

Lab 1: Map Layout

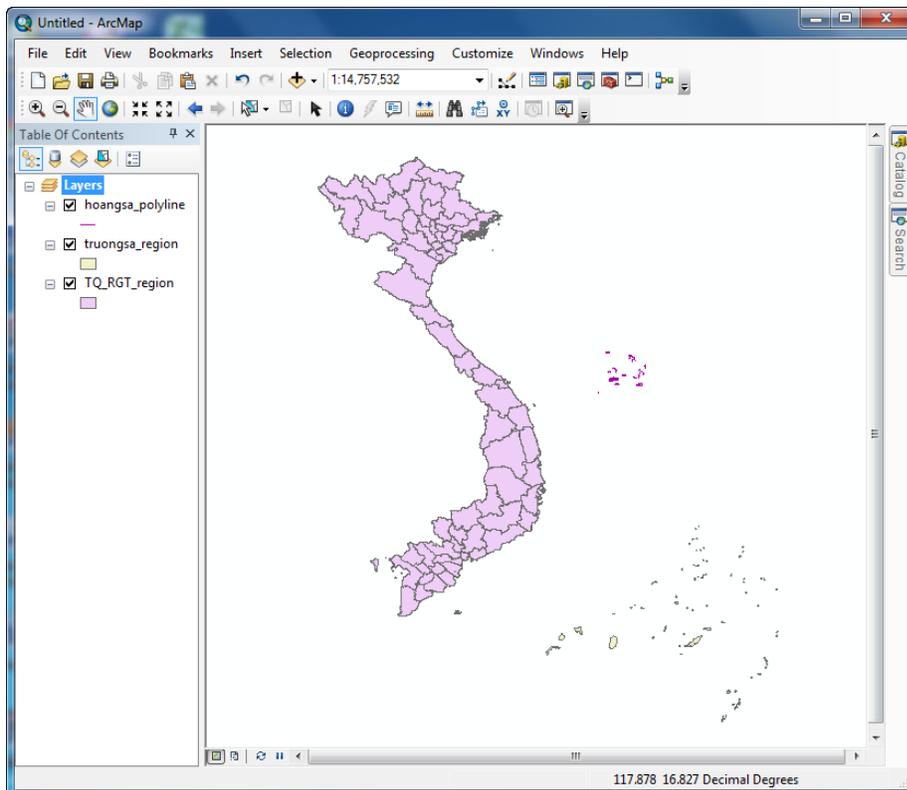
* Section 1: Map Layout

Adding Data to ArcMap

- Vietnam Territory: (TQ_RGT_Region; Truongsa_polyline; Truongsa_region)

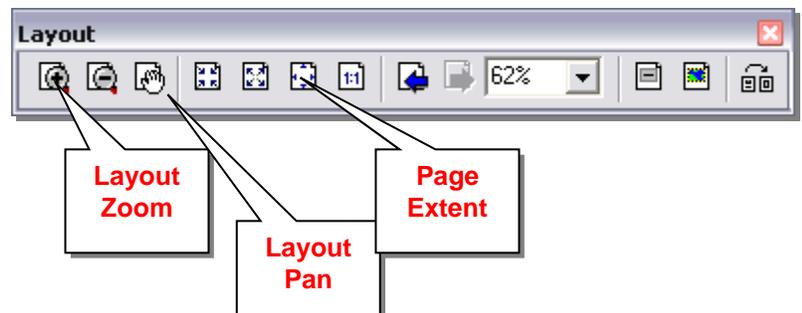
Navigation in the Layout View

1. **Click** on the **Layout Button** (it looks like a page), on the **View Toolbar** at the bottom left corner of the **Map Display**.



Note that you are now presented with the **Layout Toolbar**. This toolbar is only available in **Layout View**. Some of the Tools on this toolbar work in a way that is similar to the **Tools Toolbar**, but with one critical difference... these tools act on "the page" rather than the data.

2. **Click** on the **Layout Zoom Tool** and **Drag** a **Box** across the top half of the **Layout Display**.
3. **Click** on the **Page Extent Button** to **Return** to the **Full View** of the page.

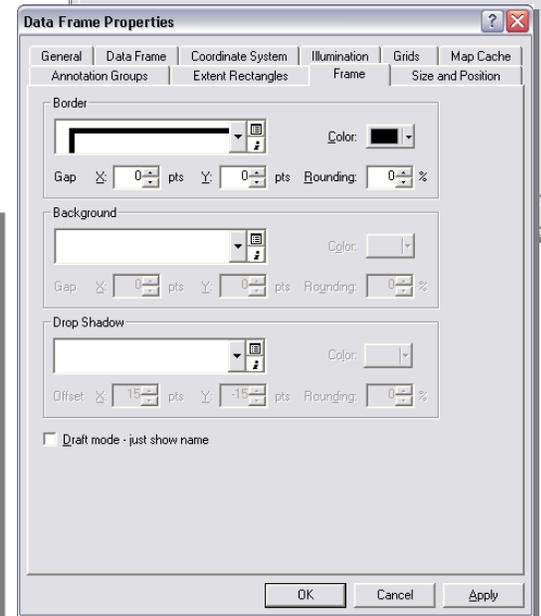
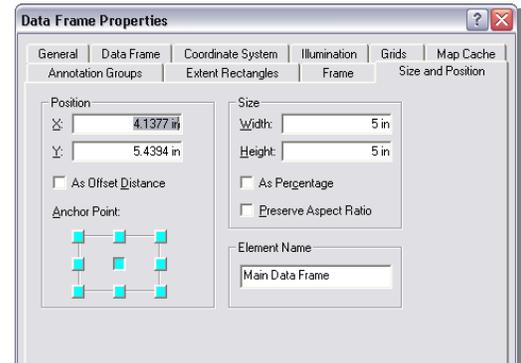
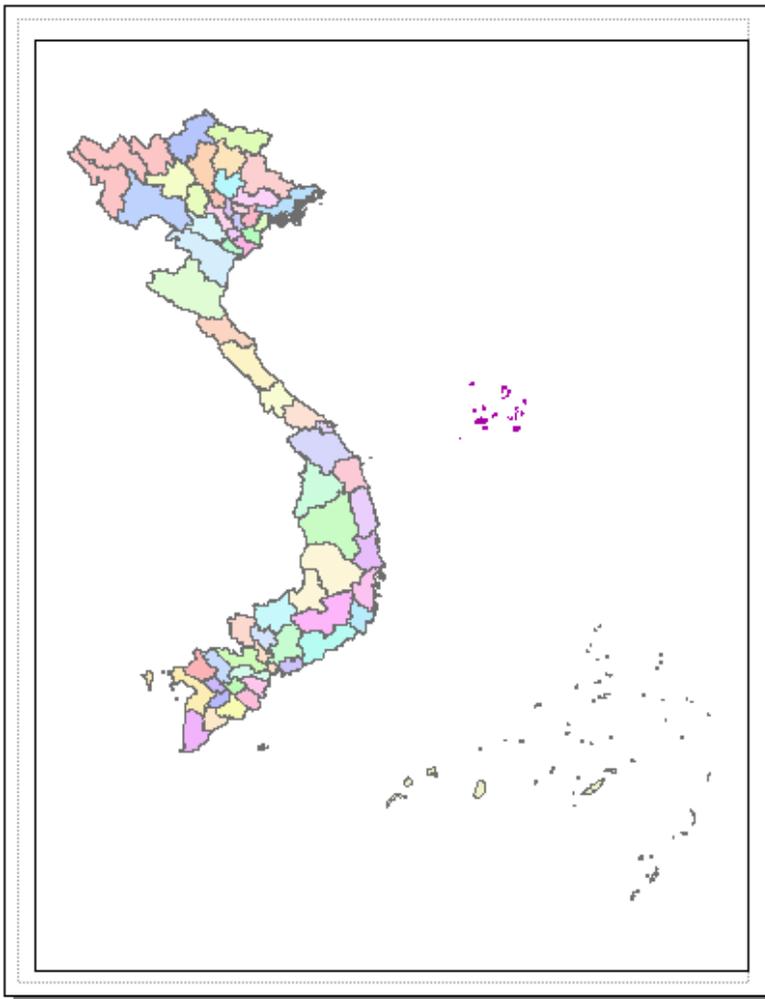


Note that these tools did not change the scale or extent of the data.

Working with Data Frame Properties

The data is contained within a rectangle referred to as the Data Frame. In the Data View, this rectangle was represented by the edges of the Map Display Panel. Now, the Data Frame is an 'Object' on the layout page. The fact that the Data Frame is an Object on the Layout Page means that we can alter its properties.

1. At the very top of the **Table Of Contents Panel**, **Right-Click** on the **"Layers" Layer** and **Open the Properties.**
(or Right-Click on the Data Frame of the Layout Page)
2. **Click** on the **Size And Position Tab.**
3. **Change** both the **Width & Height** to **5 Inches.**
4. **Change** the **'Element Name'** to **Vietnam Territory.**
5. **Click** on the center blue box under **"Anchor Point."**
6. **Click** on the **Frame Tab.**
7. **Select** a **Border Style.**
8. **Click Ok** to **Apply** the **Changes.**

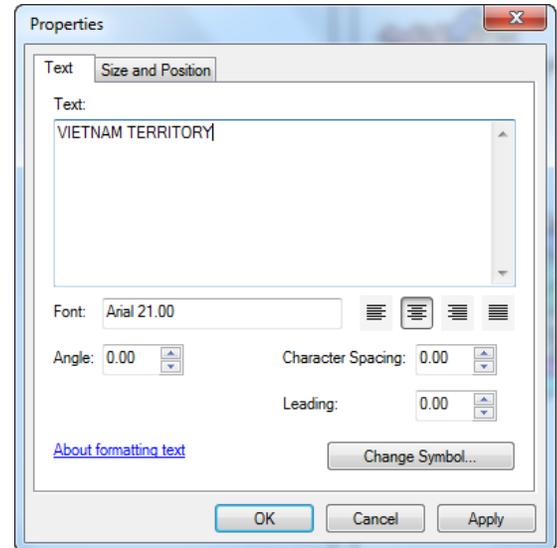


Adding Essential Map Elements

Finally, there are a few elements that are considered fundamental to good mapmaking. While it is true that *ALL* maps do not need *ALL* of these elements (Does a map of the entire earth *really* need a north arrow?), it is also true that they can be critical tools in conveying spatial messages, when used properly. Here, we will take the final steps to complete our map layout, before exporting to portable formats.

Map Title

1. On the **Main Menu**, **Go To Insert>Title**. A **Highlighted Text Box** will be inserted into the **Map Layout**.
2. **Double-Click** on the **Text Box** to **Open** its **Properties**.
3. **Change** the **Text** to “**VIETNAM TERRITORY**” using carriage returns to **Insert** line breaks.
4. **Leave** all other **Settings** at their **Default**, but *note that there are many options for altering the title text*.
5. **Click OK**.
6. **Use** the **Select Elements**  **Tool** to **Move** the **Map Title** to an appropriate position above the **Data Frame**.

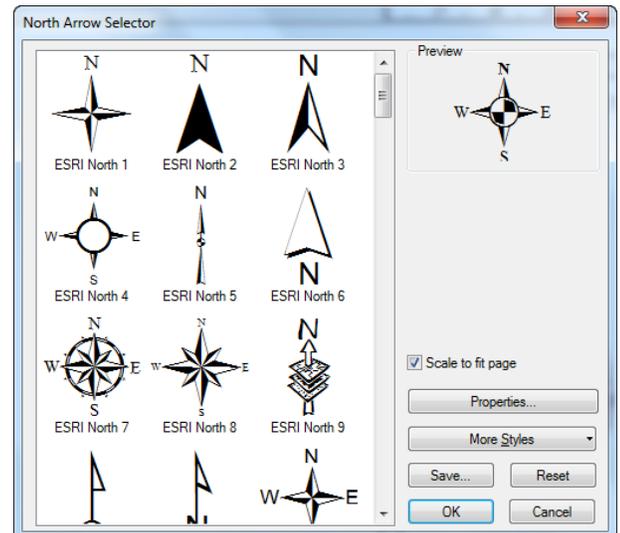


North Arrow

1. On the **Main Menu**, **Go To Insert>North Arrow**.
2. In the **North Arrow Selector**, **Select** the first **North Arrow** in the list.
3. **Click Ok**.

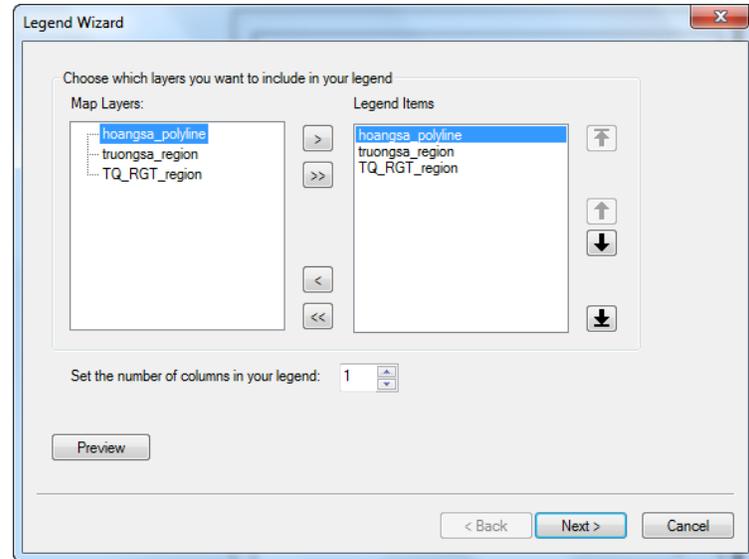
A highlighted North Arrow will be inserted into your Map Layout (probably at the worst possible place).

4. **Use** the **Select Elements**  **Tool** to **Move** the **North Arrow** to a more appropriate part of the map.
5. If necessary, or desired, you can **Use** the **Blue ‘Resize Handles’** to **Change** the **Dimensions** of the **North Arrow**.
6. Since the **North Arrow** is an **Object**, you can **Access** its **Properties** by **Right-Clicking** and **Selecting Properties**.



Legend

1. On the **Main Menu**, **Go To Insert>Legend** to **Open** the **Legend Wizard**.
2. **Add/Remove layers** from the **Legend Items List**
Using the <  **Button**.
3. **Click Next** twice.
4. **Select a 1pt Frame**.
5. **Select a White Background**.
6. **Click Next**.
7. **Click Next**.
8. **Accept** the **default settings** for the final window and **Click Finish**.

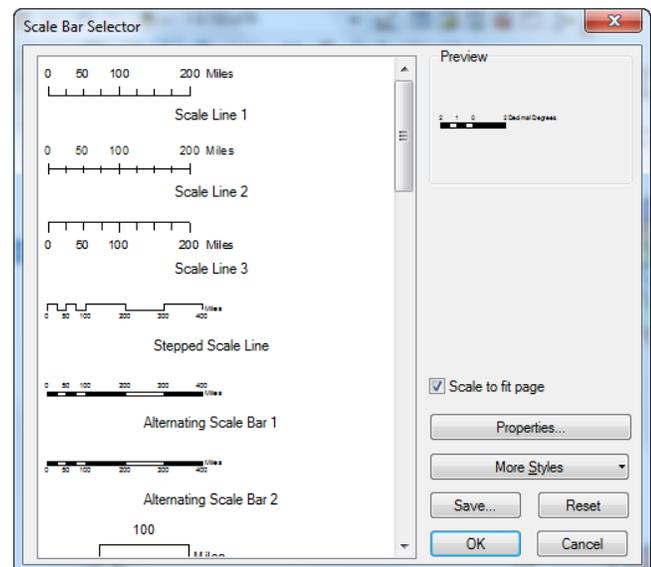


9. Using the **Select Elements**  **Tool**, **Move** the **Legend** to the lower right corner of the **map layout**.
10. **Use** the **Resize Handles** to make the **Legend** smaller.
11. In the **Table Of Contents Panel**, **Click** once on the **each of the Layer Name**, **Wait**, then **Click Again** to **Highlight** the **Text**.
12. **Change** the **Name** of the layer to **(Vietnam Territory; Parcel Islands; Spratly Islands)**

Note that the text changes with the alteration of the Table of Contents Panel.

Scale

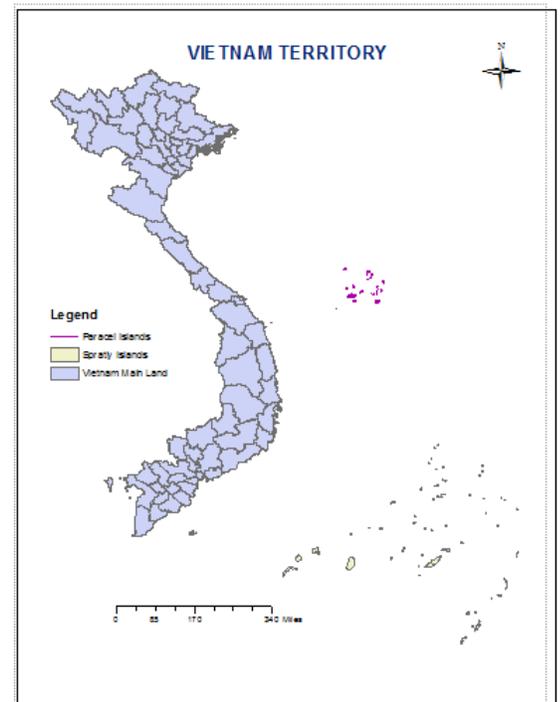
1. On the **Main Menu**, **Go To Insert>Scale Bar** to **Open** the **Scale Wizard**
2. **Select** type of Scale
3. **Click Properties** to change colors, size, font of the Scale bar



Other Essential Map Elements

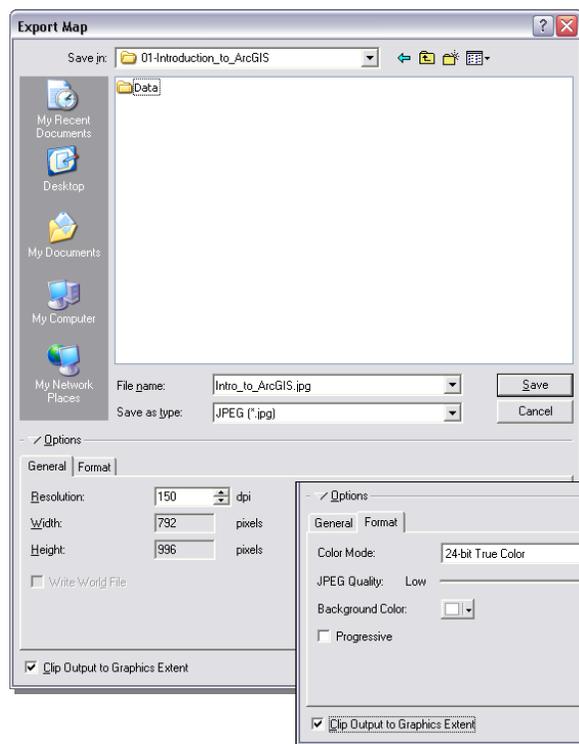
Other elements are warranted when creating a map and have been neglected here only for expedience. These elements are primarily textual, and can be included using a procedure similar to that used to insert the Map Title.

- Date the map was made
- Author of the map
- Who the map was made for
- Projection / Coordinate System information
- Data Source(s)
- Descriptive Text (if necessary)
- Location (in the title, or using an inset map)



Sharing Your Map Project

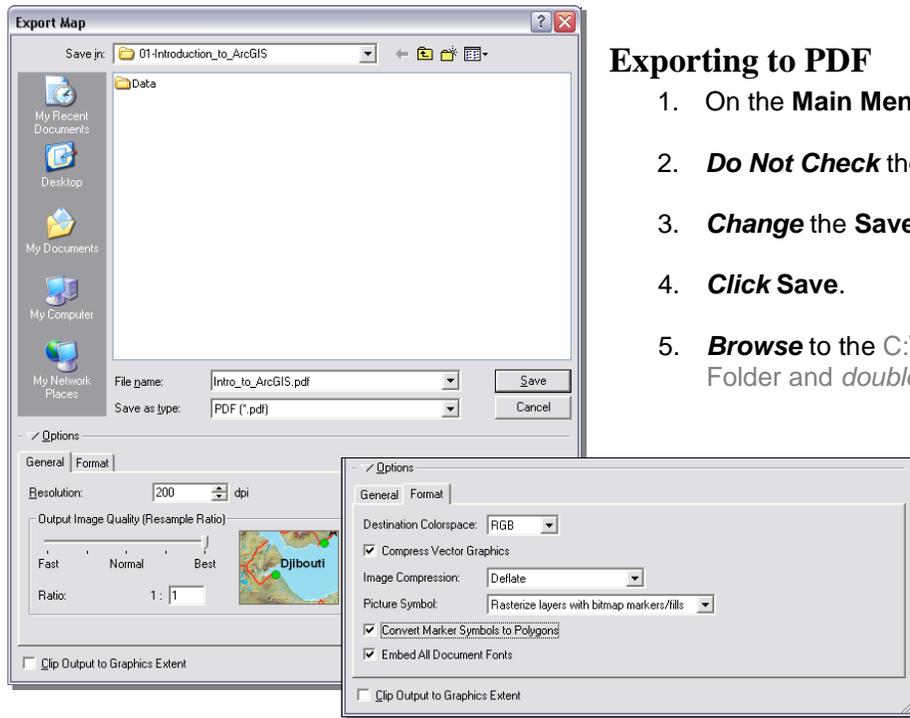
At this point, you might like to export your map to an image that you can use in PowerPoint or a Word Document. Or, you might want to save the map in a format that you can send to colleagues to view or print. Here you will learn to export your map.



Exporting to JPEG

1. **Save** your work by **Clicking** the **Save**  **Button**.
2. On the **Main Menu**, **Go To File>Export Map**.
3. **Browse** to the **C:\temp\your_initials\01-Introduction to ArcGIS\ Folder**.
4. **Change** the **Save as Type: Drop-Down** to **JPEG (*.jpg)**.
5. **Set** the **Resolution** to **150 dpi**.
6. **Check** the **box** to **Clip Output to Graphics Extent**.
7. **Click** on the **Format Tab**, under **Options**.
8. **Make sure** that the **Color Mode** is set to **24-bit True Color**.
9. **Click Save**.
10. **Browse** to the **C:\temp\your_initials\01-Introduction to ArcGIS\ Folder** and

double-click on the `Intro_to_ArcGIS.jpg` to **Open** it.



Exporting to PDF

1. On the **Main Menu**, Go To **File>Export Map**.
2. **Do Not Check** the **Clip to Graphics Extent** box.
3. **Change** the **Save as Type Drop-Down** to **PDF (*.pdf)**.
4. **Click Save**.
5. **Browse** to the **C:\temp\your_initials\01-Introduction to ArcGIS** Folder and **double-click** on the **Intro_to_ArcGIS.pdf** to **Open** it.

Assignment 1:

- a **Layout Map of Vietnam**
 - a **Layout Map of your country (for Vietnamese student – World Map)**
- Turn in: Two color Maps printed at A4 or A3 paper size.**