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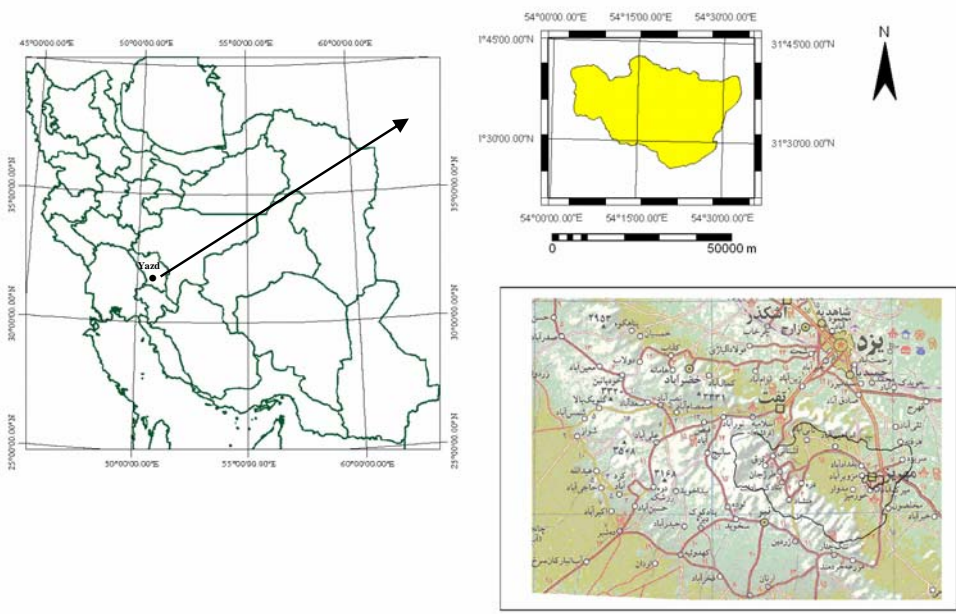
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- Iran Research Institute Forest and Range Lands.
- Plant Cover.
- Material Cover
- Dust Storm Index



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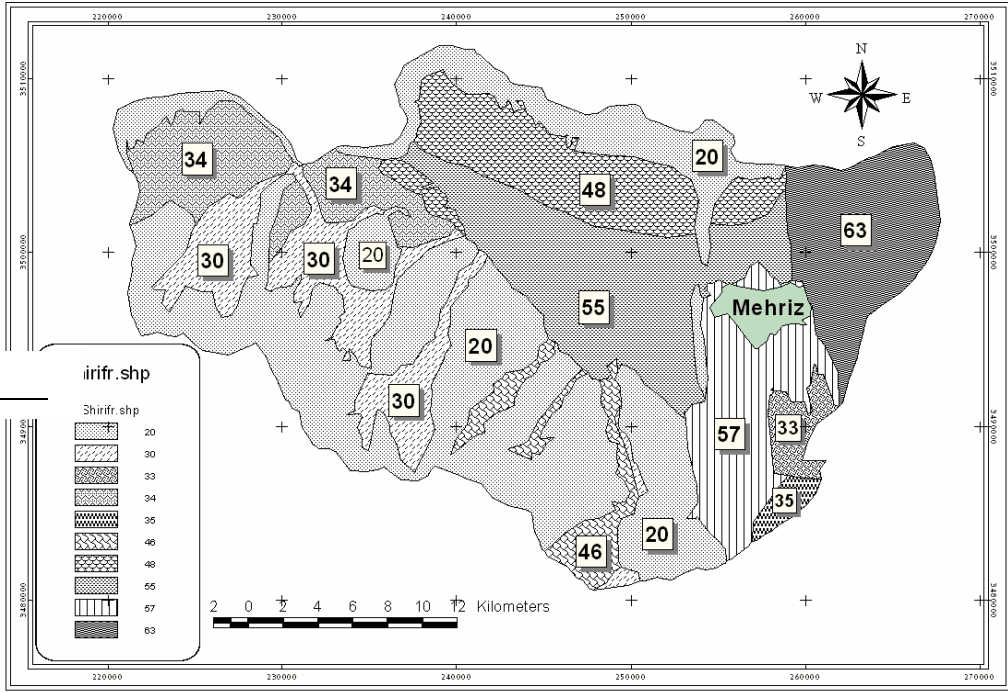
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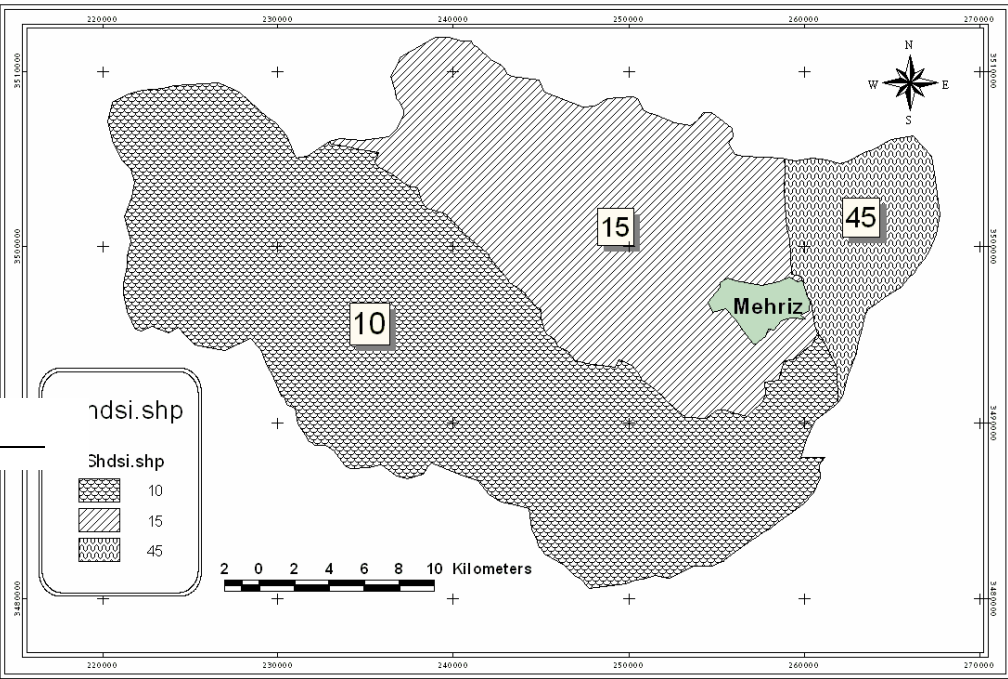
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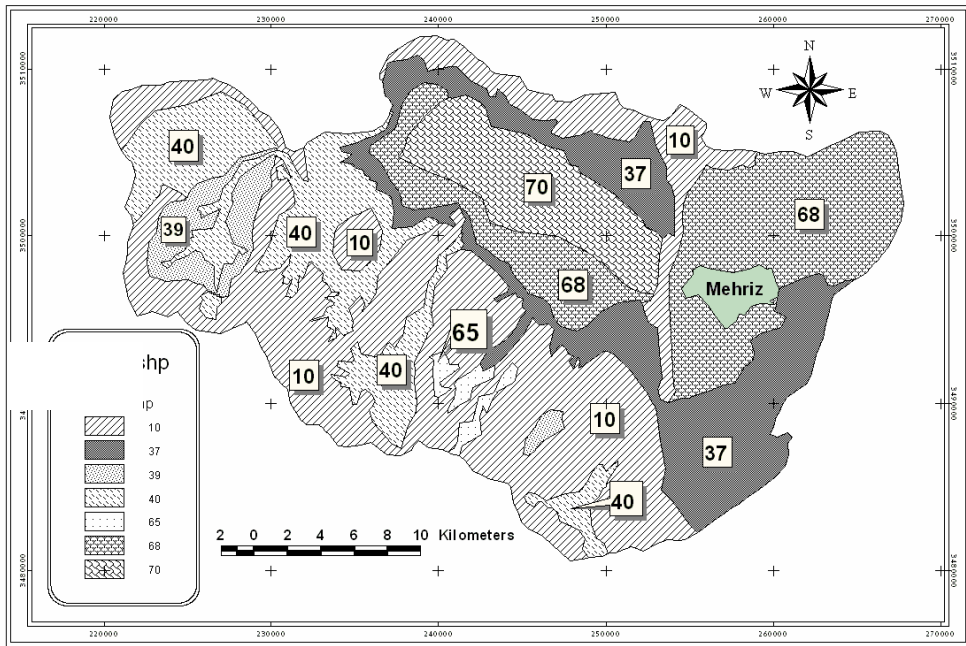


( ) IRIFR \*

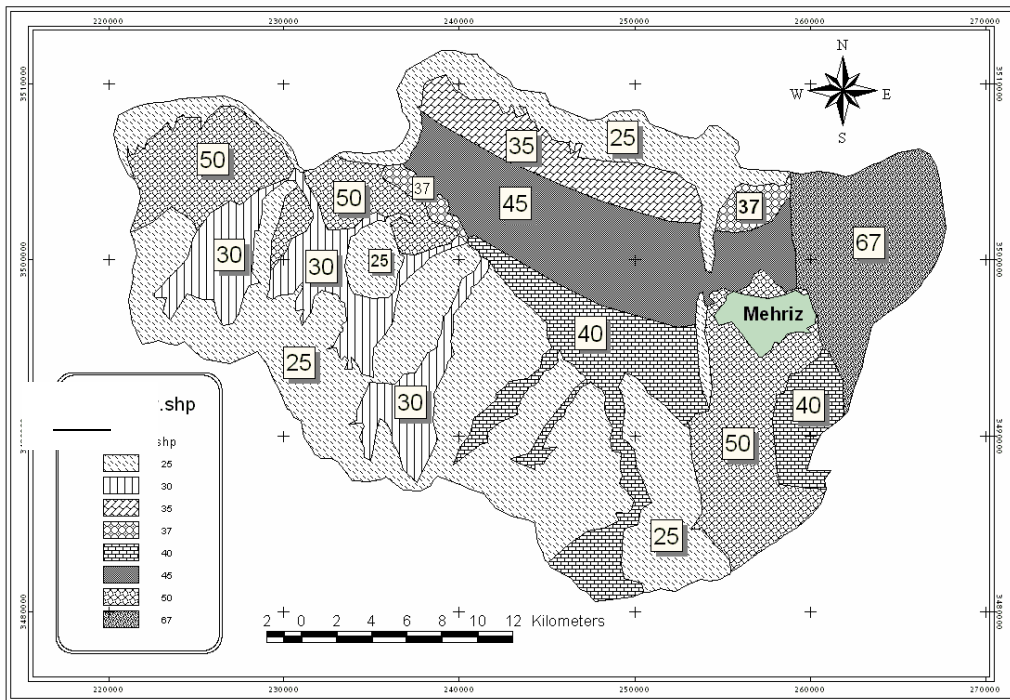


( ) (Dust Storm Index) DSI \*



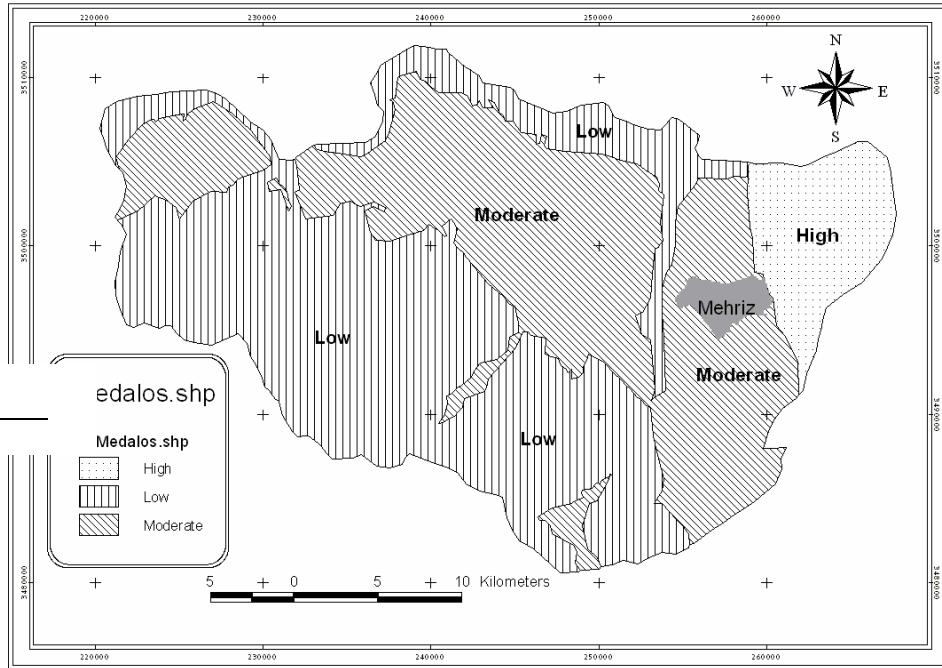


( ) (Material Cover) MC \*



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11- FAO-UNEP (1984). Provisional Methodology for Assessment and Mapping of Desertification, Rome.

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## Assessment and Mapping of Desertification Using Modified MEDALUS Model in Fakhrabad-Mehriz (Yazd)

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(Received: 19 Dec 2004, Accepted: 4 Feb 2006)

### Abstract

There have been several models presented for evaluation and provision of the prevailing conditions of desertification. In this research, the ongoing condition of desertification (with emphasis on wind erosion) has been considered. By using the Modified MEDALUS model (Ekhtesasi-Ahmadi 2004), in Fakhrabad of Mehriz region, four indices of desertification were evaluated and related information layers provided. These layers are: 1- Data layer of wind erosion model (IRIFR). This layer includes three classes of: high (27958 ha), moderate (28628 ha) and low (33330 ha). 2- Data layer of DSI index. This layer includes two classes which are low (2354 ha) and moderate (7545 ha). 3- Data layer of soil surface material. This layer includes three classes of: high (26331ha), moderate (31412ha) and low (32165 ha). 4- Data layer of Soil compressive strength. This layer includes three classes which are high (7565 ha), moderate (49024ha), and low (33327 ha). Finally, geometric average values of these layers were calculated. Then, through a classification of this map, the prevailing condition of desertification was determined. The results indicate that the studied region (89916 ha, area) is divided into the three following classes: 1- Low desertification intensity class, of 44640 ha (%49/54) area. 2- Medium desertification intensity class, with an expansion of 37648 ha (%41/76) area. 3- High desertification intensity class, of 7628 ha (%8/38) area.

**Keywords:** FAO- UNEP model, ICD model, Modified MEDALUS model, DSI index, IRIFR erosion model, Desertification phenomenon.

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