World Academy of Science, Engineering and Technology
International Journal of Urban and Civil Engineering
Vol:9, No:05, 2015

Landscape Classification in North of Jordan by Integrated Approach of Remote Sensing and Geographic Information Systems

Authors : Taleb Odeh, Nizar Abu-Jaber, Nour Khries

Abstract : The southern part of Wadi Al Yarmouk catchment area covers north of Jordan. It locates within latitudes 32° 20’ to 32° 45’N and longitudes 35° 42’ to 36° 23’ E and has an area of about 1426 km2. However, it has high relief topography where the elevation varies between 50 to 1100 meter above sea level. The variations in the topography causes different units of landforms, climatic zones, land covers and plant species. As a results of these different landscapes units exists in that region. Spatial planning is a major challenge in such a vital area for Jordan which could not be achieved without determining landscape units. However, an integrated approach of remote sensing and geographic information Systems (GIS) is an optimized tool to investigate and map landscape units of such a complicated area. Remote sensing has the capability to collect different land surface data, of large landscape areas, accurately and in different time periods. GIS has the ability of storage these land surface data, analyzing them spatially and present them in form of professional maps. We generated a geo-land surface data that include land cover, rock units, soil units, plant species and digital elevation model using ASTER image and Google Earth while analyzing geo-data spatially were done by ArcGIS 10.2 software. We found that there are twenty two different landscape units in the study area which they have to be considered for any spatial planning in order to avoid and environmental problems.

Keywords : landscape, spatial planning, GIS, spatial analysis, remote sensing
Conference Title : ICURPT 2015 : International Conference on Urban, Regional Planning and Transportation
Conference Location : Paris, France
Conference Dates : May 18-19, 2015