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Studying of Forests Potentials for Introducing of Mediterranean Industrial Woody Species to Desertification Combating

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Abstract

Most of arid and semiarid parts of the world suffer from great lack of forest land. Therefore taking a good care of these forest lands quantity and quality and control of renewable natural resources is very important. Zagroass forests are located in semiarid parts of Iran. The main purpose of this research is to determine the potential habitat of forest olive for Chaharmahal va Bakhtiary using GIS. This province has a total area of 1653300 hectars. The main steps of this project are as follows: collecting data and maps, digitizing topographic maps with scale of 1:25000, and developing maps of slope, elevation levels, aspect, climatic classification. Regretion analysis was performed on the climatic data and the gradian equations were developed with a high R2 value. Using these equations the following maps were developed.
For the whole province: isothermal, isoheytal, abs. max isothermal, relative humidity relative humidity of dry months. Soil maps were also digitized and the information system suitable for this study was developed. Using this bank the following layers were made: land units, soil depth, two soil textures, EC, pH, CaCo3. The following layers were made using digitized data, land use hydraulic network, lake and marsh land. Considering ecological needs of olive and extracting them from all diferent layers using boolean method. The layers showing suitable locations for planting olive(olea europea) was made. One of these maps includes all types of soils suitable for planting olive and the other excludes silty clay loam soils which are not so suitable. The total area achived was 9500 hectars in the whole province and the area excluding silty clay loam soils was determined to be 900 hectars. Using RS information and GIS technology in these types of projects can increase accuracy specialy including some more layers is recommended.