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**The thesis submitted for the degree of M.Sc (in the field of  
combat desertification)**

# **Classification of Desertification Intensity Using ICD Model in Southwest of Hirmand county**

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October 2010

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### **Abstract:**

Desertification is a phenomenon occurred in arid, semi-arid and dry semi-humid areas that reduces suitable lands potential. There are different models for preparing desertification maps like ICD model. Due to being consistent with local biome and conduct of step by step that reduce expert error and also can prepare map of desert environments types and desertification intensity, ICD model is one of the best models in estimation of Desertification intensity. In this study, ICD model has been used to Determin desert environment type, desertification factor, process type, dominant criteria and indices, and desertification intensity in southwest of Hirmand county. In addition to the field visits, unsupervised classification method was used by ERDAS 9.1 software and IRS (2003) Indian satellite. After scoring of anthropogenic and natural factors and desertification indices, quantitative value of desertification intensity was obtained for each working unit. In order to draw maps, Arc Gis 9/2 software was used in this study. The results showd that in this region, current situation of desertification is moderate, and includes medium(III), high (IV) and very high (V) classes. These classes cover 58/306%, 15/051%, 26/643% of the study region with an area of (6418) ha, respectively.

**Key words:** desertification, dominant processes, desertification map, Hirmand County, ICD.