 5 to 6 km from each other from the bed river and laboratory works on them shows that the particle size gradually from upstream to downstream side becomes more fine-grain. This phenomenon is common in rivers sediments. River sediments are generally coarse texture and some branches of the northern part of the main branches in some areas associated with coarse blocks. Transverse profile taken from bed river in three intervals drawn from upstream to downstream. These profiles show the upstream from broad bed change to a low gradient rectangular cross-section with vertical walls relatively high slope to change shapes. These changes do not show any correlation between Sediment condition and dynamics channel. This inconsistent subject formed the main problem of research.

4- Conclusion
Geometrical parameters indicate that changes in morphology and lateral erosion from section 1 to section 2 were decreased. But in the third section the bed river is straight and surrounded by river channel and its morphology changes much less than the other sections. Hydrological data also does not shows any correlation with the lateral erosion values of river channel from upstream to downstream. So that with increasing discharge and sediment from section 1 to the third section, the amount of lateral erosion and morphological changes in this direction is reduced. Being reversed results show that the channel morphology of the geological structure and lithology over the river dynamics are influenced.

Keywords: Geomorphology, Lateral Erosion, Horrood river, Hydrology.

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