

Data Integration in a GIS Geographic Information System Mapping of Agriculture in Semi-Arid Region of Setif, Algeria

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Abstract : Using tools of data processing such as geographic information system (GIS) for the contribution of the space management becomes more and more frequent. It allows collecting and analyzing diverse natural information relative to the same territory. Space technologies play crucial role in agricultural phenomenon analysis. For this, satellite images treatment were used to classify vegetation density and particularly agricultural areas in Setif province by making recourse to the Normalized Difference Vegetation Index (NDVI). This step was completed by mapping agricultural activities of the province by using ArcGIS.10 software in order to display an overall view and to realize spatial analysis of various themes combined between them which are chosen according to their strategic importance in different thematic maps. The synthesis map elaborately showed that geographic information system can contribute significantly to agricultural management by describing potentialities and development opportunities of production systems and agricultural sectors.

Keywords : GIS, satellite image, agriculture, NDVI, thematic map

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