This help guide describes how to use the geometry calculator in ArcMap to calculate the area of a polygon. The procedures can also be used to calculate other geometries such length of a line, polygon centroid coordinates and x and y coordinates of a line start or end.

**Calculating area per square km - polygons:**

Calculating area of polygons can be done using the Field Calculator.

1. In ArcMap, open the attribute table of the *projected* shapefile: Right-click on the layer > Open Attribute Table.
2. Click the Table Options down arrow and choose Add Field
3. In the Add Field dialog add a name and choose the data type, precision and scale:
   - **Name:** AreaSqKm
   - **Type:** Double
   - Define the **Precision** (field length) and **scale** (decimal places)
     - Precision: 10
     - Scale: 6
4. Click OK.
5. Click on this new column header — **AreaSqKm** — to make it the active field.
6. Right-click on the header and choose Calculate Geometry. If a message appears click Yes to continue.
7. In the Calculate Geometry box check the appropriate Co-ordinate System Box and choose the Units drop down box - Square Kilometers.
8. Click OK.

The area by square kilometre has been calculated for each of the polygons in the layer.