Short Communication

A solution for conversion of area from decimal degrees to metric units in ARC INFO GIS software

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A major problem confronts many of the ARC GIS 8.2 and lower version users in estimating the area of polygons in metric units. Most of the available data (like toposheets) give spatial values (latitude and longitude) of coordinates of different points on the earth in degrees only. This requires users to georeference the acquired maps in decimal degrees only. So the shape files for digitizing the maps are created using Arc Catalog without defining the projections. The digitized shape files are converted to coverages using ArcToolbox to estimate the area directly which is found in the Attribute Table. Since the projections are not defined, the area estimated will be in decimal units. Conversion of decimal to metric units is complicated, and moreover not possible. All researchers need area in metric units only for their further analysis or research. So to avoid these difficulties, a very simple procedure for estimating area in metric units has been discussed in this note:

After georeferencing the scanned map, creating shape file in unknown coordinate system, digitization of the map (for area, in polygon mode and before adding the attributes)

1. Create a new shape file using Arc Catalog with UTM projections (or any preferred projections used to display the area values in metric units)   and specify the correct zone for UTM system

2. Open the already digitized shape file and using the Edit menu of ArcMap, copy the whole shape file.

3. Open the new shape files created and then click paste from Edit menu.

4. Convert this new shape file into coverage using ArcToolbox.

5. This converted coverage of new shape file will present the area in metric units.

Reference

www.esri.com