

Abstract

The destruction of forests and wrong exploitation of the lands are the most important causes of abnormal floods. This research will be carried out on Malanty study area covering 011/13115 hectare of Kerman province,. The main objective of this study was to determine the role of land use and land cover changes on the volume and maximum flood discharge indices using multi temporal satellite data and the experimental method is SCS-CN in the Malanty region. The satellite images including Landsat TM in 1992 , Landsat ETM + in 2003 and OLI in 2015 will be used in this research. To evaluate changes in land use and land cover, maximum likelihood algorithm of supervised classification will be used to create time series map of land cover. these times. First, the detection method of classification changes, will displayed changes in land use during the period (2003-1992) and (2015-2003) tables data. . Finally, by combination of three different land use maps and the map of soil hydrologic group, also determining the status of vegetation such as range cover and forest areas through field visits, as well as using curve number tables, the average curve numbers of each land will be determined, using the mean weight of CN. Then, using experimental method of SCS-CN method, maximum flood discharge and volume will estimated in 1992, 2003 and 2015 using the rainfall intensities with a return period of 2, 5, 10, 25, 50 and 100 years. Finally, the relationship between land use and land cover changes will determined using maximum flow rate and flood volume indices in three period over 1992, 2003 and 2015.

Key words: Discharge Change, Land Use/Cover Change, *Tecommella Undulata* forest, Malanty Region, SCS-CN method.



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**The Role of Land-Use/Cover Change on
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in Jiroft Plain**

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