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## ICD

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ICD

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.ICD GIS

ICD ( ) F. A. O- UNEP

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ILWIS

(DEM)

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( )

(Cu, Am, Tz,

Kn, As-Sb, Gs, QT)

(.)

QT

( )

( ) ( )

( )

TM

ILWIS

ICD

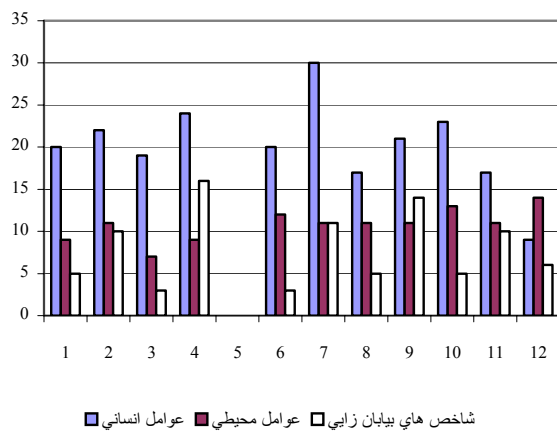
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a. a(b) S. e (wa)

L. d (ch) W. d(pu) P. d (cu-gr)

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/	/	/		
IV	III	II	I	

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/	/	/		
IV	III	II	I	



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W. d(pu)>S. e(wa)>L. d(ch)>P. d(cu-  
gr)>Q(qt)

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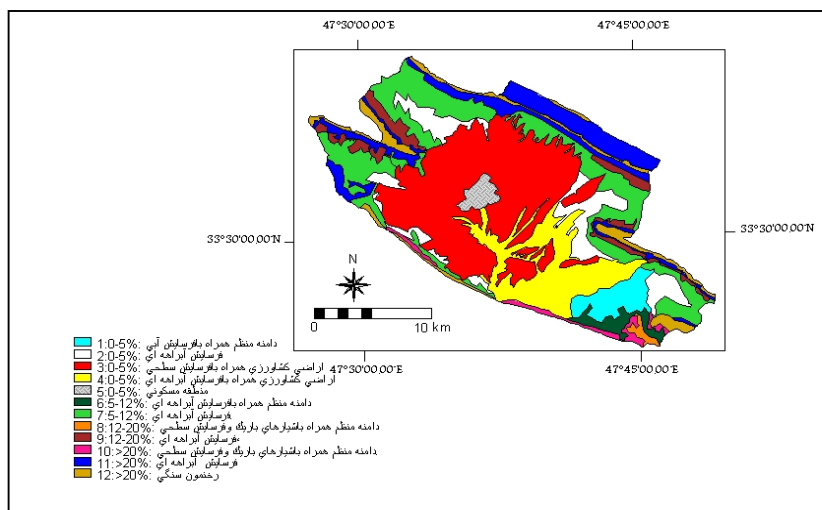
DS= /

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ICD

desertification severity



		Km <sup>2</sup>		
$\frac{III - P, A(n)}{A - L.d(ch)}$		/		
$\frac{III - A}{A - W.d(pu)}$		/		
$\frac{II - A(i)}{A - W.d(pu)}$		/		
$\frac{IV - A}{A.E - W.d(pu).S.e(wa)}$		/		
$Ab$		/		
$\frac{III - P}{A - P.d(cu - gr), L.d(ch)}$		/		
$\frac{IV - P, A(n)}{A - P.d.w.d(pu), L.d(ch)}$		/		
$\frac{III - P}{A - P.d(cu)}$		/		
$\frac{IV - P / R, A(n)}{A - A + I}$	*	/		
$\frac{III - P / R}{A - P.d(cu)}$		/	>	
$\frac{III - P}{A - P.d(cu)}$		/	>	
$\frac{II - B(m)}{E - Q(qt)}$		/	>	



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/ ,II

/ III

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IV

(IV,III, II)

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(II)

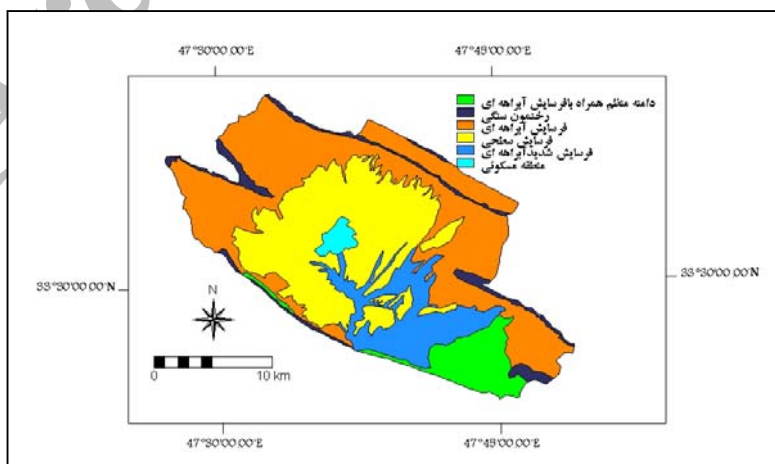
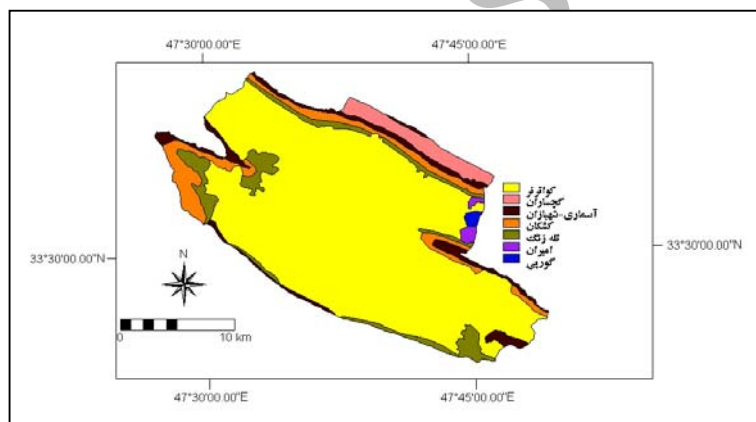
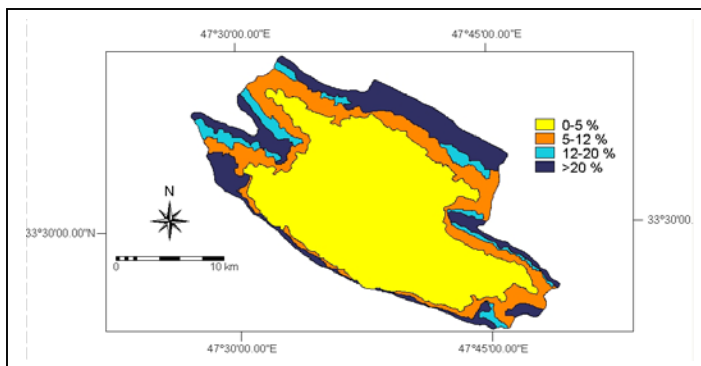
(IV)

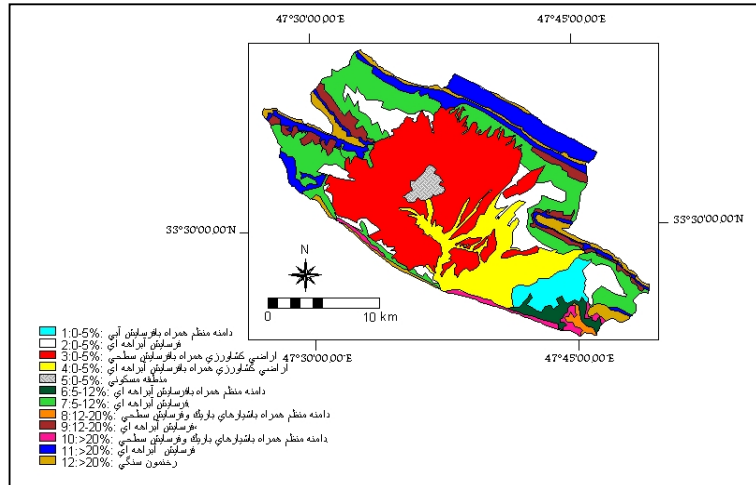
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(III)

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- 16- Babaev, A. Q. Kharin, N. Q, Orlovsky (1993). Assessment and mapping of Desertification processes, A methodological guide. Ashkabad.
- 17- FAO/UNEP (1984). Provisional methodology for Assessment and mapping of Desertification processes, A methodological guide. Ashkabad.
- 18- Kharin, N. Q. et al. (1985). A methodological principles of desertification Assessment and mapping, Ashkabad.
- 19- Lesser, M. (April 7, 2003), Remote sensing monitoring and Assessment potential for Desertification.
- 20- Qrumblatt, J. (1991), Kenya Pilot study to Evaluate FAO/UNEP Provisional methodology for Assessment and mapping of desertification (Qok, DRSRS).
- 21- Qrumblatt, J. Ottichilo, w. k. and sinange, RK (1992) A QIS Approach to desertification Assessment and mapping.

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## Application of ICD Method for Determining the Severity of Desertification in Koohdasht Watershed

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### Abstract

Desertification has recently been in various ways discussed in scientific and research centers at universal, regional and national levels. Vast attempts have been made to control it. Its control is undoubtedly indispensable, because if desertification occurs in one part of the world, the consequences would be devastating to inhabitants all over the world. Access to knowledge of vulnerability and susceptibility of areas to desertification is the first step that must be taken to combat the phenomenon. From among the many methods of identification of areas susceptible to desertification the Iranian Classification of Desertification (ICD) was chosen. Based upon ICD the map for the present status of desertification for Koohdasht basin with an area of 45600 ha was prepared. The environmental cause, human cause, influencing factors, type of process, the predominating criteria and indices, as well as the class of desertification intensity were determined for the basin. Results indicate that desertification of the area accompanied by land destruction of the area accompanied by land destruction of average intensity has started and is continuing. Among the expediting factors to be named are: underground water withdrawal through pumping which has resulted in a deeper underground water, and a destruction of plant and vegetation through either a change of land use from its natural state to urban development of overgrazing of the rangelands.

**Keywords:** Desertification, Human causes, Environmental causes, Determining process, Desertification map, Geographic Information System, Koohdasht basin

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