

# Practical\_Session\_2\_ArcMap Interface and Basic Data Handling

## ArcMap Interface and Basic Data Handling

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### **Objective of the exercise**

Make trainees familiar with the basic tools in ArcGIS intended to make trainees competent in exploring the data.

### **Data Information:**

Your data is within the folder Nepaldata. It consists of the following data:

- a. DIS\_HQ : (District Headquarter : Point data
- b. MajorRivers : Major Rivers of Nepal : Line data
- c. Districts : District Boundary : Polygon data
- d. RoadNetwork2006 : Road Network : Line data
- e. VDC : Polygon data

### [Step 1 – Open ArcMap 10.5](#)

- a. Start > ArcGIS > ArcMap 10.5
- b. You will see the window as shown in figure below:

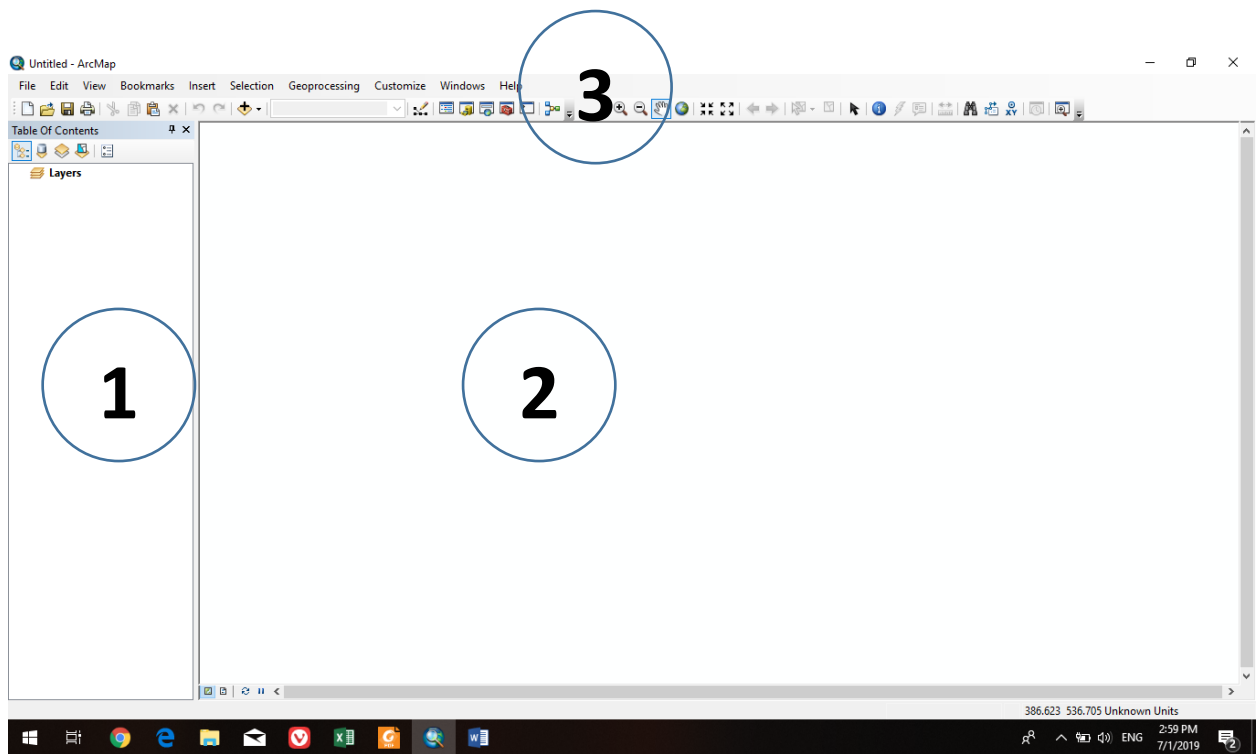


Figure 1: Interface of ArcMap

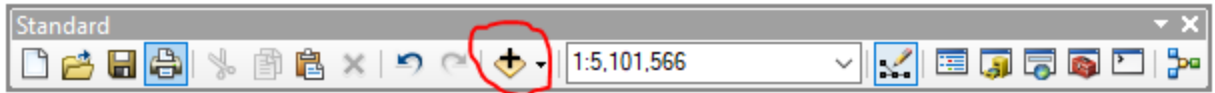
- c. On the left side, you see Table of Contents. (1)
- d. The large white part is the Map Canvas (2)
- e. On the upper part you see several toolbars (3)
- f. Among the toolbars, there is a standard toolbar as shown in figure below:



- g. Hover the mouse over each tool in the toolbar and note their functions.

## Step – 2 Adding Data

- a. Click on the Add Data tool as shown in figure below.



- b. Browse to the data folder **Nepaldata** folder and add **Districts** data.
- c. **Districts** is a vector data in shapefile (.shp) format.
- d. You will see the data displayed in Map Canvas as well as the **Districts** layer in the table of contents.
- e. Each geographical (spatial) data also have attribute information and so does the **Districts** layer.
- f. Right click on the **Districts** layer in **Table of contents** and click **Open Attribute Table**.
- g. Note the attributes.
- h. *Tip 1 : You can sort (ascending/descending) any attribute values by double clicking each attribute name.*
- i. *Tip 2 : You can see the total number of data at the bottom of the attribute table*
- j. Close the attribute table

### Step – 3 Getting use to basic navigation tools

- a. Among the toolbars, there is a toolbar called Tools as shown in the figure below.



- b. Hover the mouse over each tools and note the names.
- c. Now use each of the tools to navigate through the maps. There are tools for zoom, pan, full extent, etc.

### Step – 4 Queries for practice

Using the individual tools in the Tools toolbar and opening the attribute table, find the following:

- a. Find the area of the largest district of Nepal and the smallest district of Nepal. How many times is the largest district in comparison to the smallest district?
- b. What is the area of Nepal?

#### Step – 5 Adding additional data

Now add all the data in **Nepaldata** folder into ArcMap.

- a. You can rearrange the layers by dragging the layers in Table of Contents to place it one over another in the order that you want.
- b. You can check/uncheck the layers to display or not to display them.
- c. For each layer, note the attributes

#### Step – 6 Additional Queries for practice

- a. Find the total number of VDCs.
- b. Find and note the area of your district.
- c. Assuming an airplane consumes 0.5liter of fuel per km, find the least amount of fuel consumed by an airplane while flying from Kathmandu to Birendranagar.
- d. If you have to walk around a district along it's boundary, which district would offer you the longest walk?