

---

( : )

( / / : / / : )

SPSS

( )

:

...

( ) .()

( )

( ) .()

( )

( )

( )

( )

" ۳۶° ۲۰' ۴۶" ۳۶° ۵' ۱۷"

۵۰° ۱۱' ۲۶" ۵۰° ۳۹' ۳۳"

/ /

( )

/ / ( )

/

ILWIS

/

/

spss

/

/

Archive of SID

/

( )

( )

...

---

(ton/y)	(m <sup>3</sup> /s)	(c)	(mm)	
/	/	/	/	
/	/	/	/	
//	/	/	/	
/	/	/	/	
/	/	/	/	
	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	

/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	0/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	
/	/	/	/	/	/	

...

/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	

Archive of SID







( / )

/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	
/	/	/	

( ) Y x<sub>1</sub>

( )

$$\text{LogY}=0/365\text{logx}_1+0/576\text{logx}_2+1/607$$

(stepwise)

( ) Y x<sub>1</sub> ;  
x<sub>2</sub> LogY=0/332logx<sub>1</sub>+3/732 ( )



$(R^2 = \% \quad /)$        $/$        $R^2$   
 $(SE = / \quad ) /$        $(SE)$   
 SE       $(R^2 = \% \quad /)$        $/$        $R^2$   
 $R^2$        $(SE = / \quad ) /$   
 $/$       SE       $(R^2 = \% \quad /)$        $/$   
 $R^2$        $(SE = / \quad )$   
 $/$       SE       $R^2 = \% \quad )\%$   
 $(SE = / \quad )$   
 $(SE)$        $R^2$

SE = /    R<sup>2</sup> = %

( )

( )

( )

( )

)

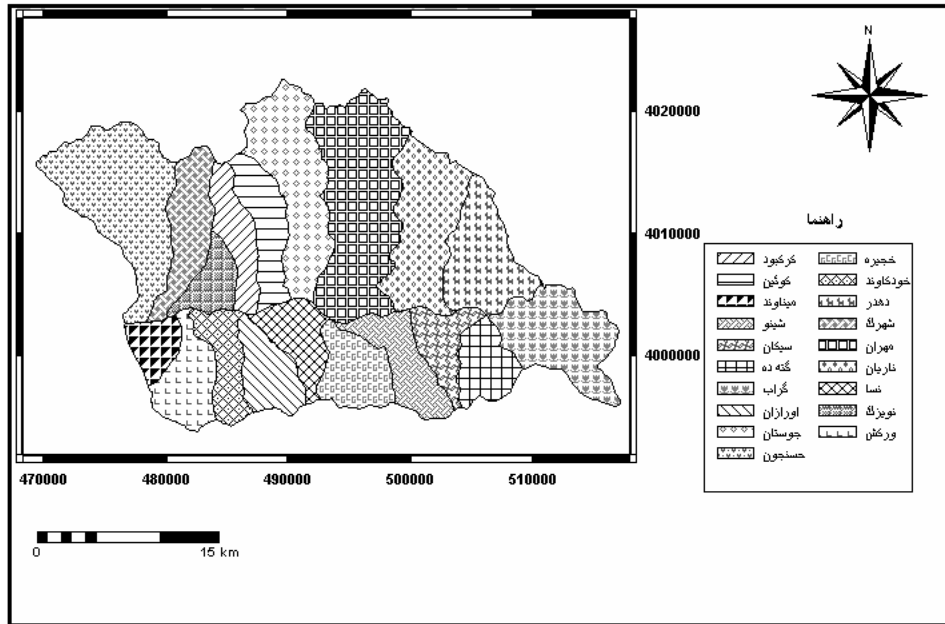
( )

(  
%

)

(

( )  
( )



8- Bray. D.I.,H.xie.1993.A regression metimating suspended sediment yield for Ungauged Watersheds in Atlantic Canada,Canadian journal of civil engineering ,Vol.20,pp:82-87

## Investigation and determination of effective factors on sediment production and yield of drainage basins (Case Study: Taleghan Drainage Basin)

M. Shabani<sup>\*1</sup>, S. Feiznia<sup>2</sup>, H. Ahmadi<sup>3</sup> and J. Ghodosi<sup>4</sup>

<sup>1</sup> Assistant Prof, Azad University of Arsanjan, Fars, I.R. Iran

<sup>2</sup> Professor, Faculty of Natural Resources, University of Tehran, I.R. Iran

<sup>3</sup> Professor, Faculty of Natural Resources, University of Tehran, I.R. Iran

<sup>4</sup> Research Assistant, Soil Conservation & Watershed Management Research Institute, I.R. Iran

(Received 2005 Feb 28 , Accepted 2006 Feb 21)

### Abstract

Erosion and sediment production depend on complex factors and parameters. Determining factors and parameters that play the main role in erosion and sediment production in a drainage basin can help better management of catchments and reducing damages caused by erosion and sediment production. In this research, for determining the factors affecting sediment yield, Taleghan Drainage basin was chosen as the subject of study. This drainage basin is located 90 km northwest of Tehran and is one of the main drainage of Sefid-Rood Drainage Basin and plays important role in input of sediments to Sefid-Rood Dam. After determining the parameters influencing sediment yield in four general groups and seventeen subgroups as independent variable, the amount of sediment yield in each sub-catchment was also determined as a dependent variable, and then, using SPSS software and through factorial analysis and performing multiple regression analysis between selected independent variables and the dependent variable, the most suitable statistical relationship between sediment yield of sub-catchment and drainage basin characteristics was obtained. The result of chosen model shows that sediment yield of sub-catchments in Taleghan drainage basin depends on four following factors: The area of agricultural lands (dryland and irrigated farming), sub-catchments area, the total area of pre-Quaternary erodible and semi-erodible formations and relief (topographical features). According to results of the research, the factors influencing erosion and sedimentation in Taleghan drainage basin can be divided into three groups: human, topographical and geological factors.

**Keywords:** Land use, sediment yield, Taleghan Drainage Basin, Regression analysis.

\* Corresponding author:

Tel: 0261-2249313

, Fax: 0261-2249313

E-mail: mohamshabani@yahoo.com