Exercise 3: Adding GPS Data

In this exercise you will learn how to create a point vector file from GPS data entered as Latitude and Longitude decimal degrees in excel.

Section 1: Creating a CSV File in Excel

Excel can save files in many formats including CSV files which are a type of delimited files.
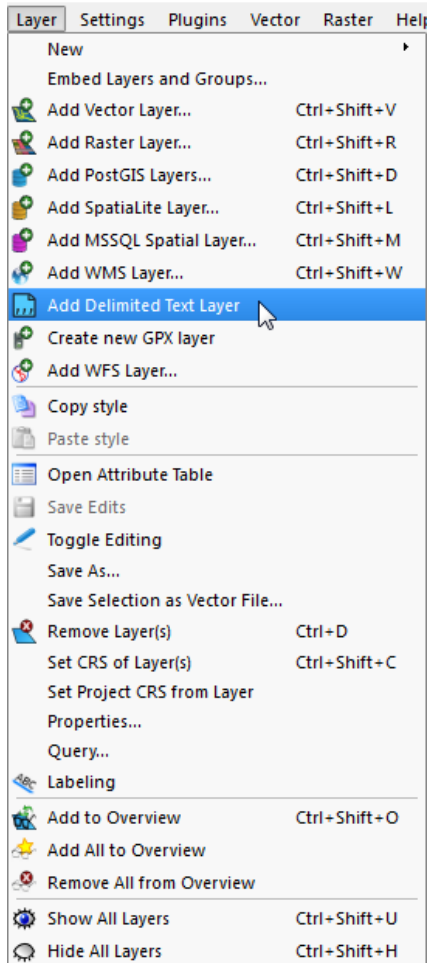
1. Open your excel file with GPS data

    \\Vietnam_Training\05_Data\01_Excel\VNM_settlements_cities.xls

2. The file should contain a table these columns: FULL_NAME_ND_RO, SORT_NAME_RG, LATITUDE, LONGITUDE, FC, CC1, ADM1

3. Open the *Save As…* dialog

4. Navigate to \\Vietnam_Training\06_Participant_Work

5. Select *Comma Delimited* (*.csv) as the *Save As* type

6. Name the file "VNM_settlements_cities_ex"

7. Click *Save*

8. Click *Yes* in the window that appears to warn you that the file may contain features that are not compatible with CSV.

9. Close excel (you might need to click yes several times to do this as excel will confirm that you want to save a close a file in a different format)

Section 2: Add Data to QGIS

You can add your point data to QGIS using the *Delimited Text Layer* Plugin

1. Start QGIS

2. Select *Layer>Add Delimited Text Layer* or click the *Add Delimited Text Layer* on the toolbar ▦ (See note below if you don't see the plugin on your screen)
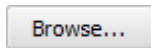
Note: If you don't see this tool in the menu, you might need to add it. See exercise 0 for details of this process.

Here is the quick version:

1) Open *Manage Plugins…*

2) In the filter box type *Delimited Text Layer*

3) Check the box next to the plugin called *Delimited Text Layer*, this will add the plugin

4) Click *OK*

5) Now you should see the option in the menu as described above

The *Create a Layer from a Delimited Text file* dialog will open

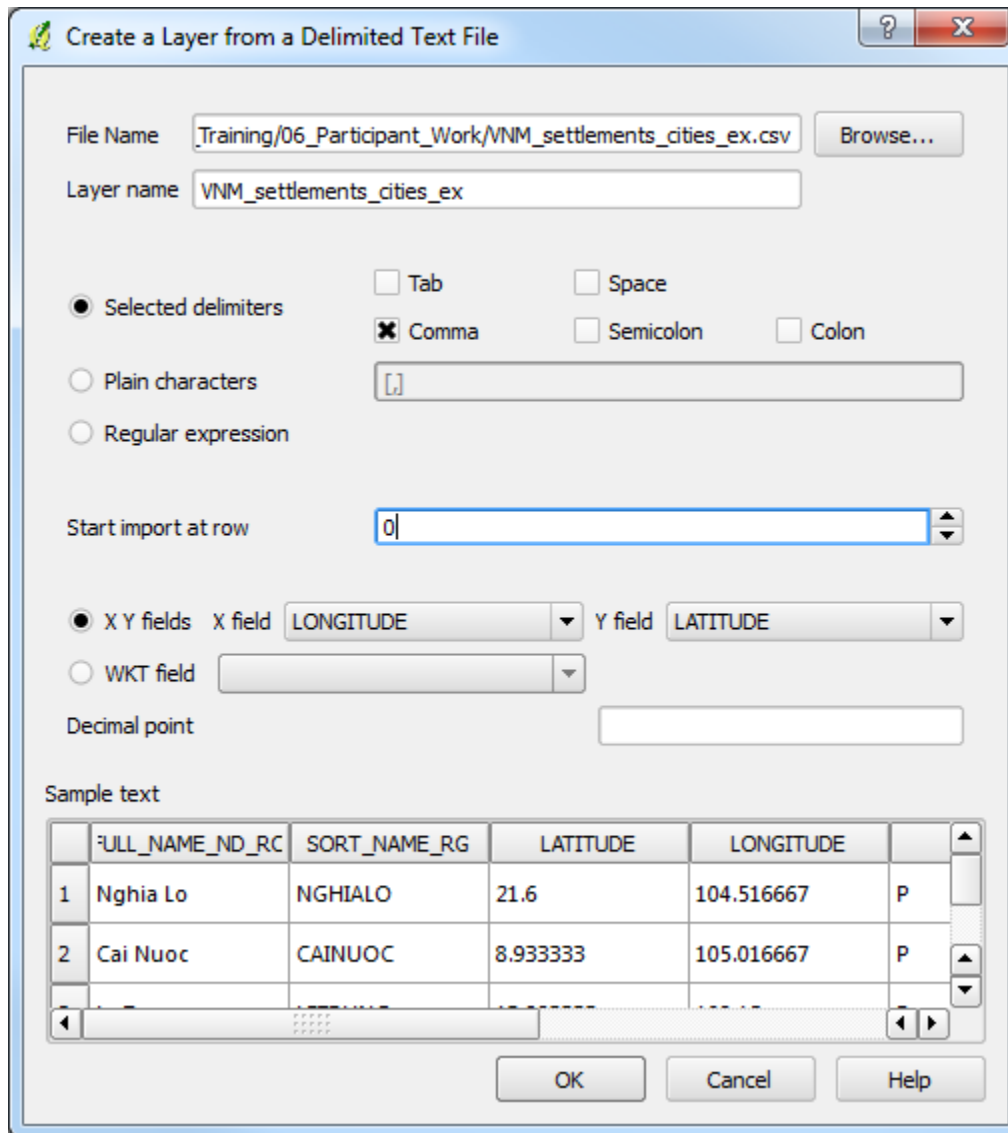3. Click the *Browse…* button [Browse…]

4. Navigate to

 \\Vietnam_Training\06_Participant _Work\ VNM_settlements_cities_ex.csv

In some cases the rest of the dialog will automatically fill itself in or QGIS might tell you that you need to parse the data and the fields in the window will remain blank.

5. In the *Layer Name* box type "VNM_settlements_cities_ex"

6. Select the *Selected Delimiter* radio button

7. Select *Comma* (and make sure no other options are selected)

8. Set the *Start Import at Row 0* (zero)

9. Make sure that the X field says *Longitude* and the Y field *Latitude*

The window should look like the one below
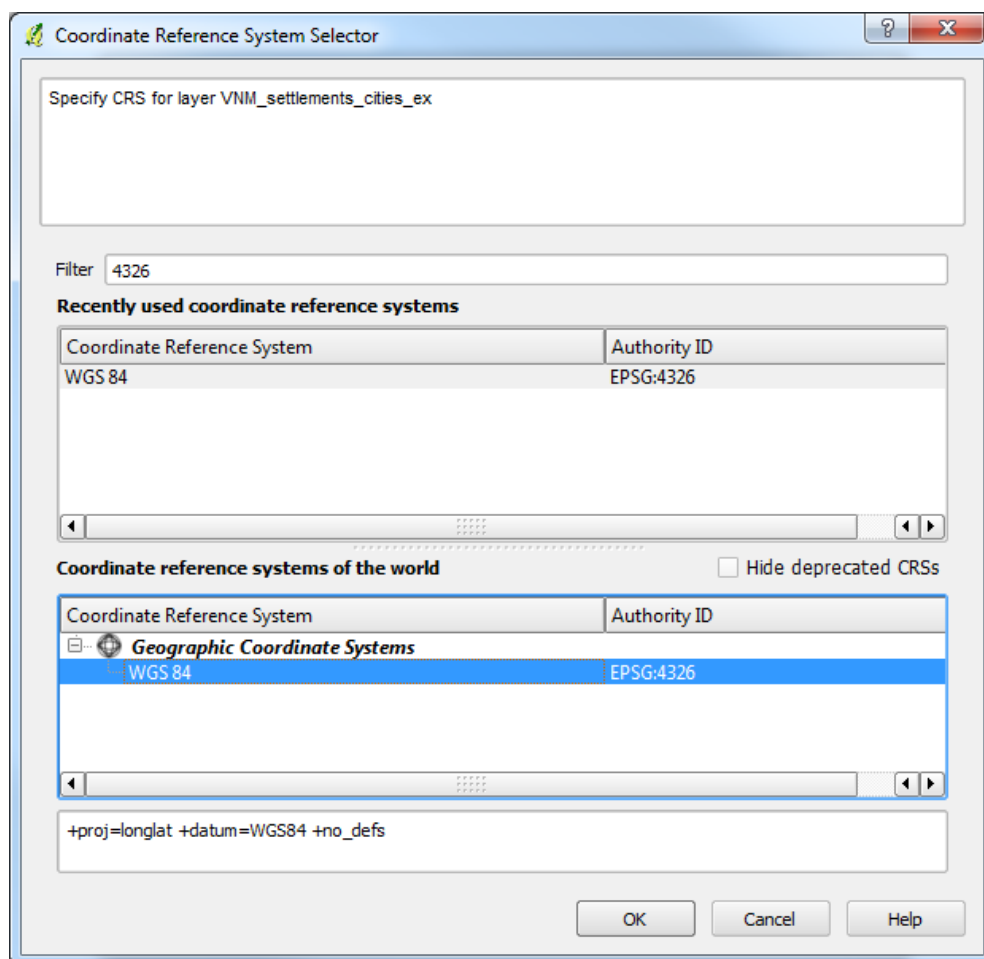

10. Click *OK*

The *Coordinate Reference System Selector* window may appear

11. Select the *WGS 84* Coordinate Reference System using one of the following methods

    a. Scroll to the *WGS 84 Coordinate Reference System* located in the *Geographic Coordinate Systems* category and click on it so it is highlighted in blue

        OR

    b. Type 4326 in the filter box and click the *WGS 84* result

The window should look similar to the one below

12. Click *OK*

QGIS will automatically add the layer to your map

13. Right click on the VNM_*settlements_cities_ex* in the *Layer Panel* and select *Open Attribute Table*

14. Check the attributes of the layer by looking through the *Attribute Table*
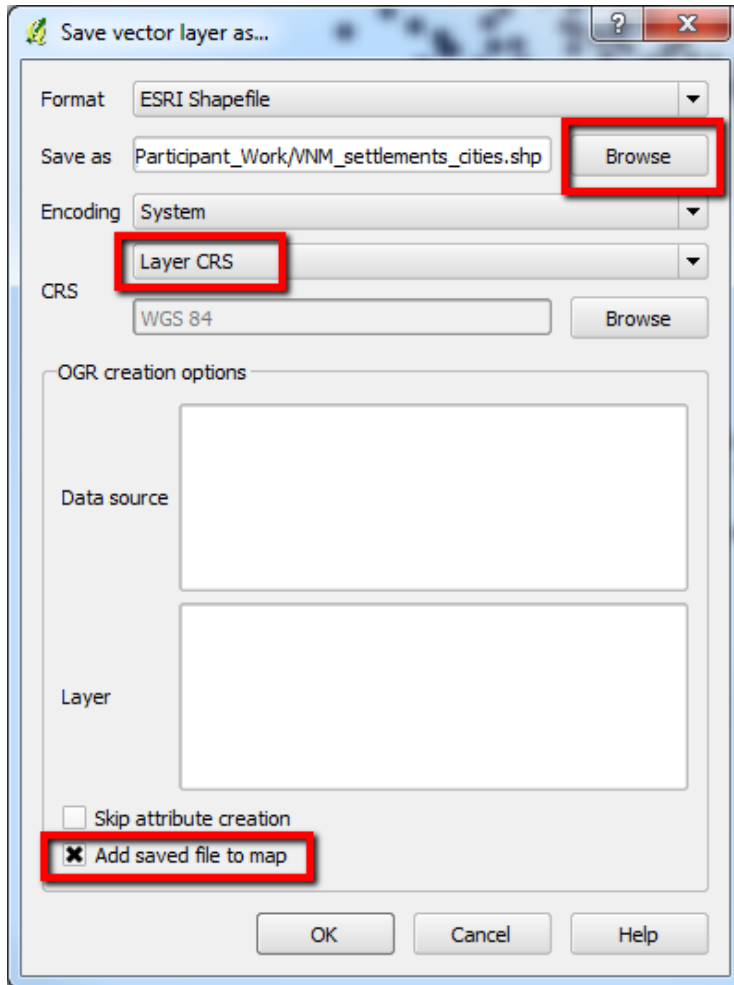
15. Close the Attribute table

Section 3: Save New Layer as Shapefile

When you add a delimited file to QGIS, it does not save the information. You need to create a shapefile to save the new layer you created from your delimited file.

1. Highlight the *VNM_settlements_cities_ex* layer in the *Layer Panel*

2. In the layer menu select *Save As…*

3. Make sure that the format is set to *ESRI Shapefile*

4. Navigate to the

     \\Vietnam_Training\06_Participant_Work

5. Name the file VNM_s*ettlements_cities*

6. Check the box next to *Add Saved File to Map* to automatically add the newly created shapefile to your map document

7. For CRS (Coordinate Reference System) make sure it is set *Layer CRS*, since you already defined WGS 84 as the CRS when you imported the GPS data

     Note: Most common GPS format is WGS 84 but verify this with the GPS unit or the data collection agency. Often this will already be in the GPS data file.

8. Click *OK*, in the pop-up window that confirms that creation of your shapefile

9. Click *OK*

10. Exit QGIS without saving

End Exercise.

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