



## Application of MEDALUS Method for Desertification Mapping in SEJZI plain

L. Bakhshandehmehr (1), S. Soltani (2), and A. Sepehr (3)

(1) MSc Student of Desertification Combating, Isfahan University of Technology (IUT), (2) Associate Professor at IUT, (3) Academic Staff at University of Isfahan

### Abstract:

According to the UNCCD definition, “Desertification” is land degradation in arid, semi-arid and dry subhumid areas resulting from various factors, including climatic variations and human activities. According to this definition, natural and anthropogenic processes have main roles in desertification severity. The MEDALUS methodology is a practical approach to assess the status of desertification and evaluating of desertification risk. In this study, have been developed a regional model for desertification assessment and mapping in SEJZI plain (Eastern Isfahan) based on MEDALUS methodology. At first step, main factors and indicators affecting on desertification process were identified. According to the local condition, seven factors include: climate, soil, vegetation cover, ground water, water erosion, wind erosion and policy and management were recognized. Each factor included several indicators accounting as factor quality determination. These indicators quantified based on their influences on desertification process. For each indicator a score ranging from 100 to 200 have been assigned and desertification weighting was extracting. Ultimately, desertification severity was classified in four level including low, moderate, severe and high severe. Results showed that 1.69% of study area classified as moderate class, 34.86% classified as severe and 63.45% involved high severe class. The climate and management and policy were the most important factors affecting on desertification process.

Keywords: Desertification, MEDALUS, SEJZI Plain, Desertification Mapping