

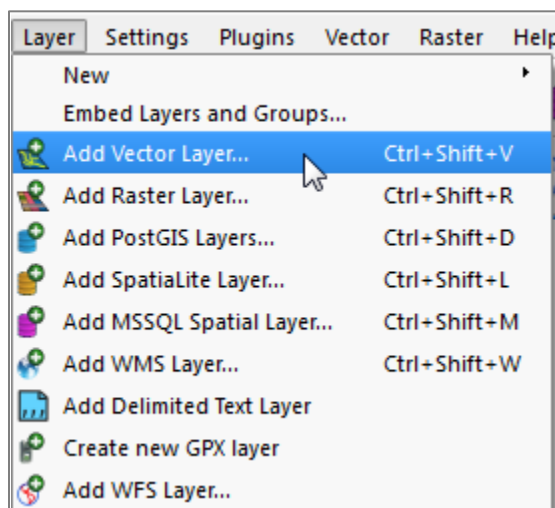
Exercise 2: Adding Vector Data

In this exercise you will learn how to add vector files to your map and adjust the properties, display symbology, and labels.

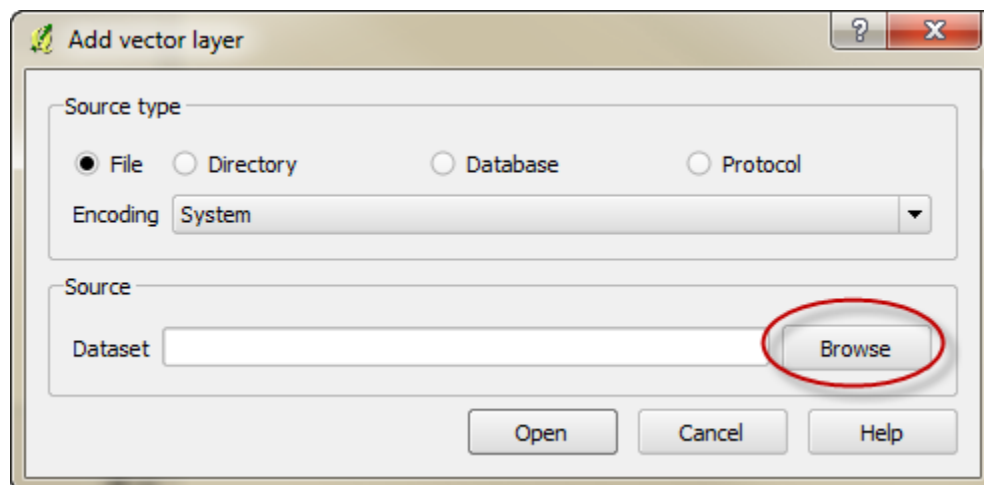
Section 1: Start QGIS and Add Vector Data

You will add a layer, consisting of vector polygon feature.

1. Start QGIS Desktop
2. Open the *Layer* menu on the top of the screen



3. Click *Add Vector Layer...*
4. Select the *Source type* as *File*
5. Click *Browse*

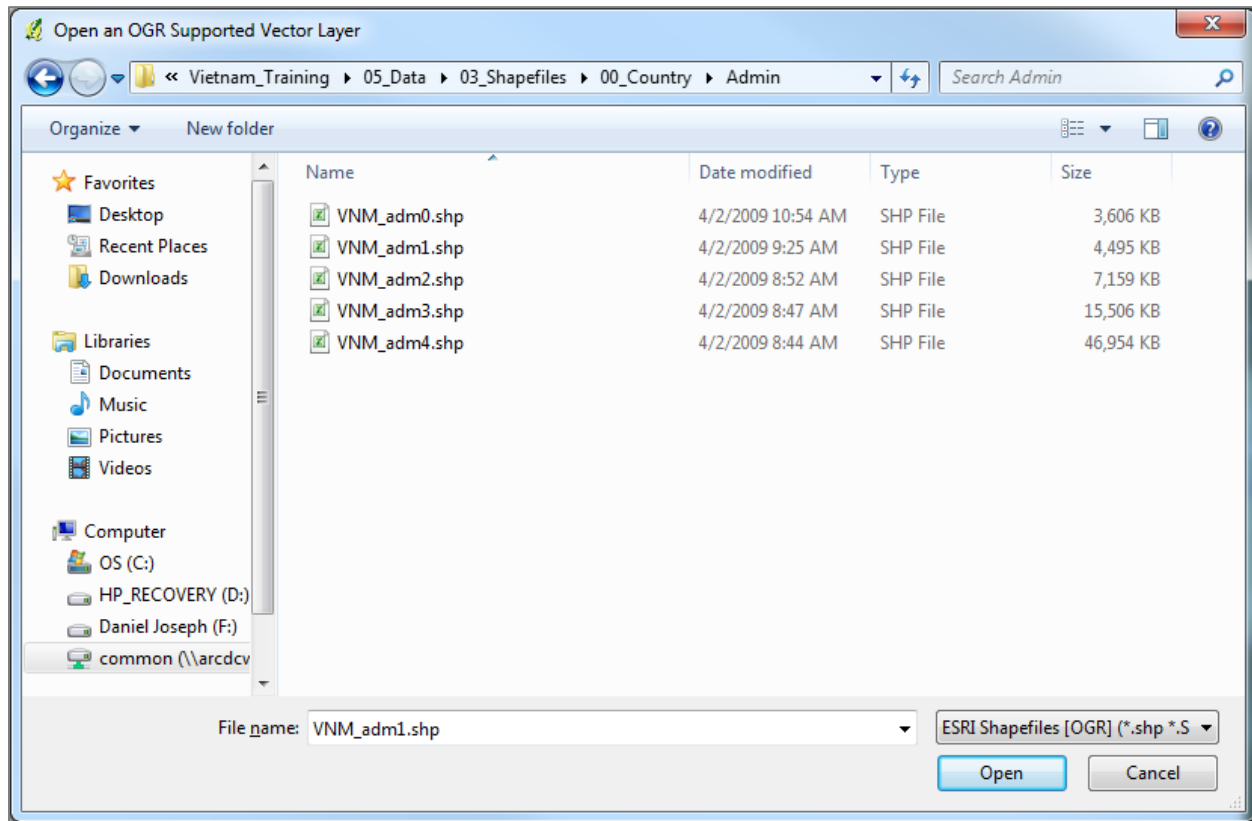


Note: The dialog will open to the last place from which you added data in QGIS.

6. Navigate to the training folder

\\Vietnam_Training\05_Data\03_Shapefiles\00_Country\Admin

7. Click on the file named VNM_adm1.shp



Note: Make sure that your file type reads ESRI Shapefiles [OGR] (*.shp)

8. Click *Open* in the “OGR Supported Vector Layer” dialog

9. Click *Open* on the “Add vector layer” dialog

10. There are three ways to add vector layers in QGIS Desktop

a. Using the menu option *Layer>Add vector layer...*

b. Using the *Add vector layer*  tool from the toolbar

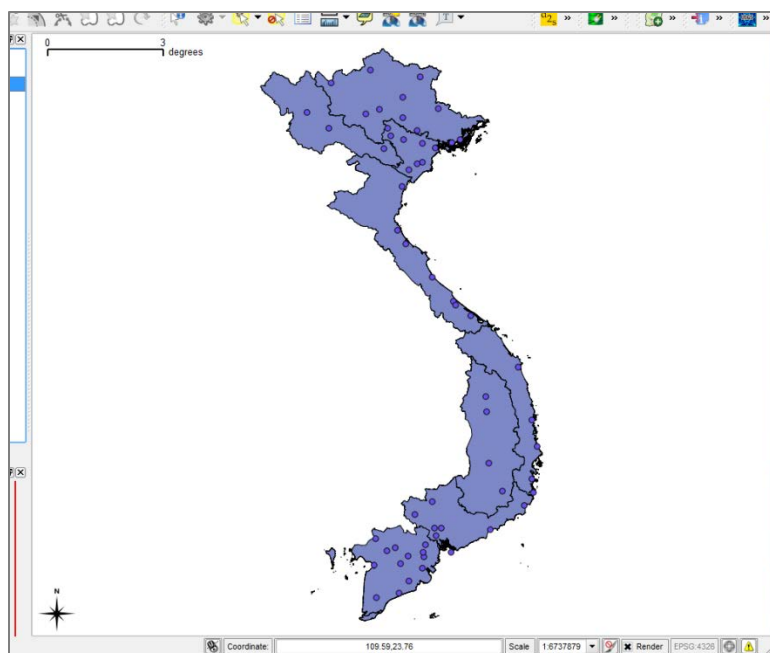
c. Using *Ctrl + Shift + V*

Note: In all of these methods the same dialog will open and the procedure for selecting which data you will add is the same as described above.

11. Add the following vector layer:

\\Vietnam_Training\05_Data\03_Shapefiles\00_Country\Cities\VNM_populatedPlaces_ne10m.shp

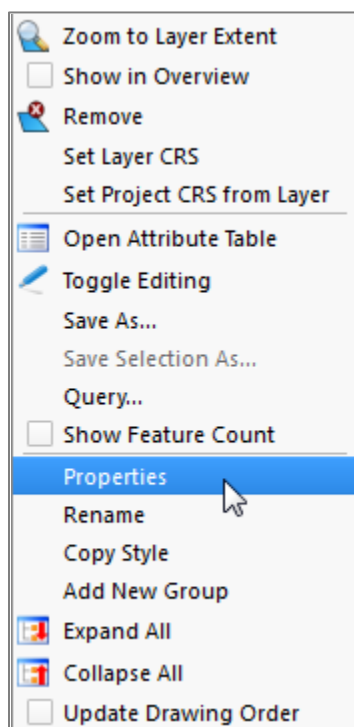
Note: Your map should look similar to this:




Section 2: Change a Layer Name

When a layer is added, QGIS assigns it a layer name. Sometimes this name is not very descriptive because it inherits the shapefile name. You can rename the layer at any time. Now, you will change the names of the layers that you added.

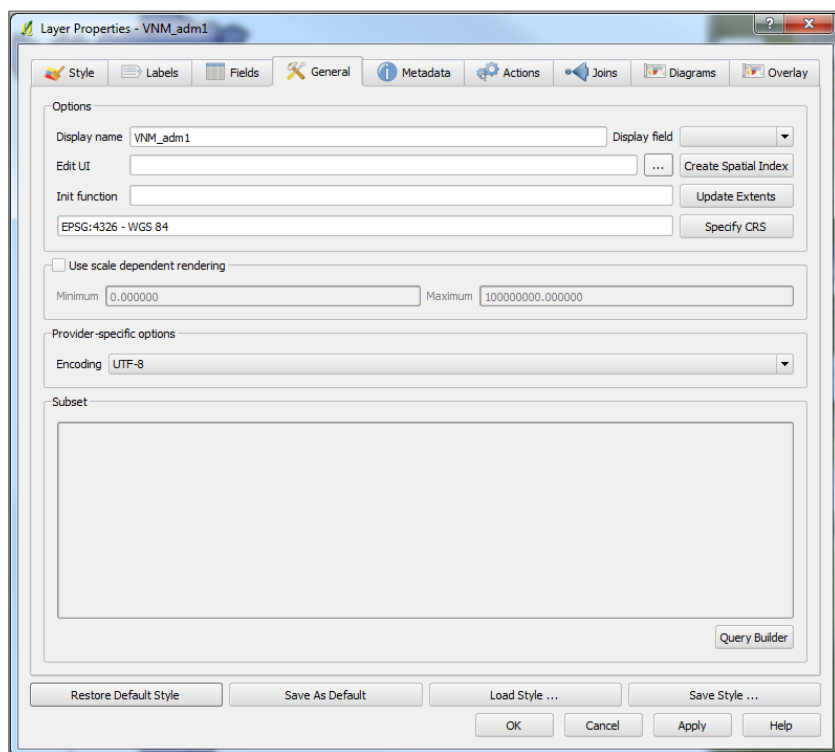
1. In the *Layer Panel*, right click (on the text) for the *VNM_adm1* layer



2. Click *Properties* to display the *Layer Properties* dialog (or, *Properties*, when you right click on layer being modified)

3. Click the *General* symbol  **General** tab near the top of the dialog box

You should see the following dialog

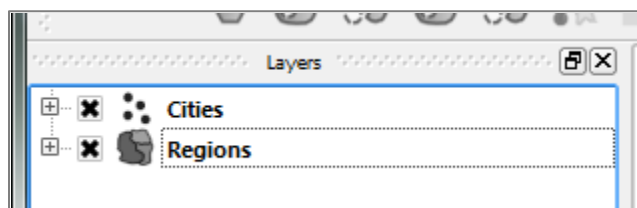


4. For *Display Name* type “Regions”

5. Click *OK*

6. Repeat the previous steps to rename the *VNM_populatedPlaces_ne10m* layer to *Cities*

Note: Your *Layer Panel* should look similar to this



Section 3: Symbolize Spatial Data

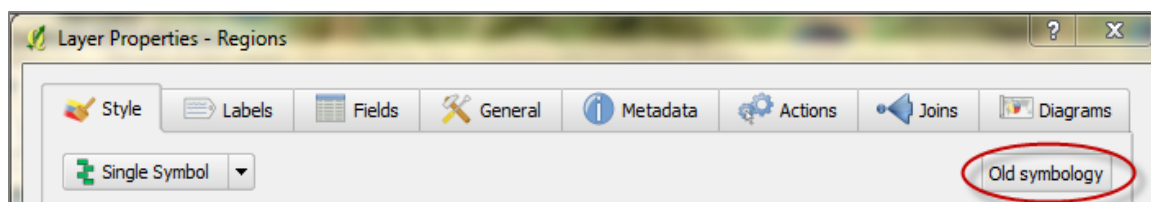
The *Regions* layer appears in a single color by default. You may want to display the Regions in different colors.

1. In the *Layer Panel*, double-click the *Regions* layer to open its *Properties* dialog.

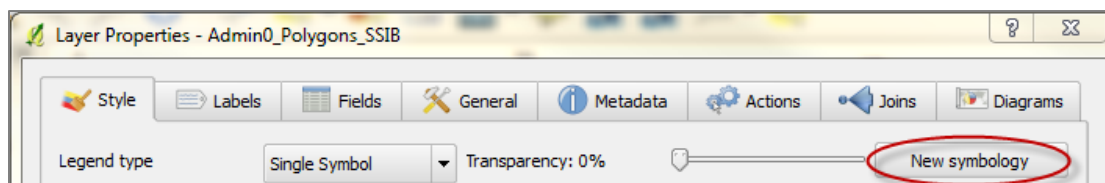
2. Click the *Style*  **Style** tab.

Note: In previous versions of QGIS it was called *Symbology*.

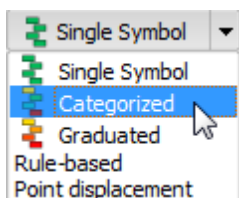
3. Make sure the button near the top right of your screen says *Old Symbology*.



Note: If your screen looks like the image below, then click on the *New Symbology* button. Clicking on *New Symbology* will change it to the newer version of QGIS symbology. You will receive a prompt asking if you wish to use the new symbology implementation for this layer. Click *Yes*.



4. Select *Categorized* from the drop down menu below the *Style* tab.

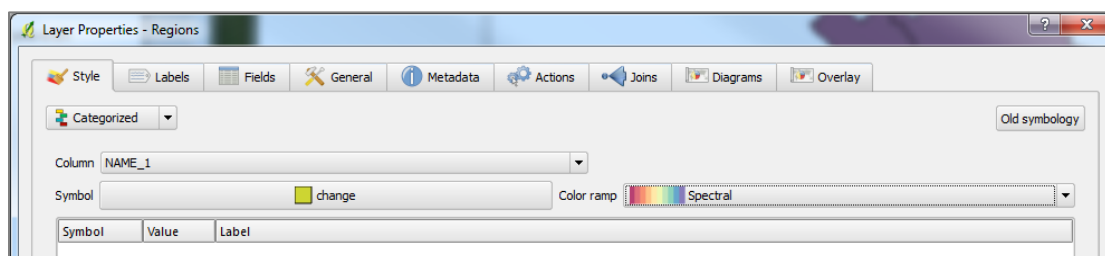


Note: If using a previous version of QGIS, select *Unique Value* in the drop down menu next to *Legend Type*.

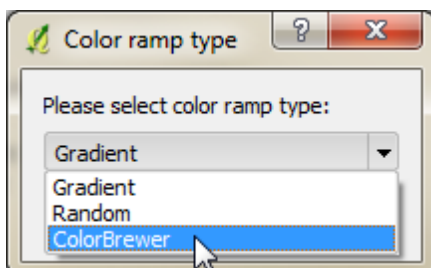
5. In the new screen that appears within the dialog, select *VARNAME_1* for the *Column*.

Note: If using a previous version of QGIS, *Column* is called *Classification Field*.

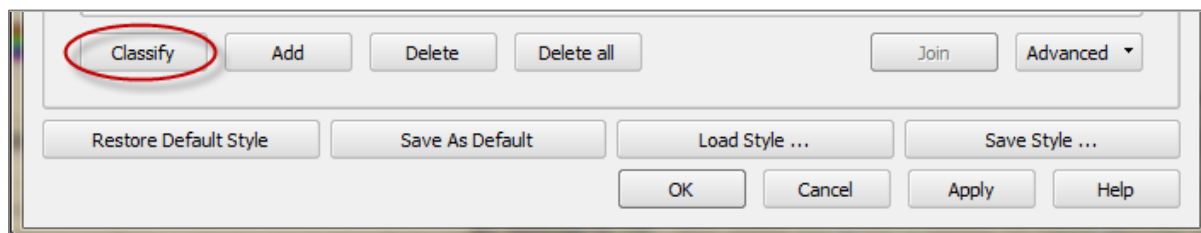
6. Click on the *Color Ramp* drop down menu.



7. Select *New Color Ramp...*
8. Select *ColorBrewer* for the Color ramp type and click OK.

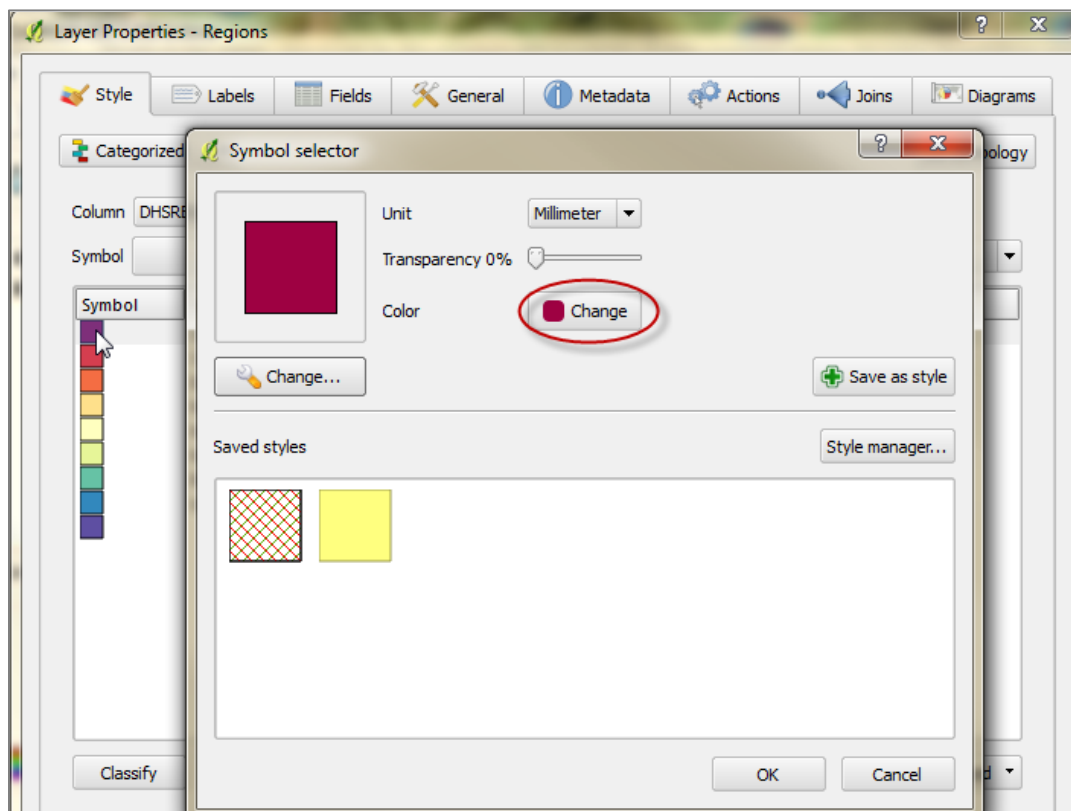


9. Select the Spectral Scheme name.
10. Select 10 for the number of colors.
11. Click OK.
12. Call the new color ramp “Spectral” and click *OK*.
13. Click *Classify*.



14. All the Regions will appear in the window with an assigned color.
15. Double click on the first Region symbol in the list.
16. In the *Symbol Selector* window that appears, you will be able to change the color for the highlighted region by clicking the *Change* button in the middle of the window.

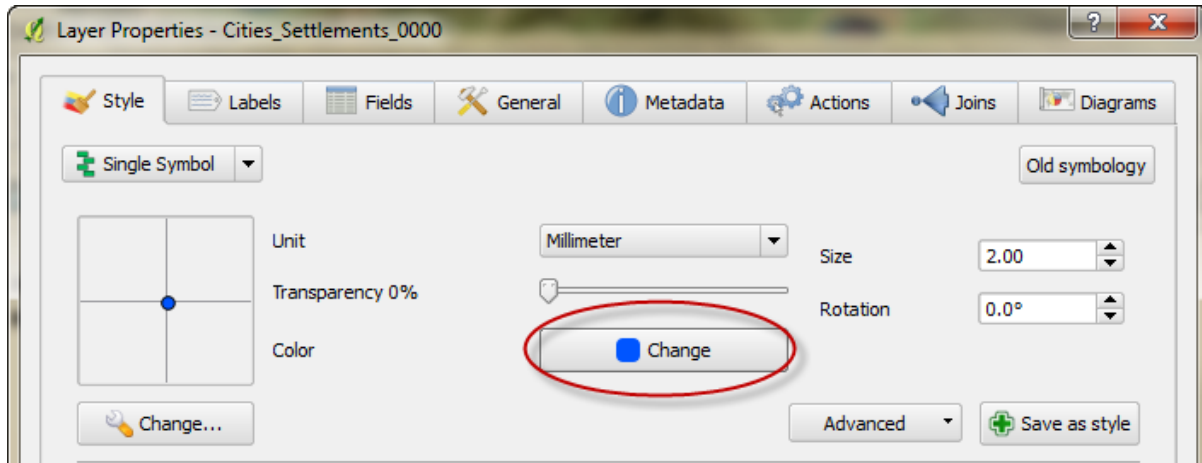
Note: If using a previous version of QGIS, click on the first Region name in the list. In the right side of the dialogue window, you will be able to change the color for the highlighted Region. Click on the colored box in the *Fill Options* area.



17. Select new color.
18. Click *OK* to close the color selection.
19. Click *OK* to close the *Layer Properties* dialog.

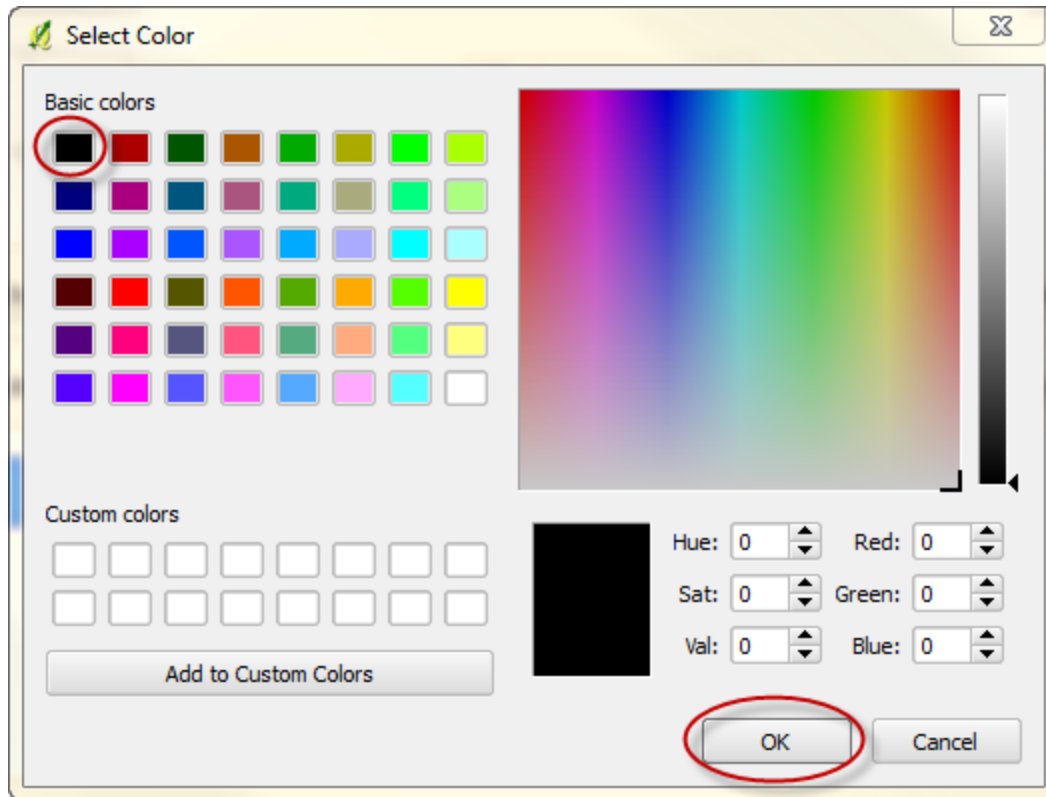
Next, you will change the symbol for the Cities.

20. Double-click the *Cities* layer in the *Layer Panel* to open its *Layer Properties* dialog.
21. Click the *Style* tab.
22. Click the *Change* button in the middle of the window.



Note: If you are using a previous version of QGIS, you will change the symbol scroll down (using the scroll on the far right of the dialog) until you see *Fill* options.

23. Click on the black box under the *Basic Colors* options.



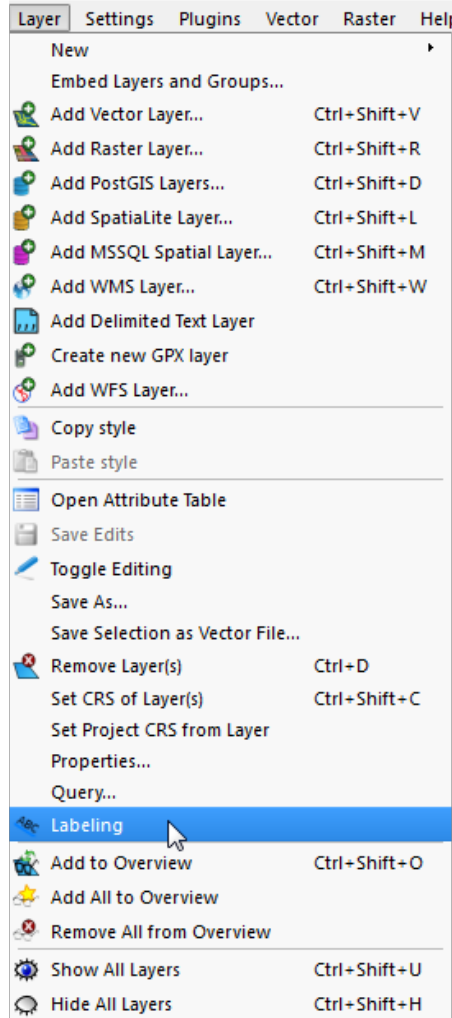
24. Click *OK* to close the color selection.

25. Click *OK* to close the *Layer Properties* dialog.

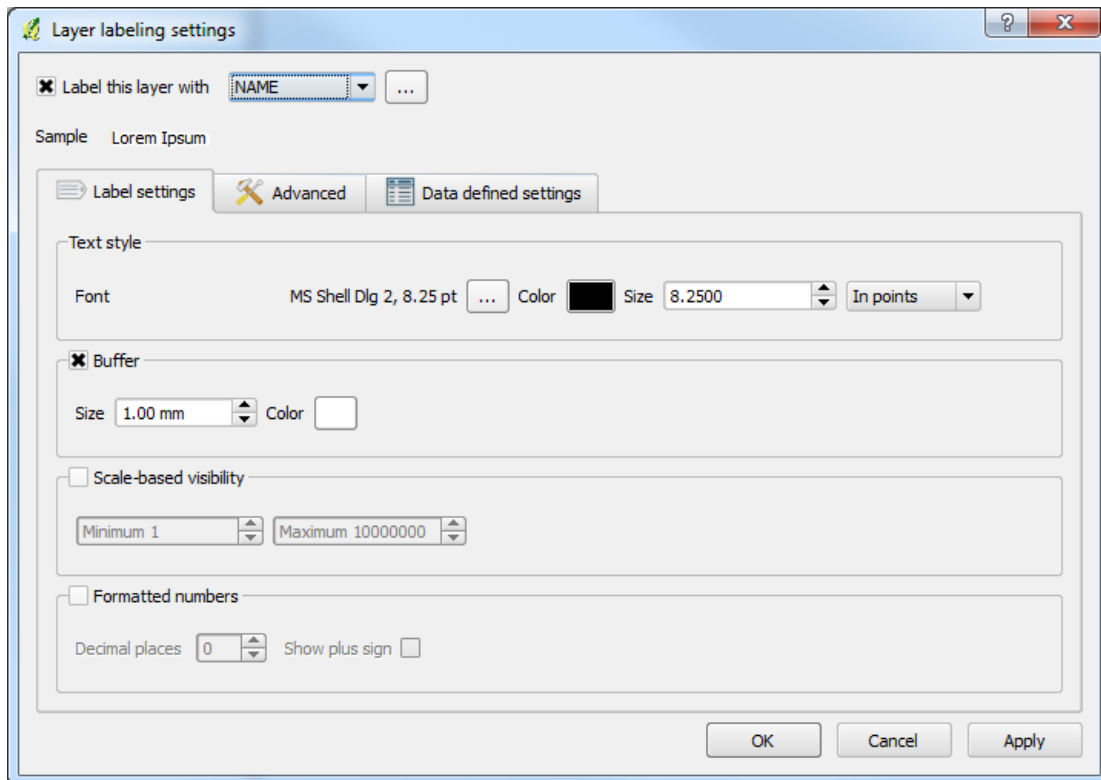
Section 4: Label Features

A map is incomplete without some labeled features. Placing names on your map is an important communication task. Map readers should be able to find names quickly or they will not use your map. Now, you will place the names of the Cities on the map.

1. Select the *Cities* layer in the *Layers* box by clicking on it once so it is highlighted blue
2. Click the *Layer* menu>*Labeling* to open the *Layer Labeling Settings* dialog



3. Check the *Label This Layer* box
4. Select *NAME* from the field with labels drop-down menu located at the top
5. Click the button with three dots in the *Text Style* section of the *Label Settings* tab



6. Select *MS, Serif, Bold, 10* (size) from the *Select Font* window
7. Click *OK*
8. Click *Color* and select *black*
9. Click *OK* to close the color selection
10. Click *OK* to close the *Layer Labeling Settings* dialog

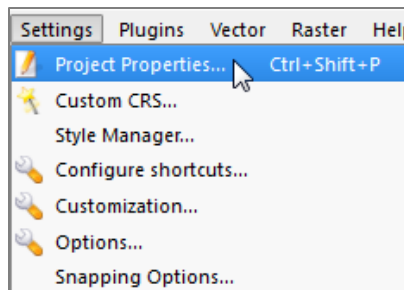
Note: Your map should look something like this. The colors will be different.



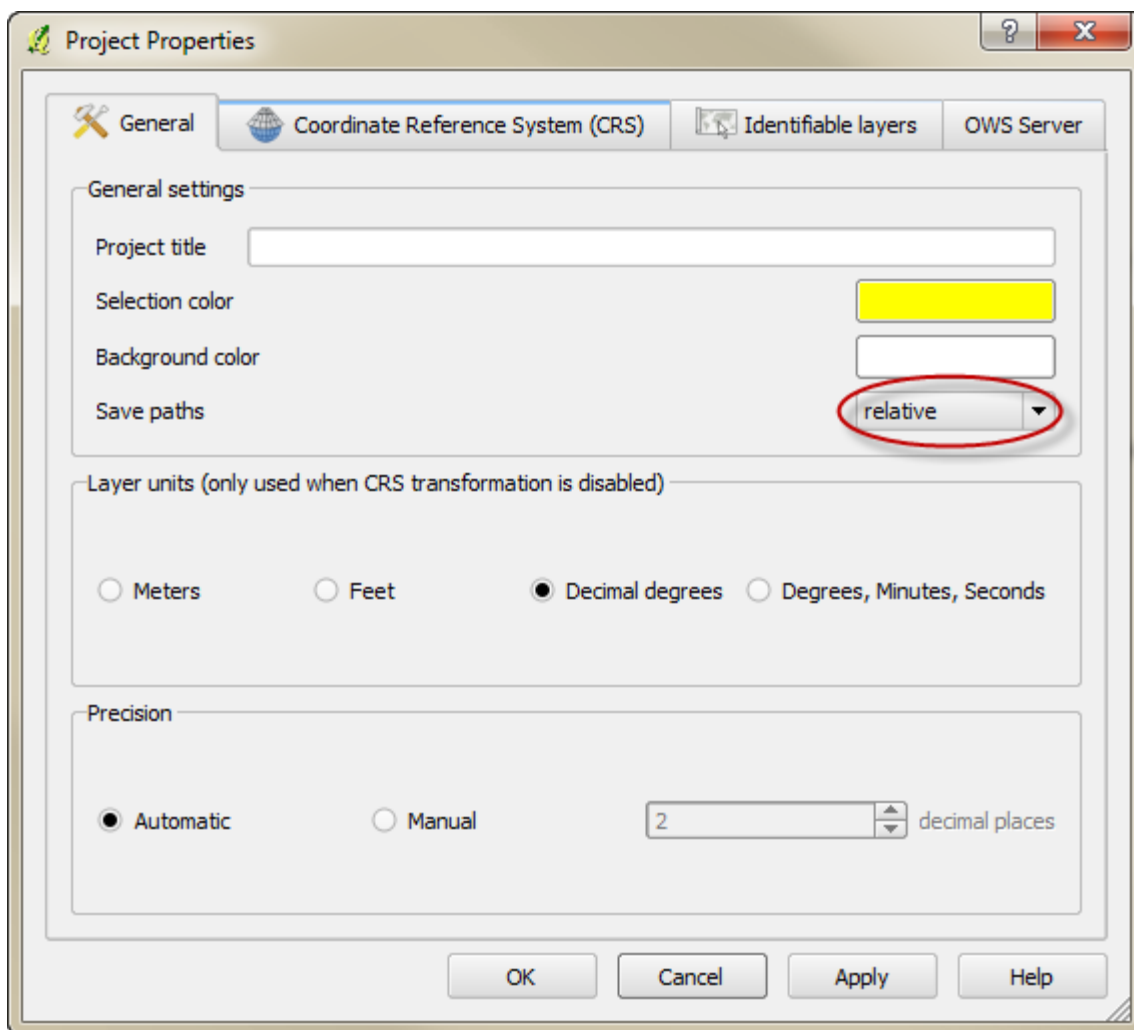
Section 5: Save Your Map Document

You will save your map document for future use. You can save your file with absolute or relative paths. This refers to how the QGIS file will remember where the data corresponding to each layer is located. Absolute path means that QGIS will always look in the same file location (exact location on the computer for the data) while relative path means that QGIS will look for the data to be in the same place in relation to the QGIS file (such as in the same folder or 2 folders away in a folder called 02_Data). Relative paths are in general better if you might move your folders and or share your *.qgs files with a colleague.

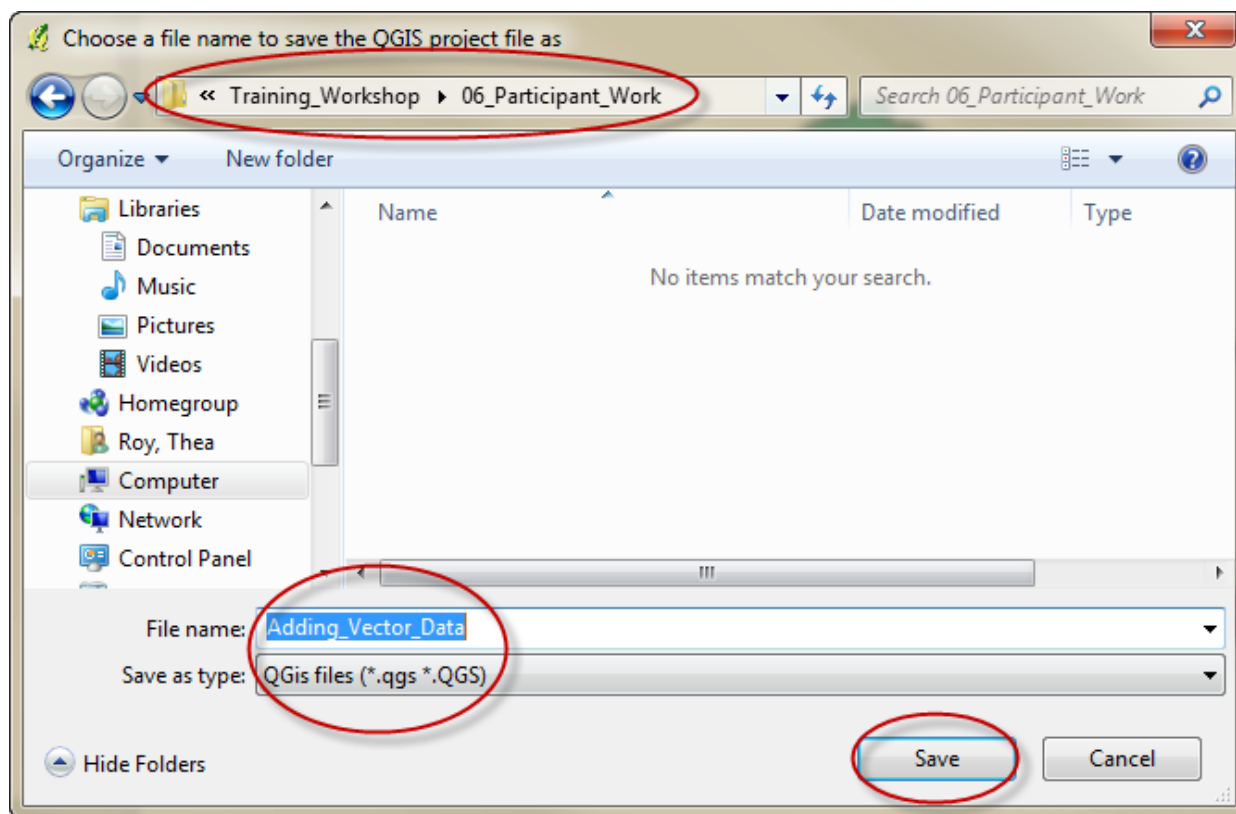
1. Click *Settings>Project Properties*



2. Open the *General* tab
3. Change *Save Paths* to *Relative* under *General Settings*



4. Click *OK* to close the dialog
5. Click *File>Save Project as...*
6. Save the file in \\Vietnam_Training\06_Participant_Work
7. Name the file "Adding_Vector_Data"
8. For *Save As Type*, confirm *QGIS Project File (*.qgs)*



9. Click Save

Optional Steps:

1. Add the road layer to the map
2. Change the road color to a different color
3. Change the road line width

End Exercise.

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