



Flood risk assessment in Ardabil valley Shirvan aquiferous zone

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ABSTRACT

Many people's lives and property are threatened by annually around the world. Thus, it is necessary to identify areas with flood risk in order to apply systematic management in urban auriferous zones. First, topographic maps and Si valley Shirvan River aquiferous land use was prepared and river basin border was drawn based on these maps, then the river divided to 3 sub-basins and these sub-basins divided to 5 hydrological unit and these units divided to 4 sub- hydrological units, and flood hydrographs were calculated in return periods of 2, 5, 10, 25, 50, 100, respectively. Within the area of S1-1-1 with a length of 3.5 km in Si valley Shirvan River, geometric information of river was obtained. In the next stage, by introduction of flow characteristics and river geometric information and each profile coefficient in HEC_RAS software, water level profile in different return periods was calculated and average level and depth of flood for risk areas was determined. Finally, using flood damages functions, damages were calculated and level-damage curve was drawn. The results showed that damage increase trend of floods with a return period of more than 25 years and average flooding depth greater than 0.52 m is more intense.

Keyword:

*Flood risk assessment
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