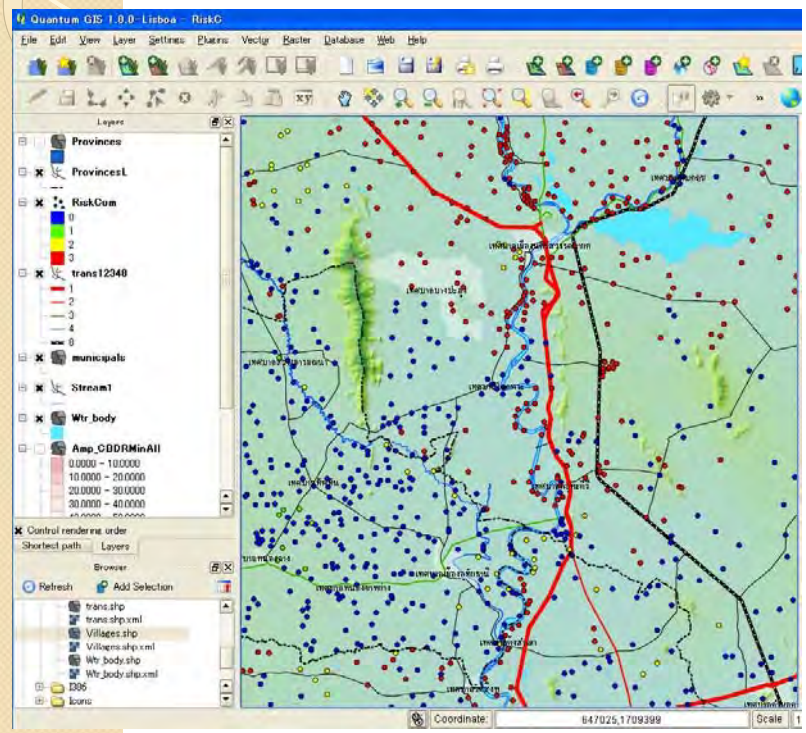
2. Making Inventory Maps (Risk Community)

2.1 Making risk community map



It is important to understand situation about risk community.

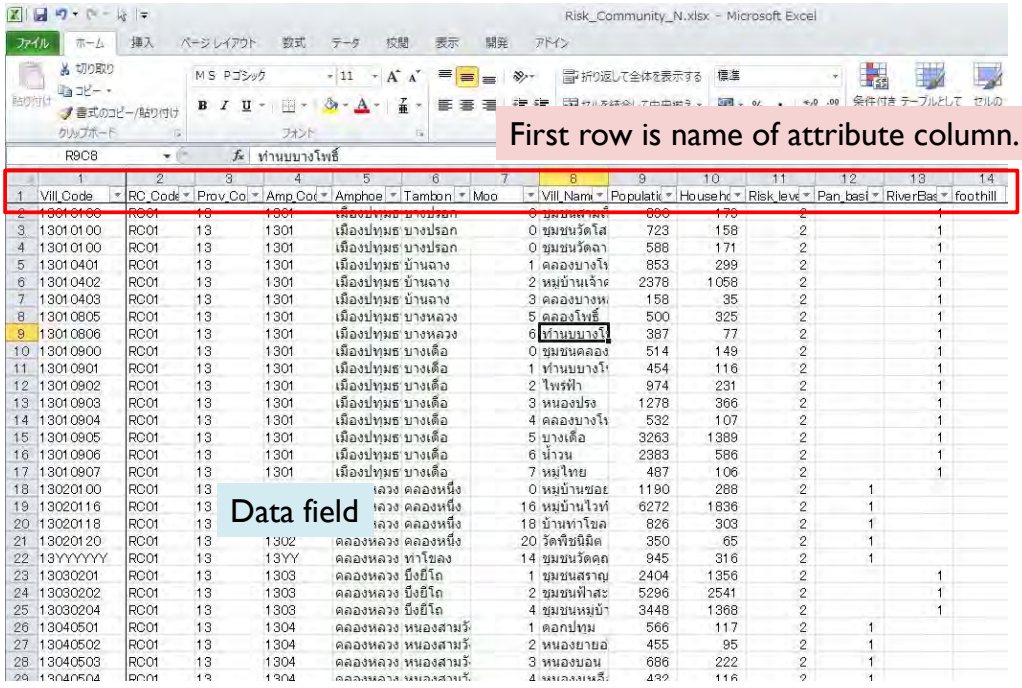
In this chapter, we make risk community map by using QGIS and Excel.

Source files
/ Risk_Community_N.xls
(list of risk community)

/ village (shape file)
/ provinces (shape file)
/ RegionC (shape file)
/ trans (shape file)
/ Wtr_body (shape file)
/ Stream (shape file)
/ thailand.osm (openstreetmap)
/ dem_90_u_ft (image file)

2.1.1 Make risk community shape file

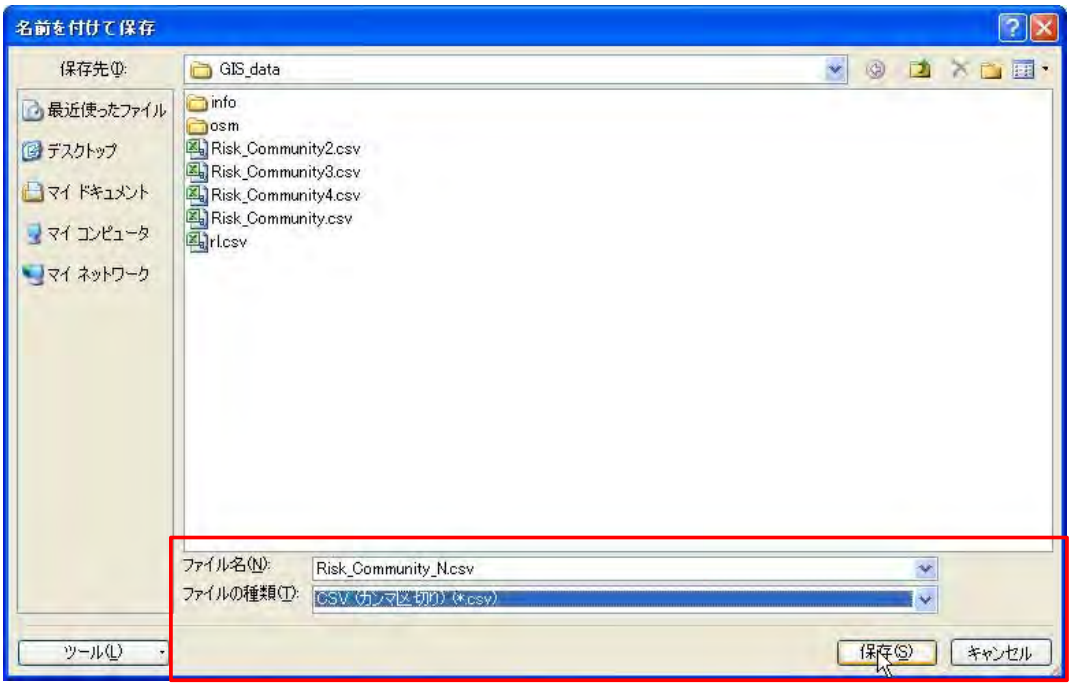
Risk_Community_N.xlsx is Excel format file. This file contains Risk community profiles (location, risk level population …).



2. Making Inventory Maps

2.1.1 Make risk community shape file

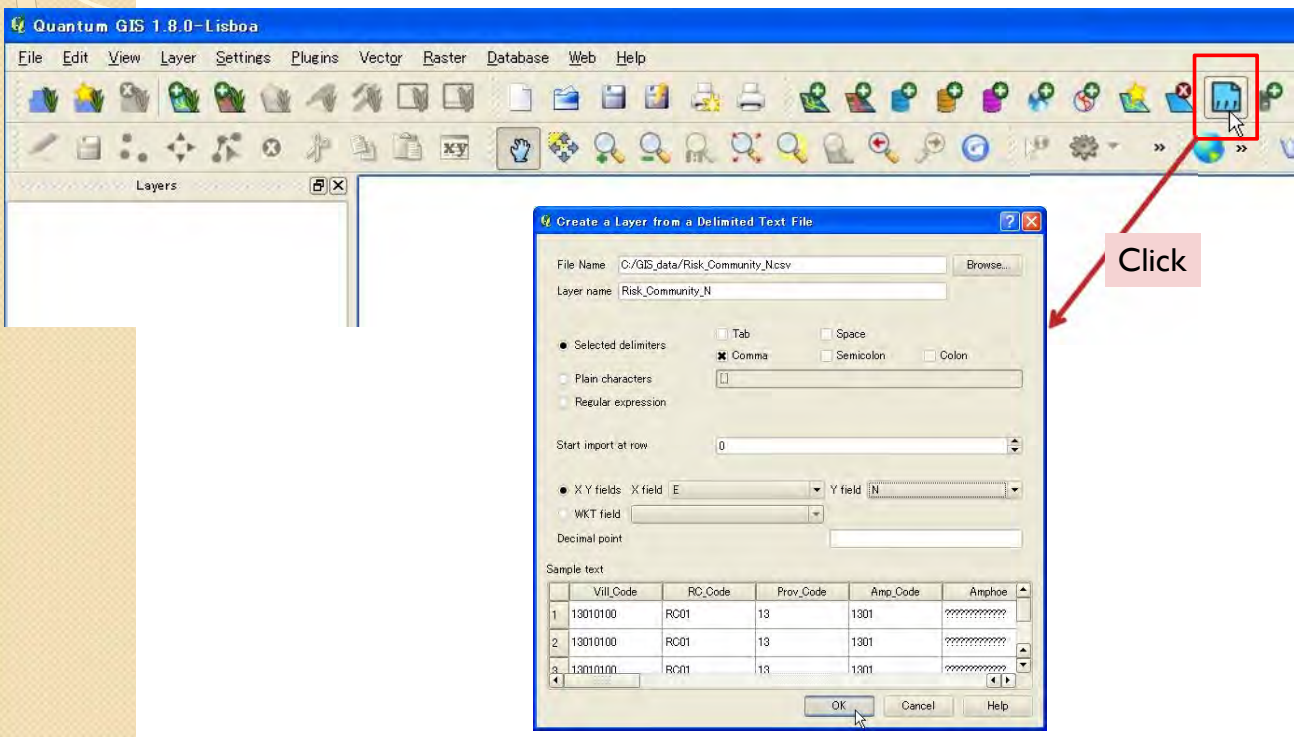
In order to import the Excel data, save the data sheet to "csv" format file.



2. Making Inventory Maps

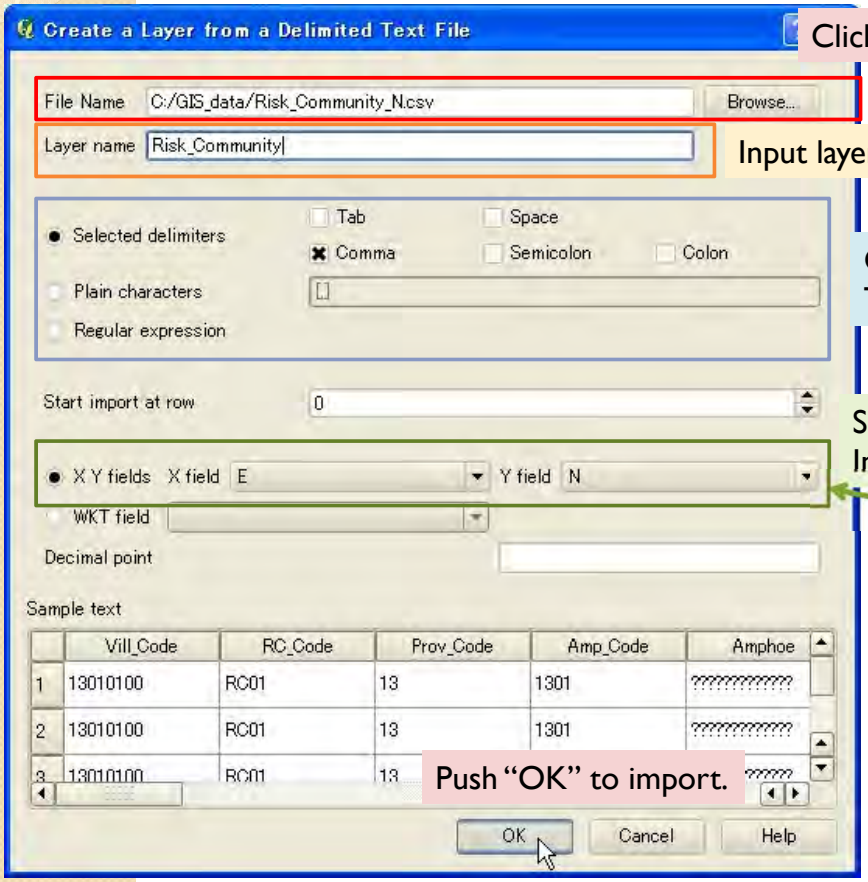
2.1.1 Make risk community shape file

Open QGIS and push "Add Delimited Text Layer" button to import the "csv" file.



2. Making Inventory Maps

2.1.1 Make risk community shape file



Click "Browse" to select csv file

Input layer name

Check "Comma".
This is delimiter of "csv" file.

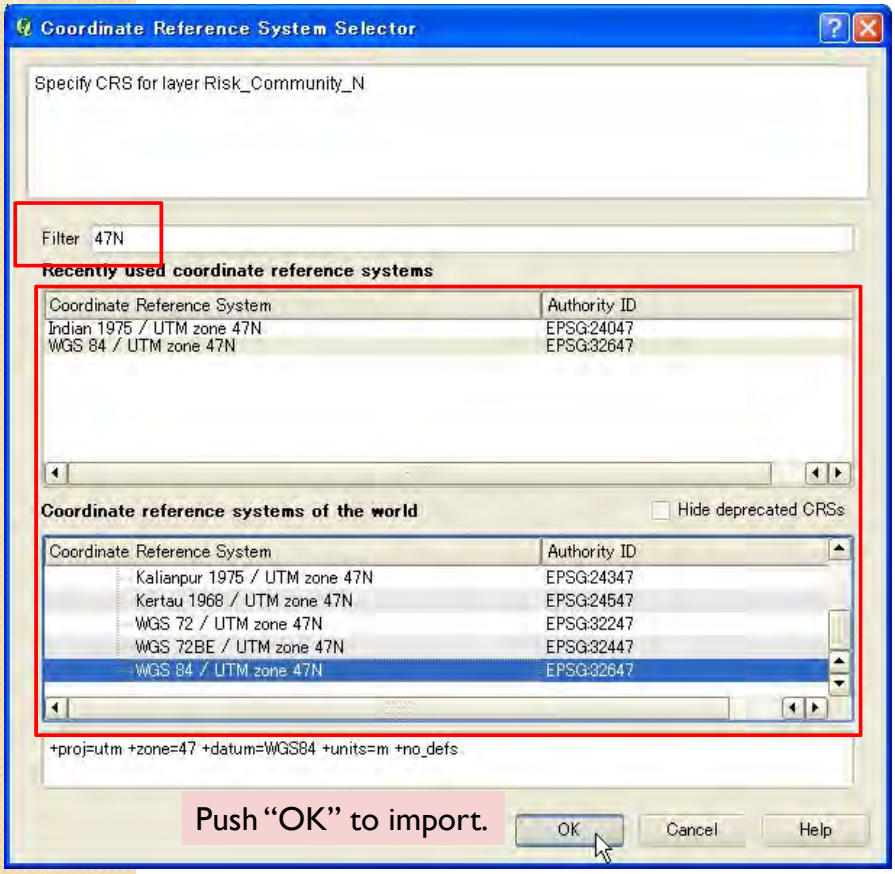
Select field of X-Y coordinate.
In this case, X is "E", Y is "N".

Push "OK" to import.

	21	22
	E	N
	822552	1816778
	847987	1802618
	849410	1801859
	849528	1808068
	852596	1812747
	850013	1808583
	839845	1793572
	835367	1795841
	839957	1793175
	839551	1793363
	831708	1825154
	836290	1825890
	831782	1826057
	833090	1825795
	837757	1813525
	839407	1811873

2. Making Inventory Maps

2.1.1 Make risk community shape file

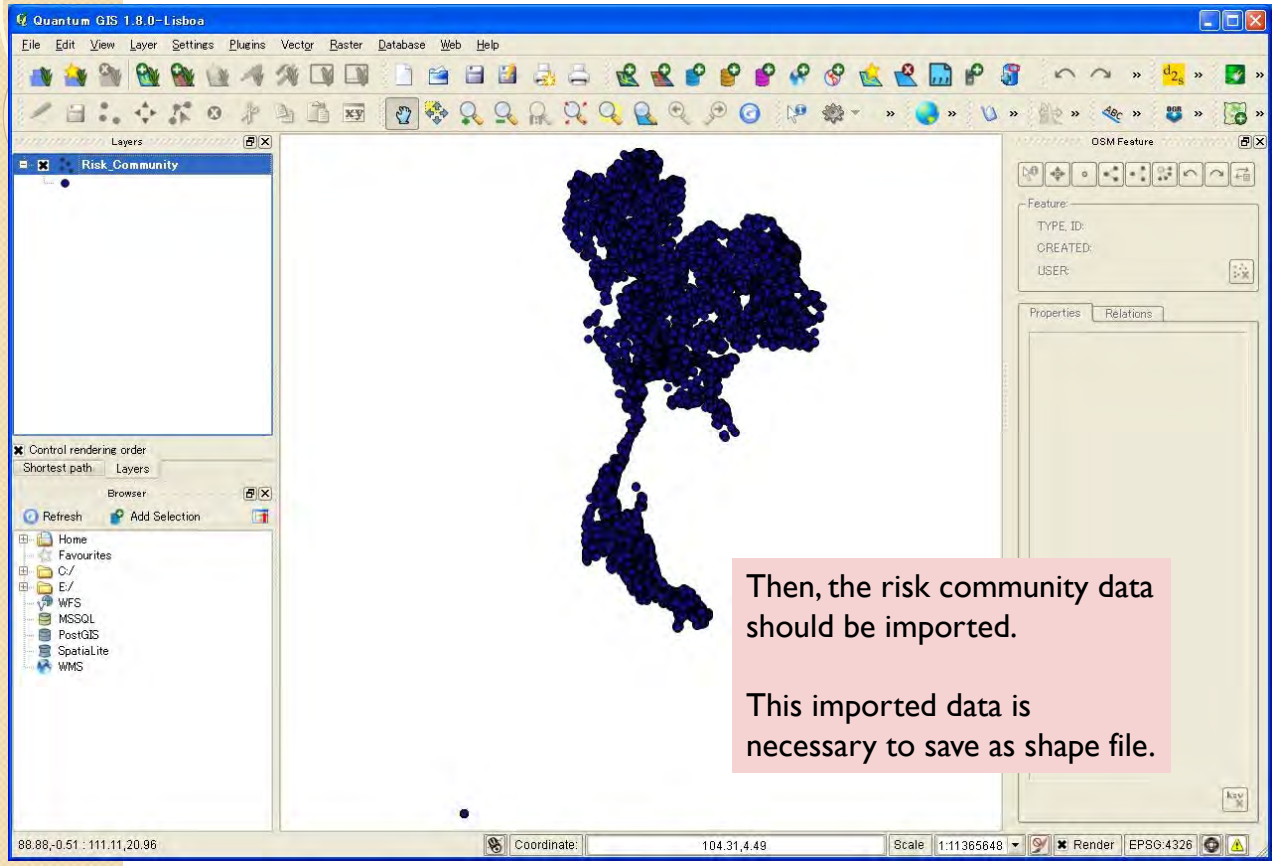


Next, set CRS (Coordinate Reference System) as "WGS 84 / UTM zone 47N".

Push "OK" to import.

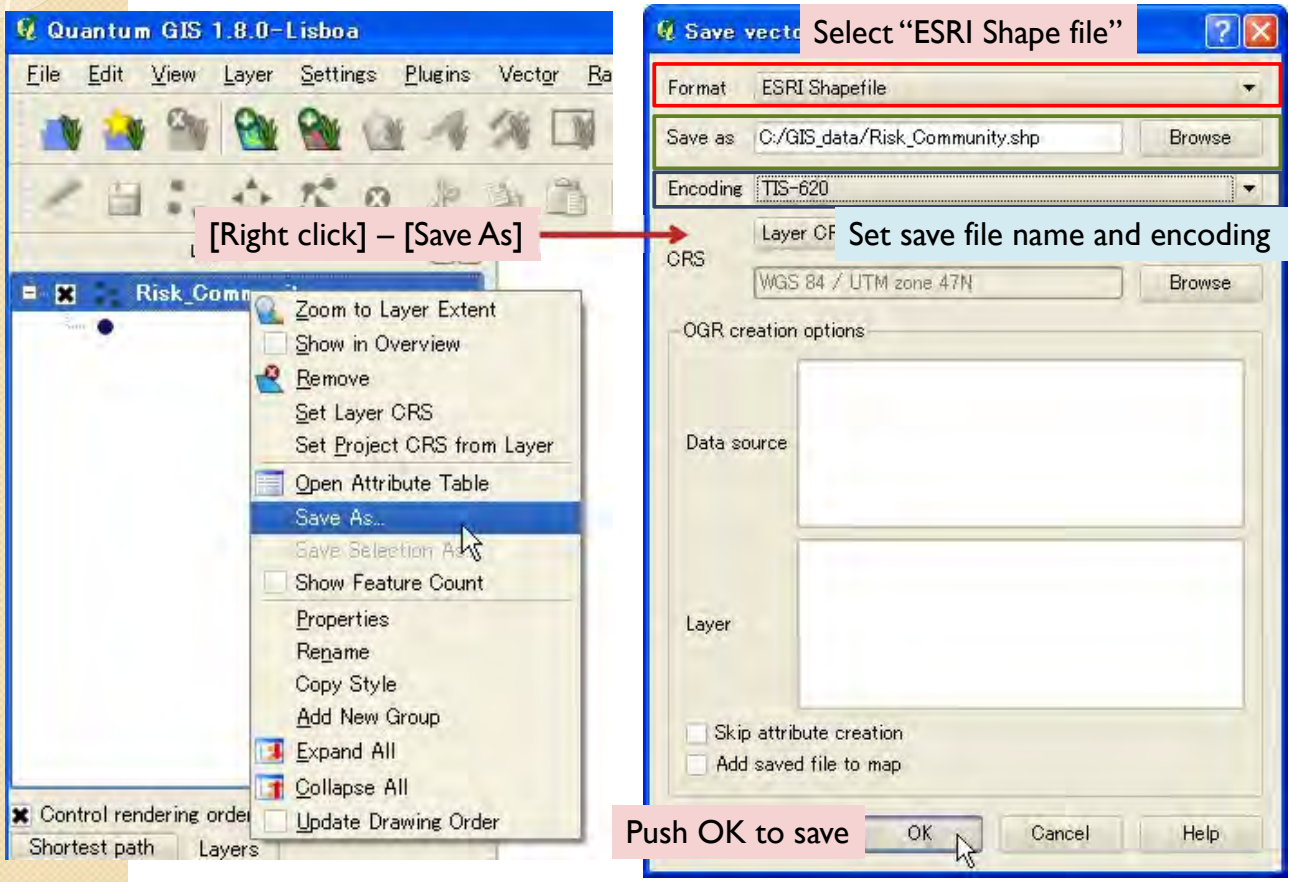
2. Making Inventory Maps

2.1.1 Make risk community shape file



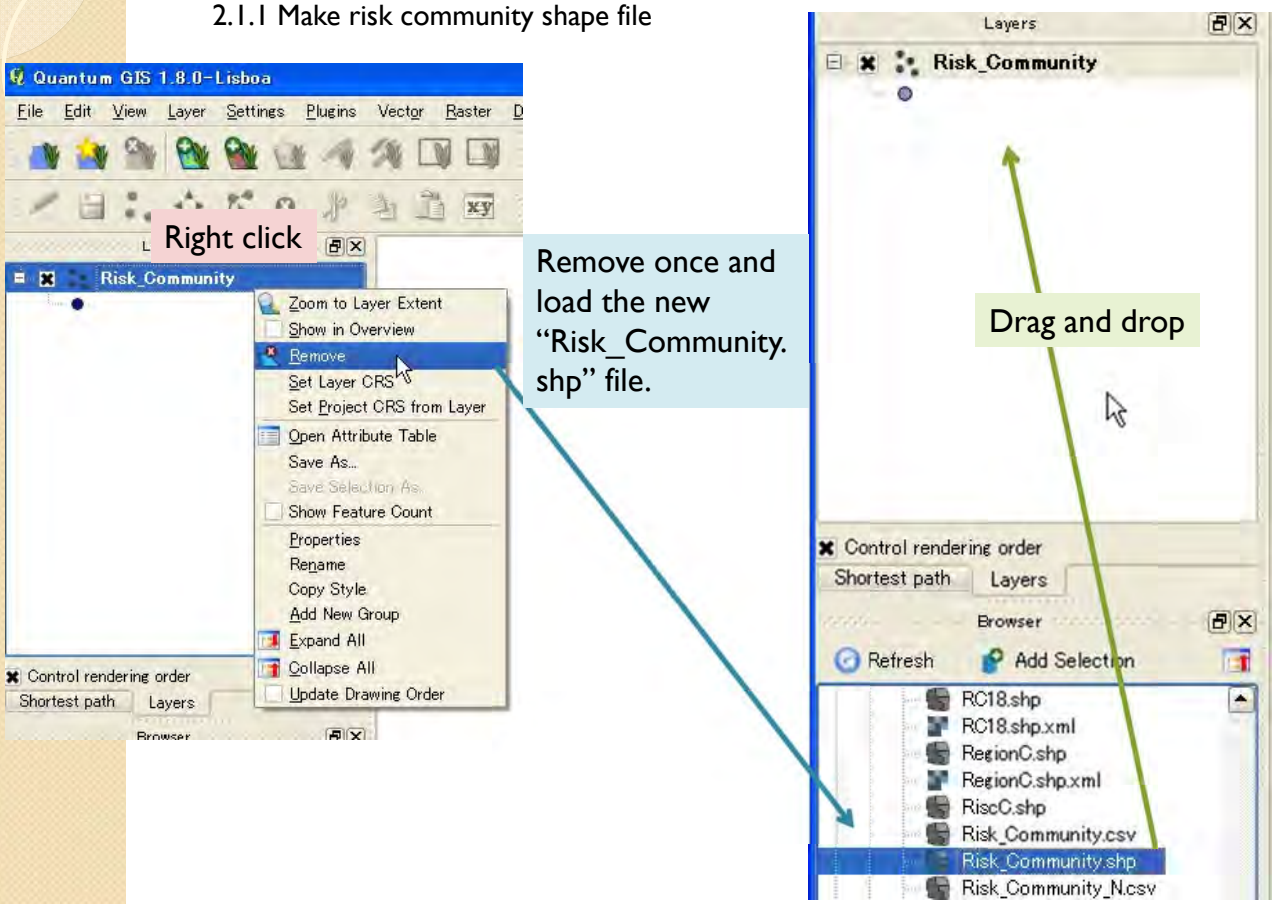
2. Making Inventory Maps

2.1.1 Make risk community shape file



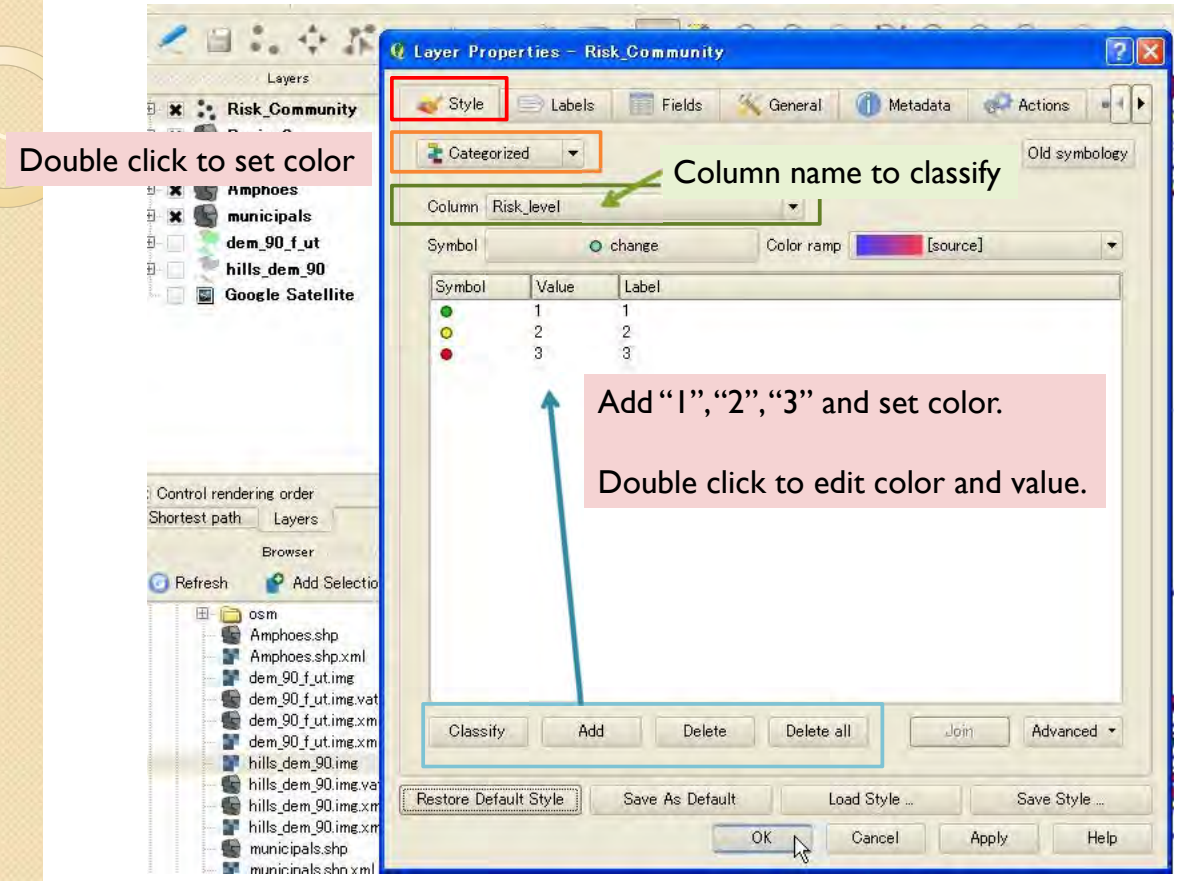
2. Making Inventory Maps

2.1.1 Make risk community shape file



2. Making Inventory Maps

2.1.1 Make risk community shape file



2. Making Inventory Maps

2.1.1 Make risk community shape file

Notes :

No location information communities are at "0, 0".

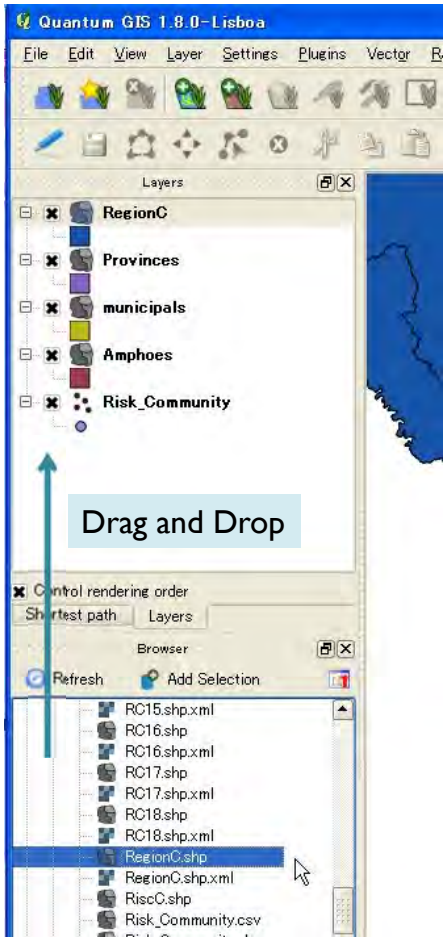
Other community location data are also imprecise. In addition, some risk communities are double counted in the list (Excel file). Some parts were removed, but it is not perfect. Please pay attention if you use this data.

2. Making Inventory Maps

2.1.2 Import administrative data

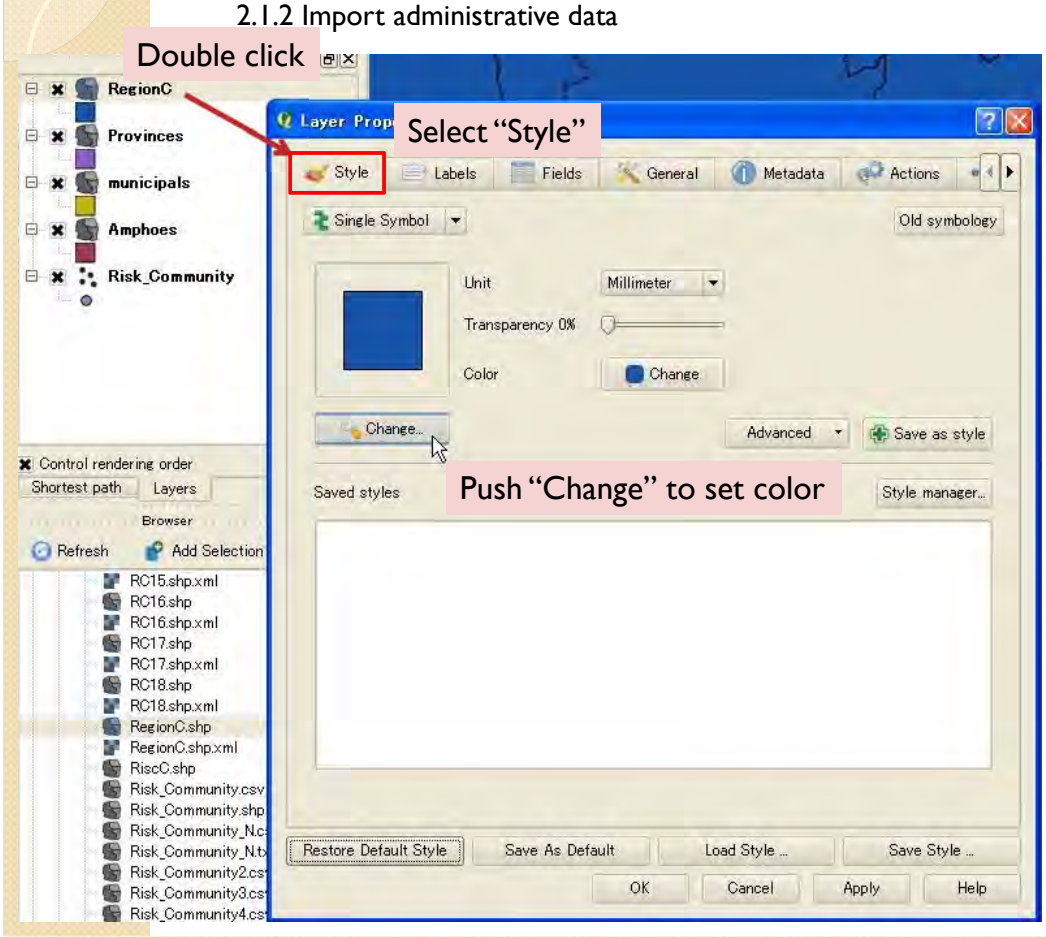
Import following administrative data from "GIS_data" folder.

/ RegionC.shp
/ Provinces.shp
/ municipals.shp
/ Amphoes.shp
/ Villages.shp



2. Making Inventory Maps

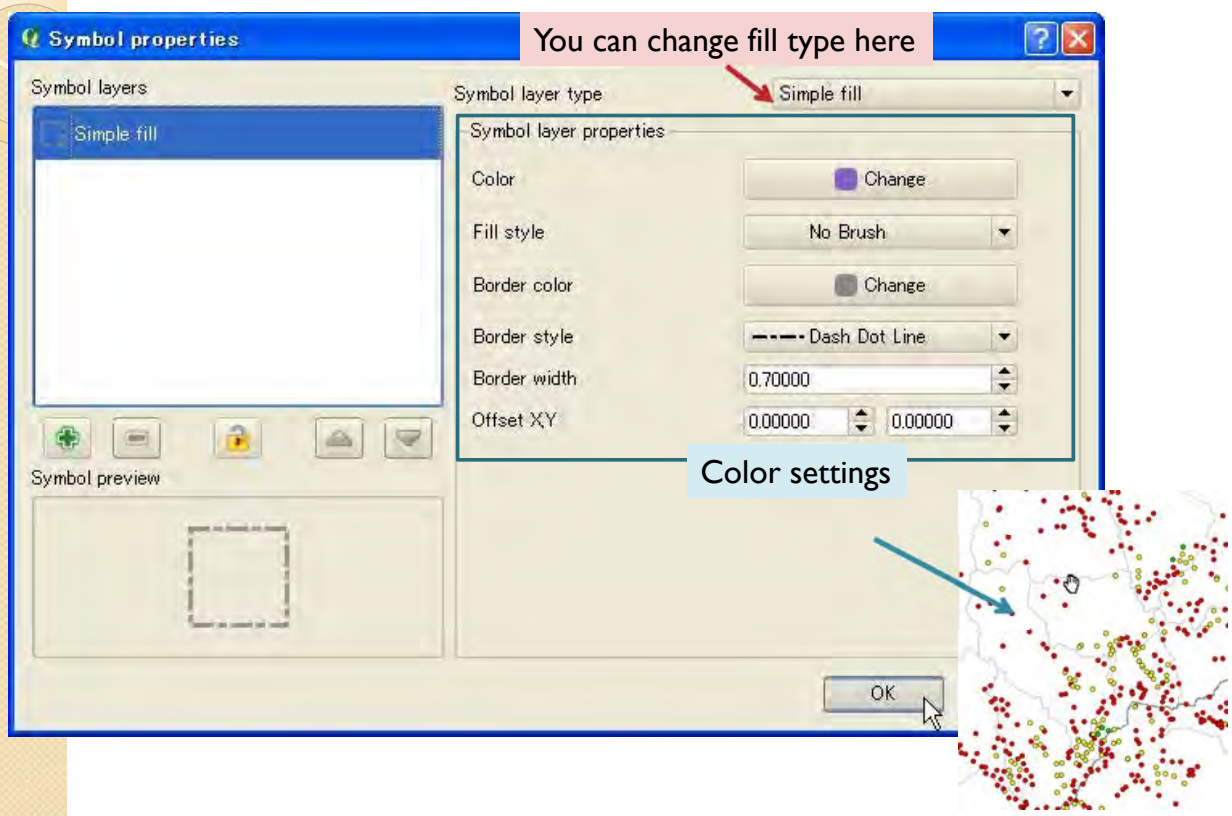
2.1.2 Import administrative data



Set colors at style tab as you like.

2. Making Inventory Maps

2.1.2 Import administrative data



2. Making Inventory Maps

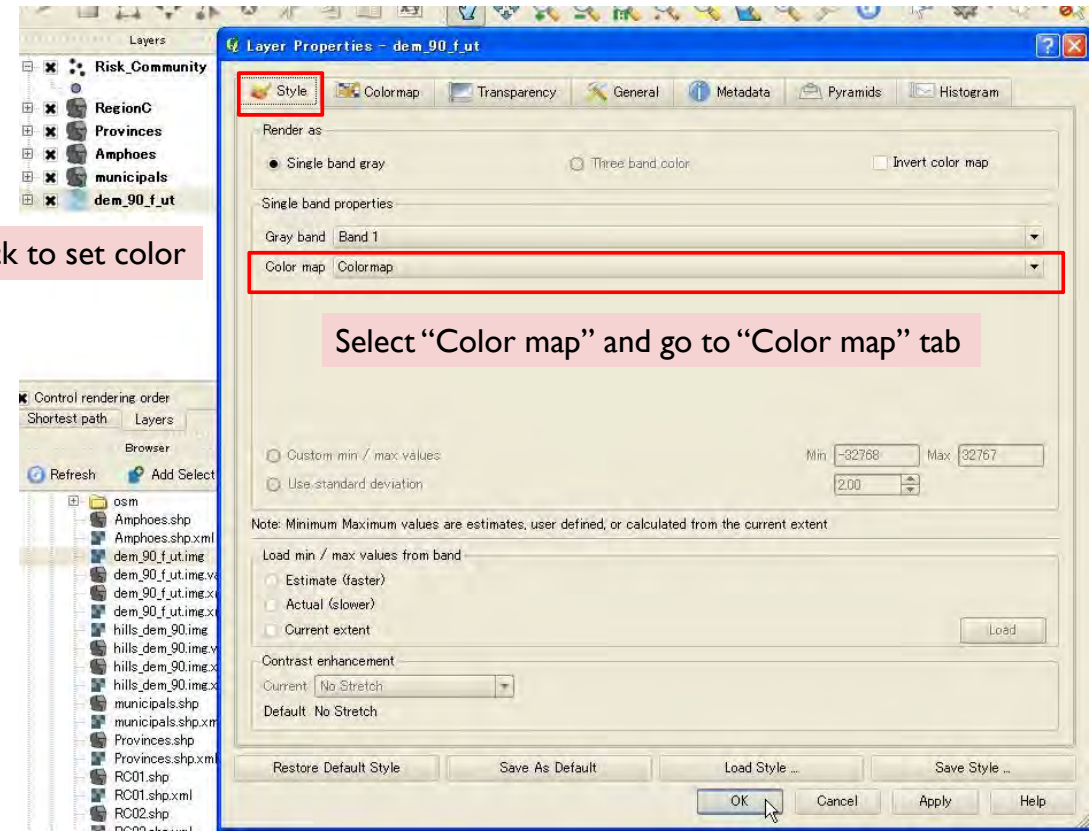
2.1.3 Import elevation data

Import "dem_90_f_ut" from "GIS_data" folder.

2. Making Inventory Maps

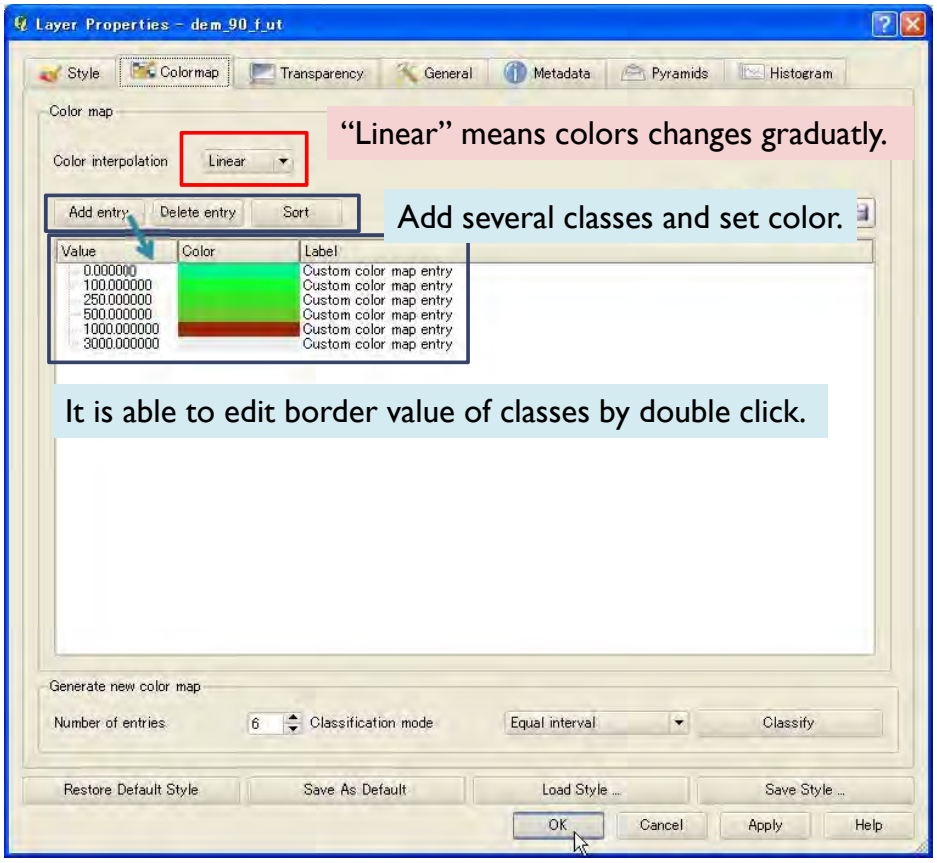
2.1.3 Import elevation data

Double click to set color



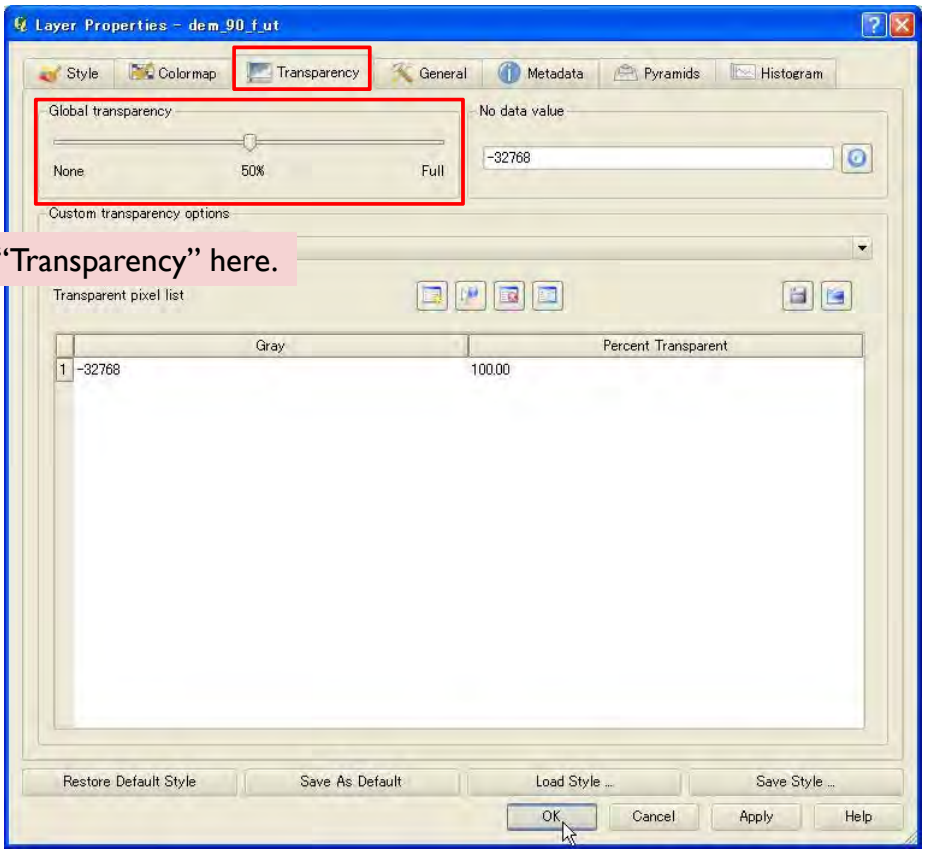
2. Making Inventory Maps

2.1.3 Import elevation data



2. Making Inventory Maps

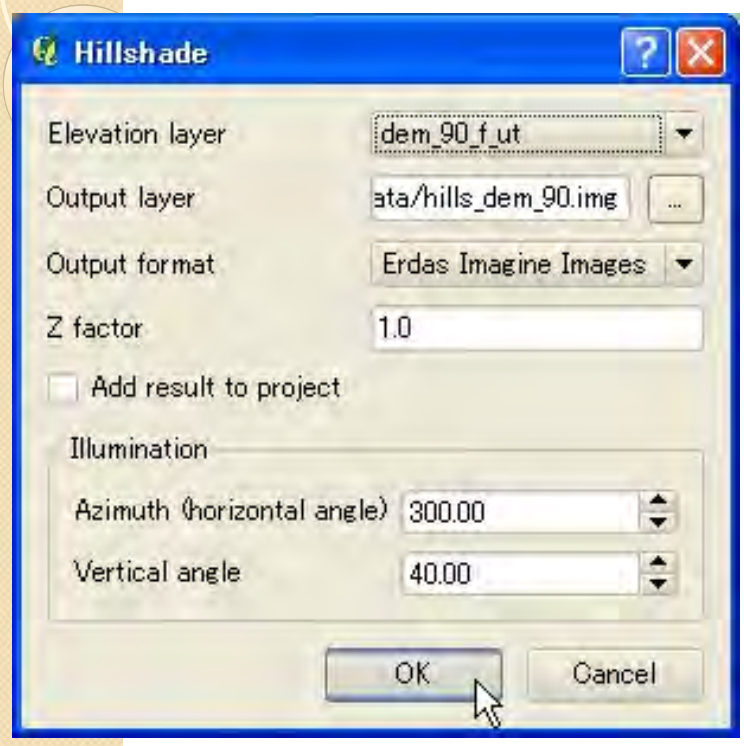
2.1.3 Import elevation data



2.1.4 Making hill shade data

Select [Raster] – [Terrain analysis] – [Hillshade] to make hill shade.

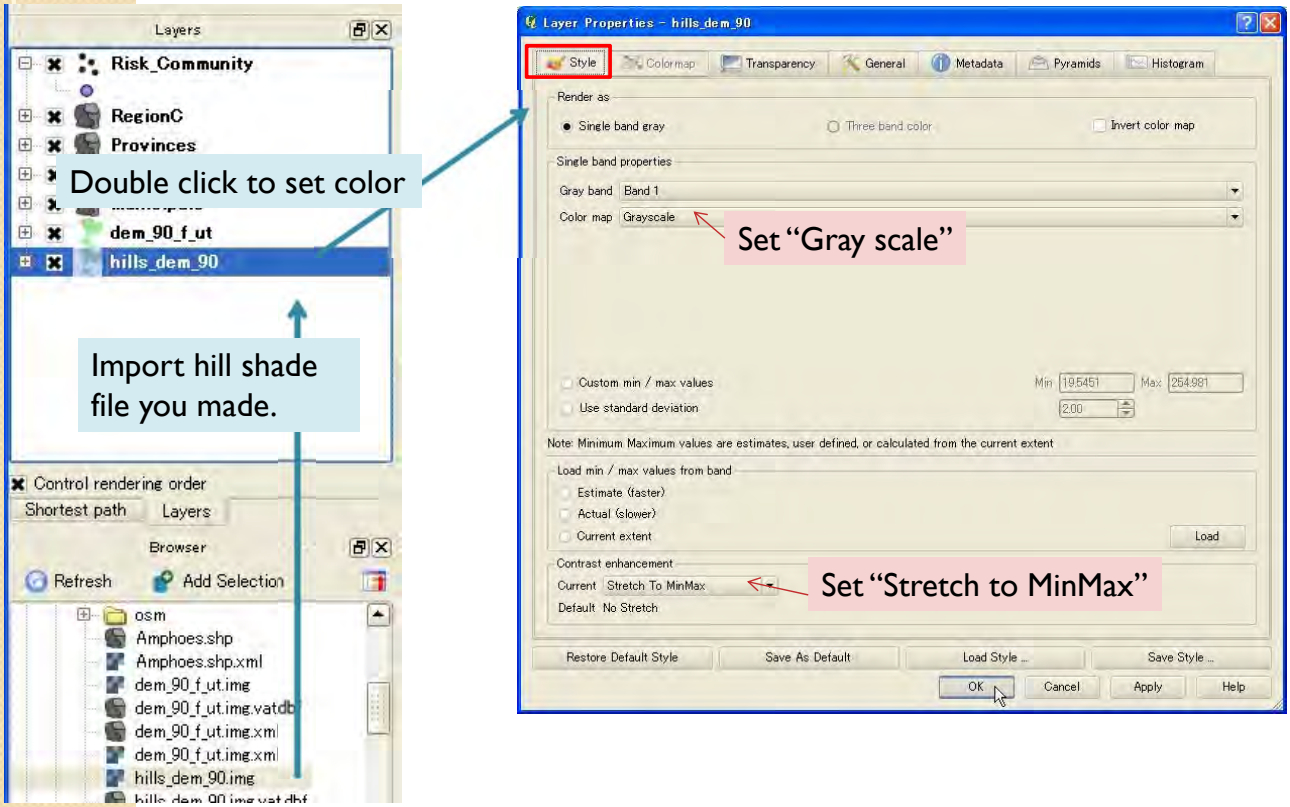
2.1.4 Making hill shade data



Select as these settings and push OK to make hill shade.

2. Making Inventory Maps

2.1.4 Making hill shade data

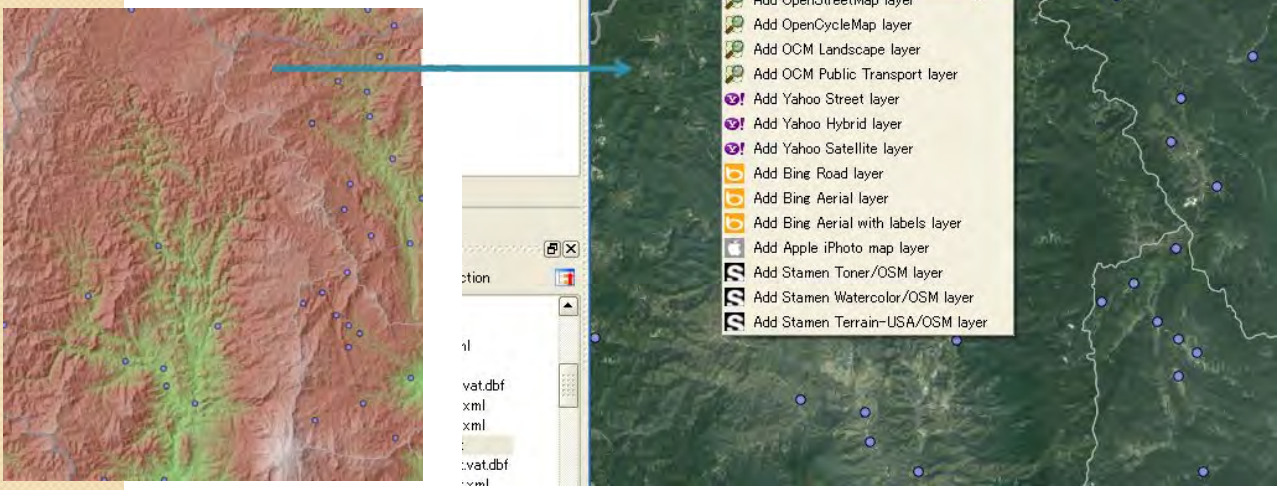


2. Making Inventory Maps

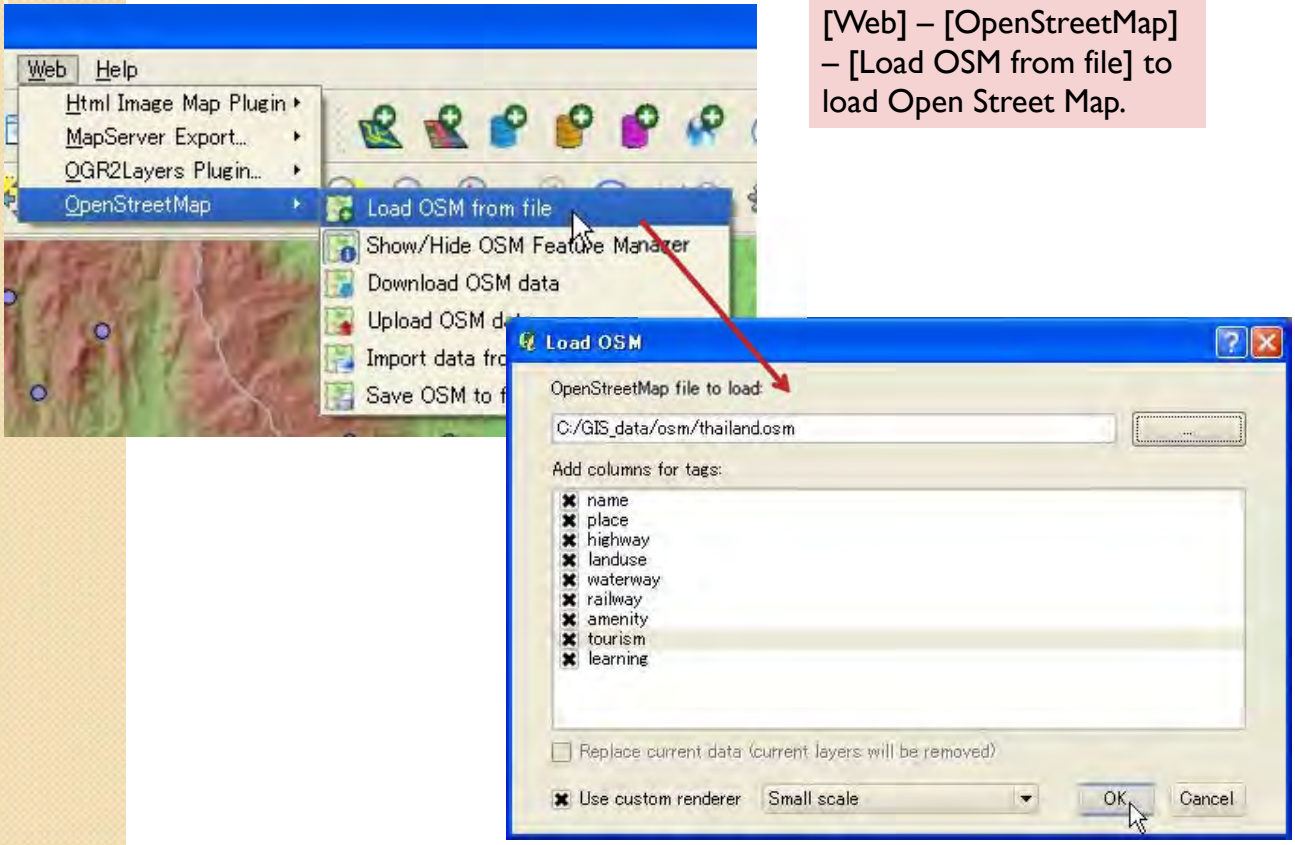
2.1.5 Import online Maps

Instead of the hill shade and elevation data, you can use online map when you use internet connection.

[Plugins] – [Openlayers plugin]



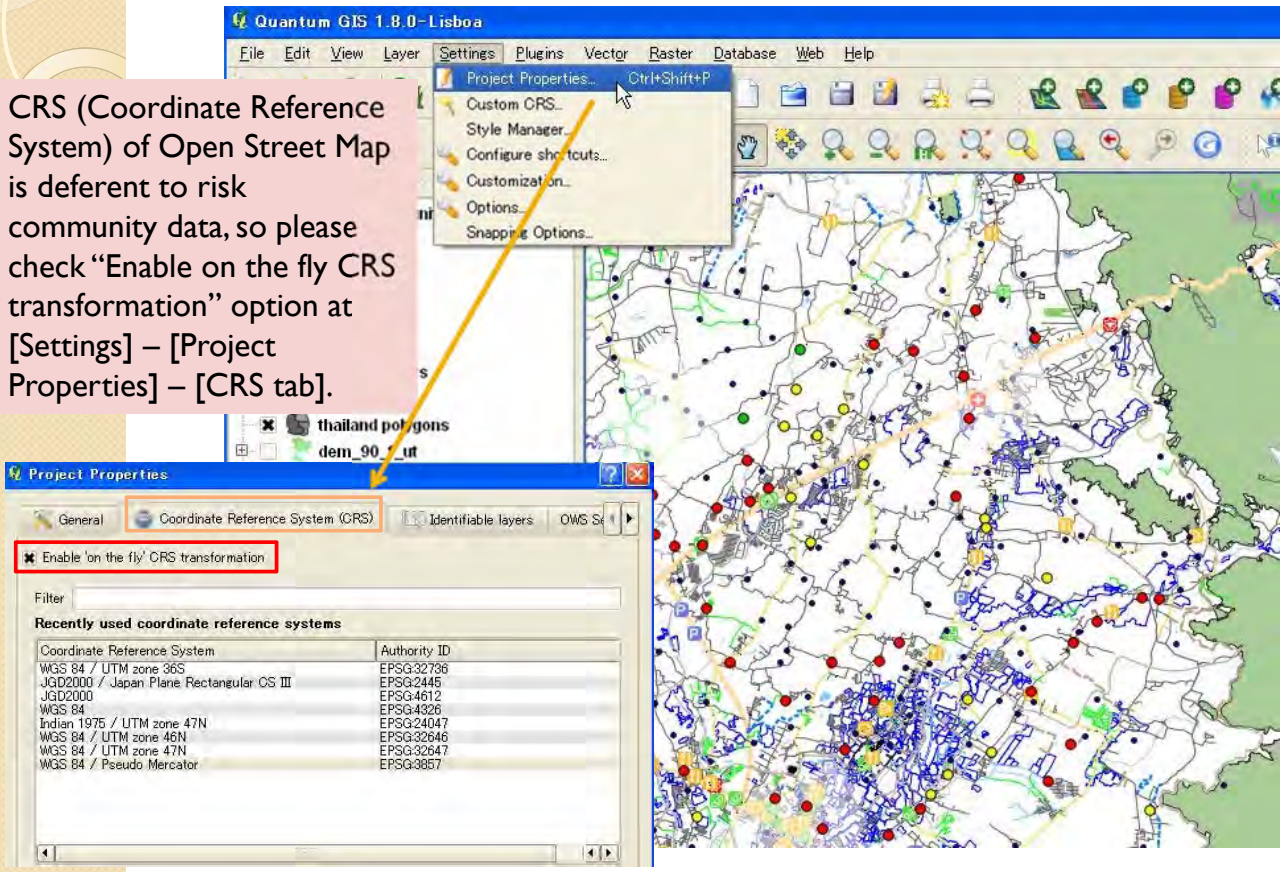
2.1.6 Import Open Street Map



[Web] – [OpenStreetMap] – [Load OSM from file] to load Open Street Map.

2. Making Inventory Maps

2.1.6 Import Open Street Map

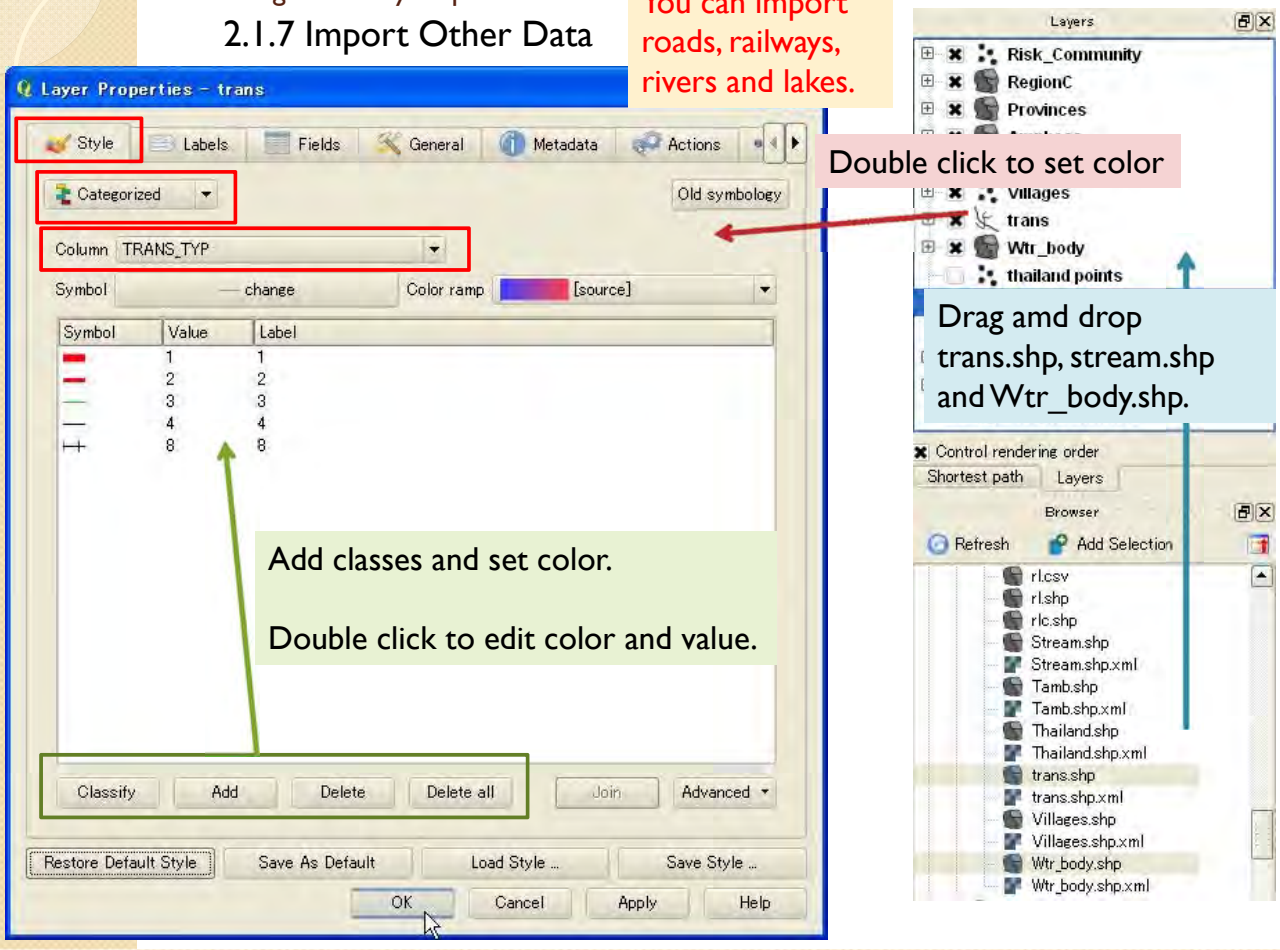


CRS (Coordinate Reference System) of Open Street Map is deferent to risk community data, so please check "Enable on the fly CRS transformation" option at [Settings] – [Project Properties] – [CRS tab].

2. Making Inventory Maps

2.1.7 Import Other Data

You can import roads, railways, rivers and lakes.



Double click to set color

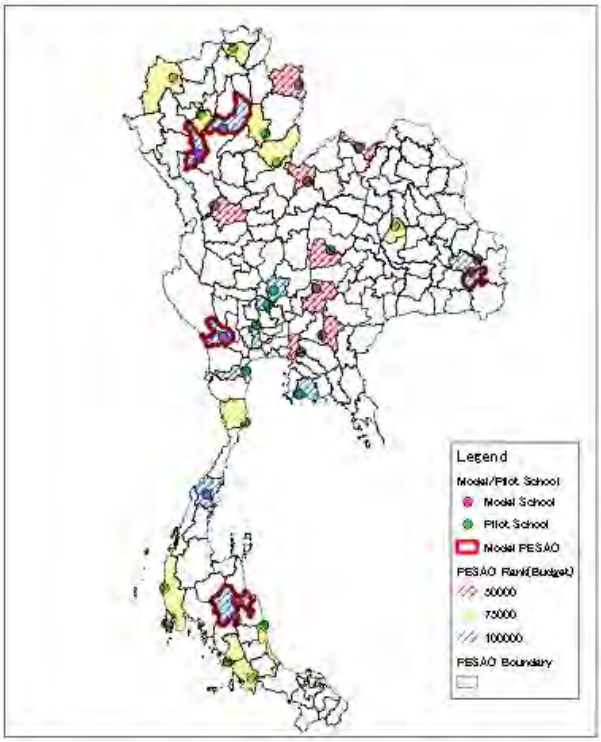
Drag amd drop trans.shp, stream.shp and Wtr_body.shp.

Add classes and set color.

Double click to edit color and value.

3. Making Inventory Maps (Disaster Education)

3.1 Making model/pilot schools and ESAO map

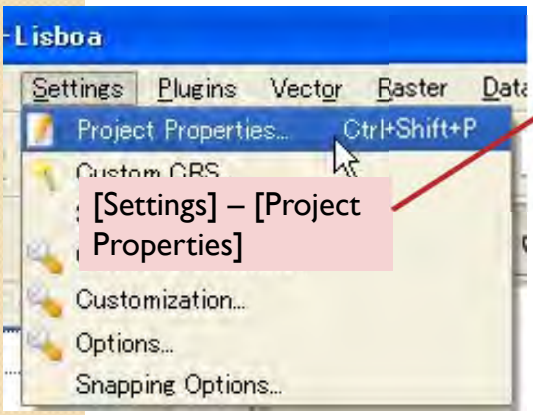


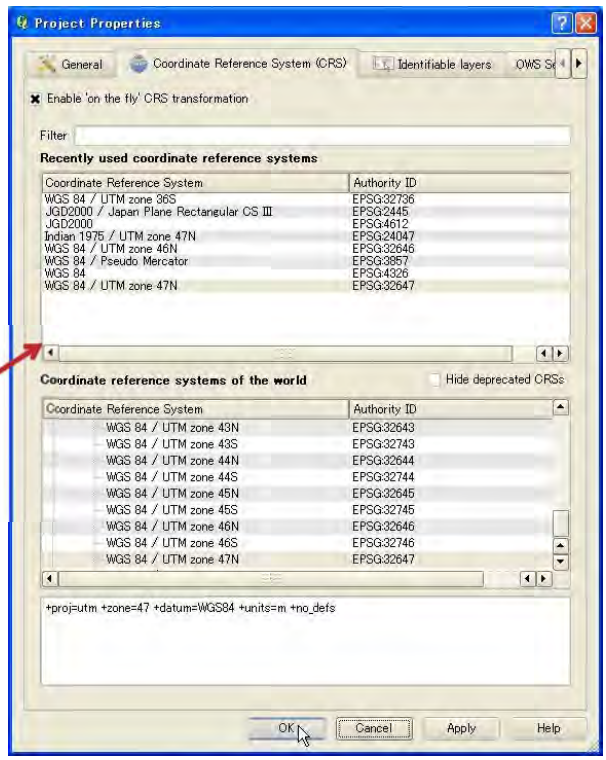
In this chapter, we make model/pilot schools and ESAO map by using QGIS and Excel.

1.Import Shape file (geographical data) and Excel file (disaster educarion information)
2.Integrate both into one shape file
3.Make coloring
4.Make inventory maps
5.Import and set color for risk area
6.Make risk area map with ESAO

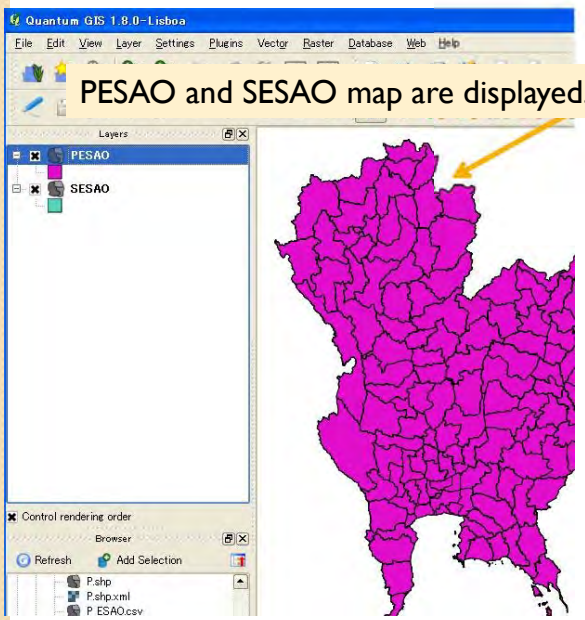
3.1.1 Import PESAO and SESAO file

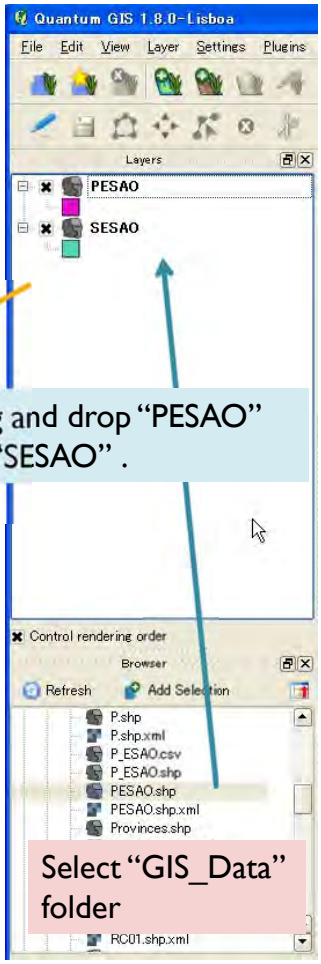
At first, make sure that Coordination Reference System (CRS) is set as WGS84 / UTM 47N and "Enable 'on the fly' CRS transformation" is checked.





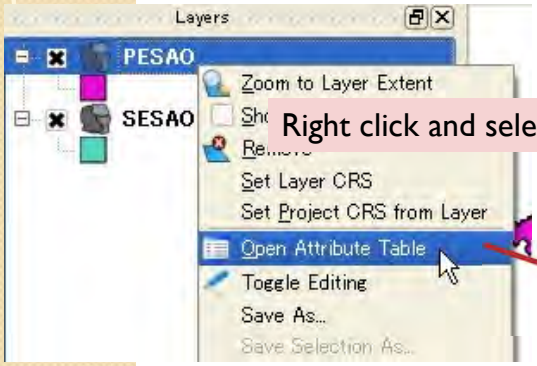
Select "GIS_Data" folder in the "Browser" field and drag and drop "PESAO" and "SESAO" file into "Layers" folder.



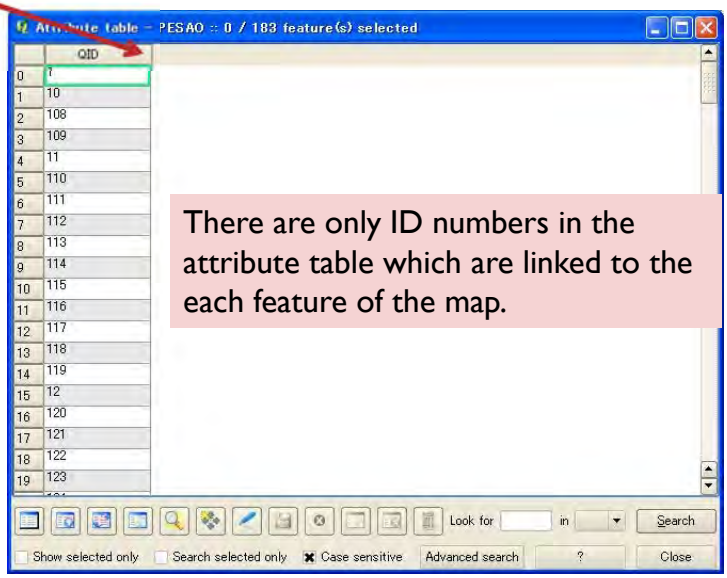


3. Making Inventory Maps

3.1.1 Import PESAO and SESAO file



Right click and select "Open Attribute Table"

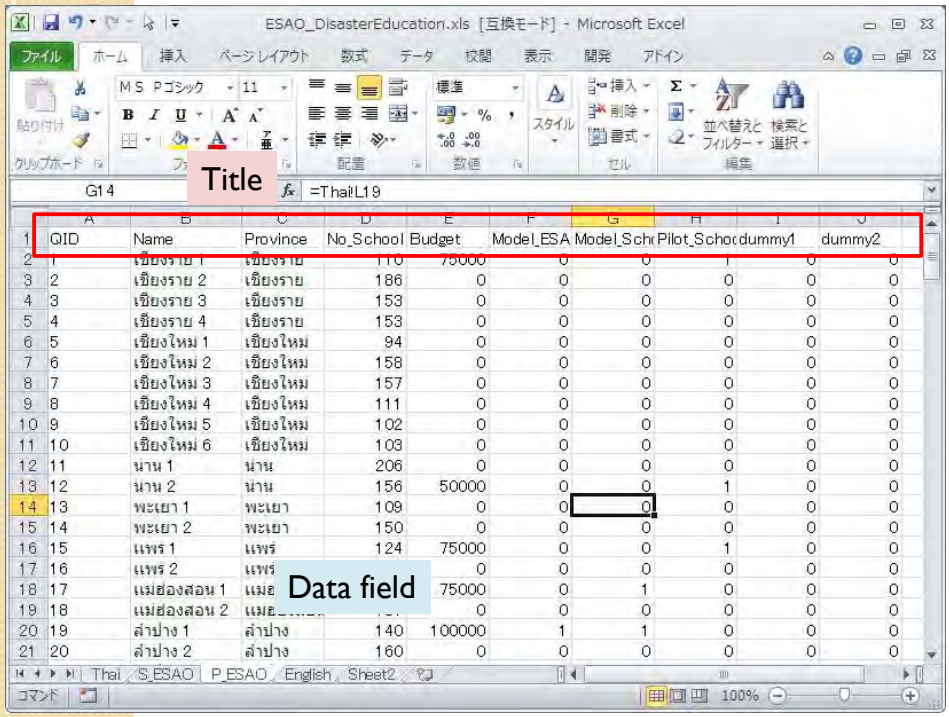


There are only ID numbers in the attribute table which are linked to the each feature of the map.

It is necessary to import ESAO data from Excel file.

3. Making Inventory Maps

3.1.2 Import PESAO and SESAO data from Excxel file



	A	B	C	D	E	F	G	H	I	J
1	QID	Name	Province	No_School	Budget	Model_ESA	Model_Sch	Pilot_Scho	dummy1	dummy2
2	1	เชียงราย 1	เชียงราย	110	75000	0	0	1	0	0
3	2	เชียงราย 2	เชียงราย	186	0	0	0	0	0	0
4	3	เชียงราย 3	เชียงราย	153	0	0	0	0	0	0
5	4	เชียงราย 4	เชียงราย	153	0	0	0	0	0	0
6	5	เชียงใหม่ 1	เชียงใหม่	94	0	0	0	0	0	0
7	6	เชียงใหม่ 2	เชียงใหม่	158	0	0	0	0	0	0
8	7	เชียงใหม่ 3	เชียงใหม่	157	0	0	0	0	0	0
9	8	เชียงใหม่ 4	เชียงใหม่	111	0	0	0	0	0	0
10	9	เชียงใหม่ 5	เชียงใหม่	102	0	0	0	0	0	0
11	10	เชียงใหม่ 6	เชียงใหม่	103	0	0	0	0	0	0
12	11	น่าน 1	น่าน	206	0	0	0	0	0	0
13	12	น่าน 2	น่าน	156	50000	0	0	1	0	0
14	13	พะเยา 1	พะเยา	109	0	0	0	0	0	0
15	14	พะเยา 2	พะเยา	150	0	0	0	0	0	0
16	15	แพร่ 1	แพร่	124	75000	0	0	1	0	0
17	16	แพร่ 2	แพร่	0	0	0	0	0	0	0
18	17	แม่ฮ่องสอน 1	แม่ฮ่องสอน	75000	0	0	1	0	0	0
19	18	แม่ฮ่องสอน 2	แม่ฮ่องสอน	0	0	0	0	0	0	0
20	19	ลำปาง 1	ลำปาง	140	100000	1	1	0	0	0
21	20	ลำปาง 2	ลำปาง	160	0	0	0	0	0	0

Open "ESAO_DisasterEducation.xls".

Table to import into GIS must be simple table like this figure.

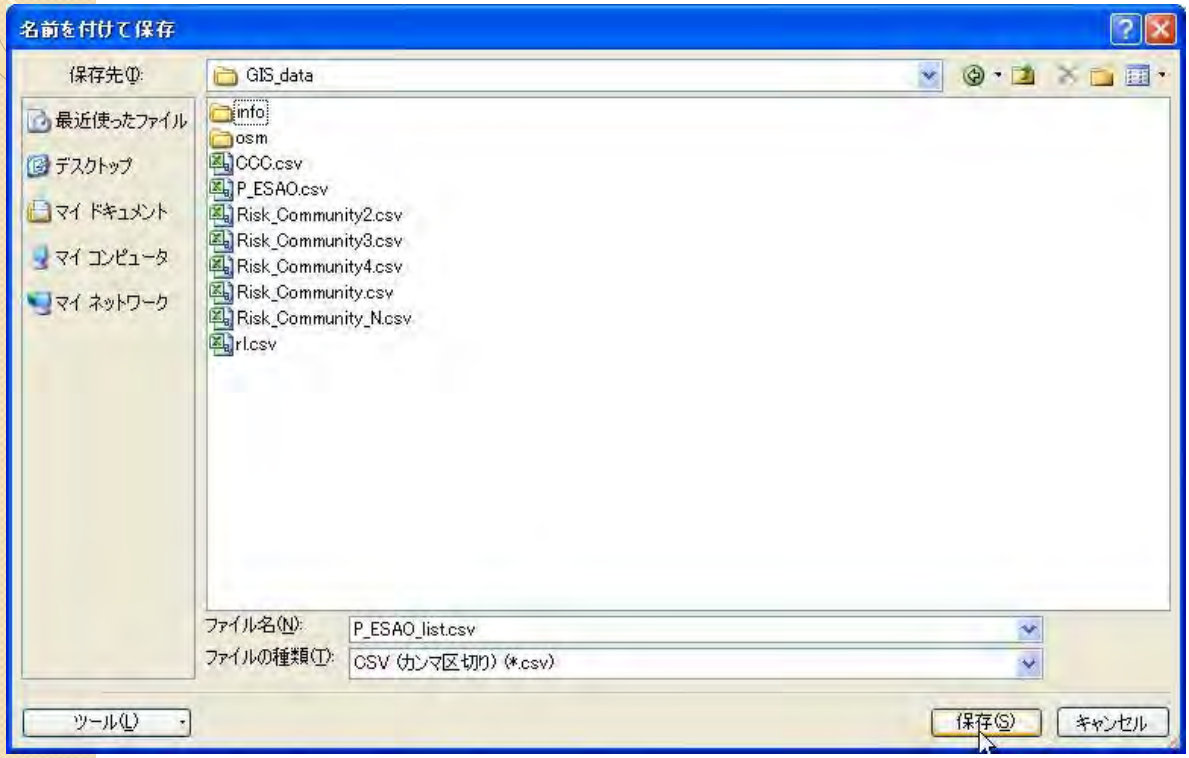
The first row is title of the attribute column. Write only alphabet and "_". Do not use " "(space), "-", "," …

Data field is below. Do not use ",".

3. Making Inventory Maps

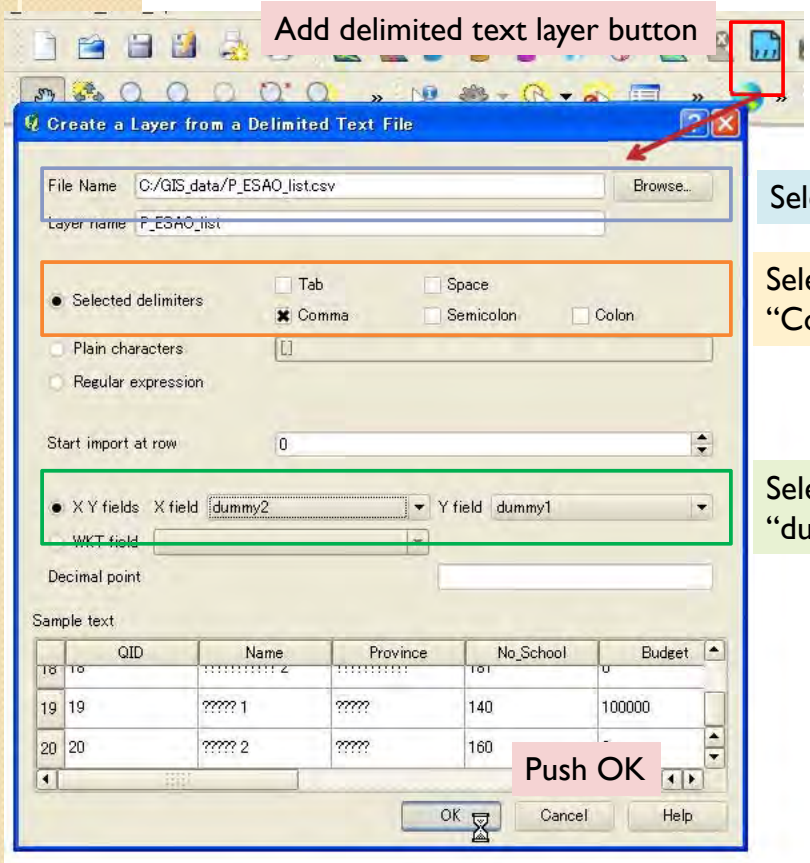
3.1.2 Import PESAO and SESAO data from Excxel file

Save "P_ESAO" and "S_ESAO" sheet as "P_ESAO_list.csv" and "S_ESAO_list.csv". Please use file format as "CSV (comma delimited)".



3. Making Inventory Maps

3.1.2 Import PESAO and SESAO data from Excxel file



Load the saved csv file by "Add delimited text layer" button.

Select file

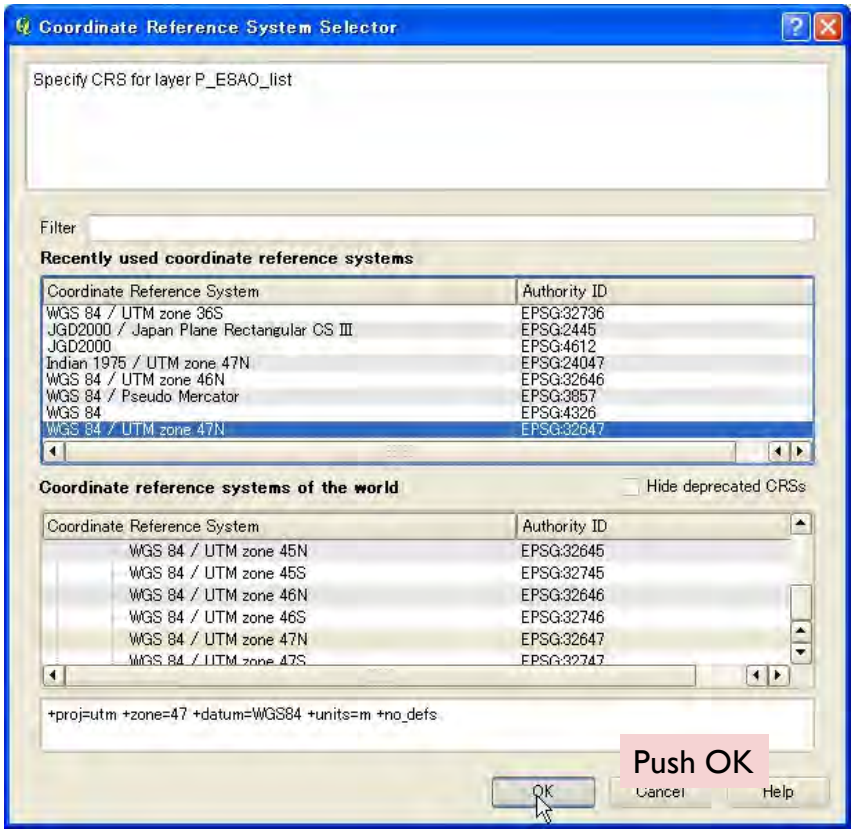
Select "Selected delimiters" and "Comma" only.

Select "X Y fields" and "dummy1" and "dummy2".

Push OK

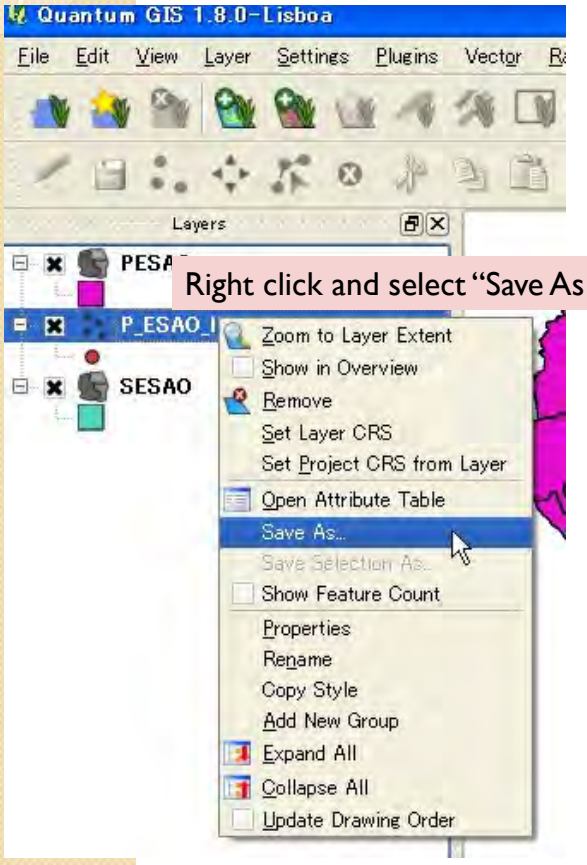
3. Making Inventory Maps

3.1.2 Import PESAO and SESAO data from Excxel file



3. Making Inventory Maps

3.1.2 Import PESAO and SESAO data from Excxel file

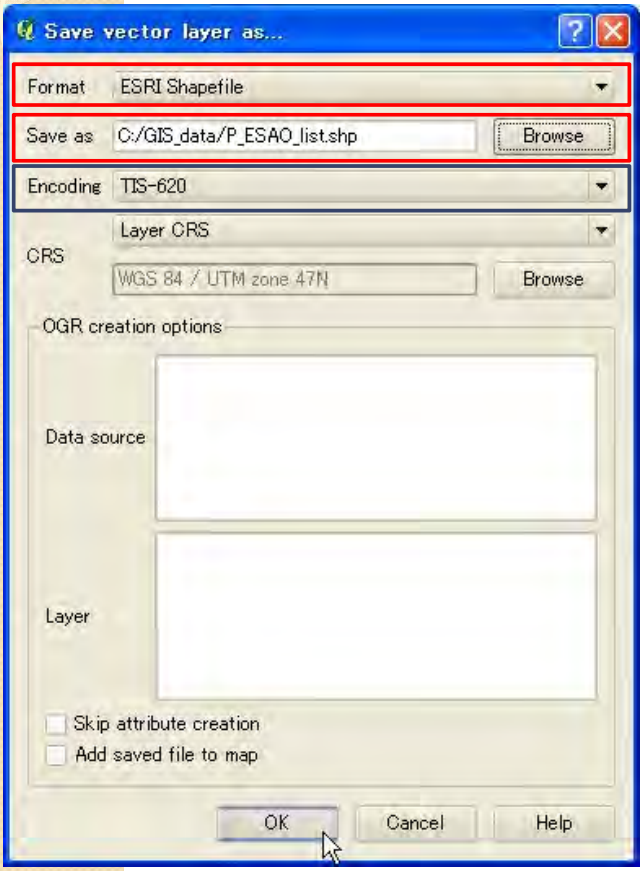


Then, the data will imported.

This is temporary layer, thus save this layer as new file.

3. Making Inventory Maps

3.1.2 Import PESAO and SESAO data from Excxel file



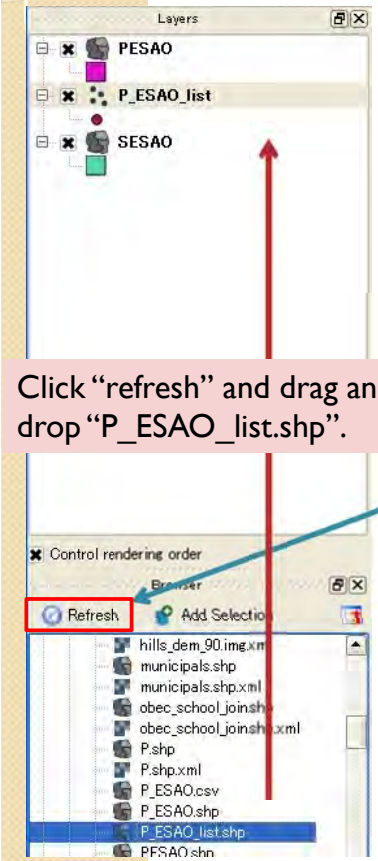
Select format and file name.

Select "Encoding" as "TIS-620" .

Push OK

3. Making Inventory Maps

3.1.2 Import PESAO and SESAO data from Excxel file

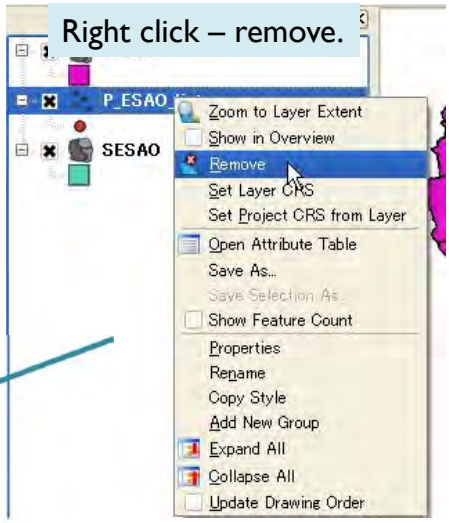


Remove the temporary layer.

Click "Refresh" button of "Browser" field, and drag and drop "P_ESAO_list.shp" into "Layer" field.

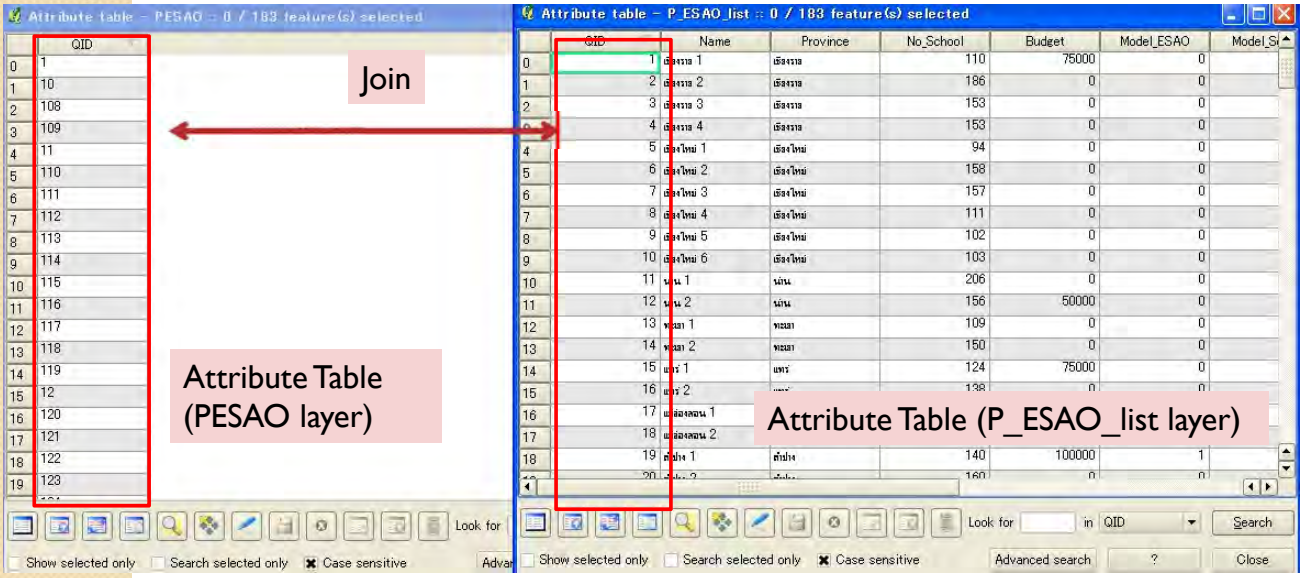
Click "refresh" and drag and drop "P_ESAO_list.shp".

Right click – remove.



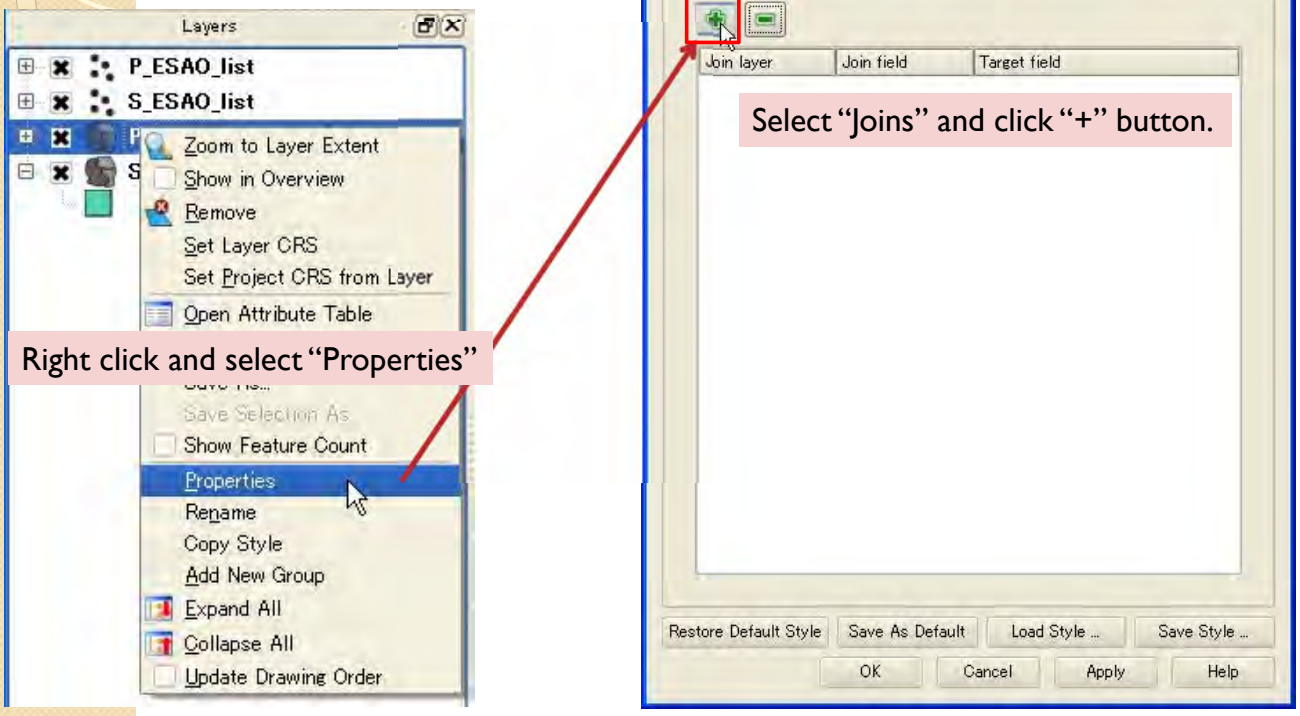
3.1.3 Join attribute table

In next step, attribute table of "P_ESAO_list" and "S_ESAO_list" will be joined into "PESAO" and "SESAO" layers.



3.1.3 Join attribute table

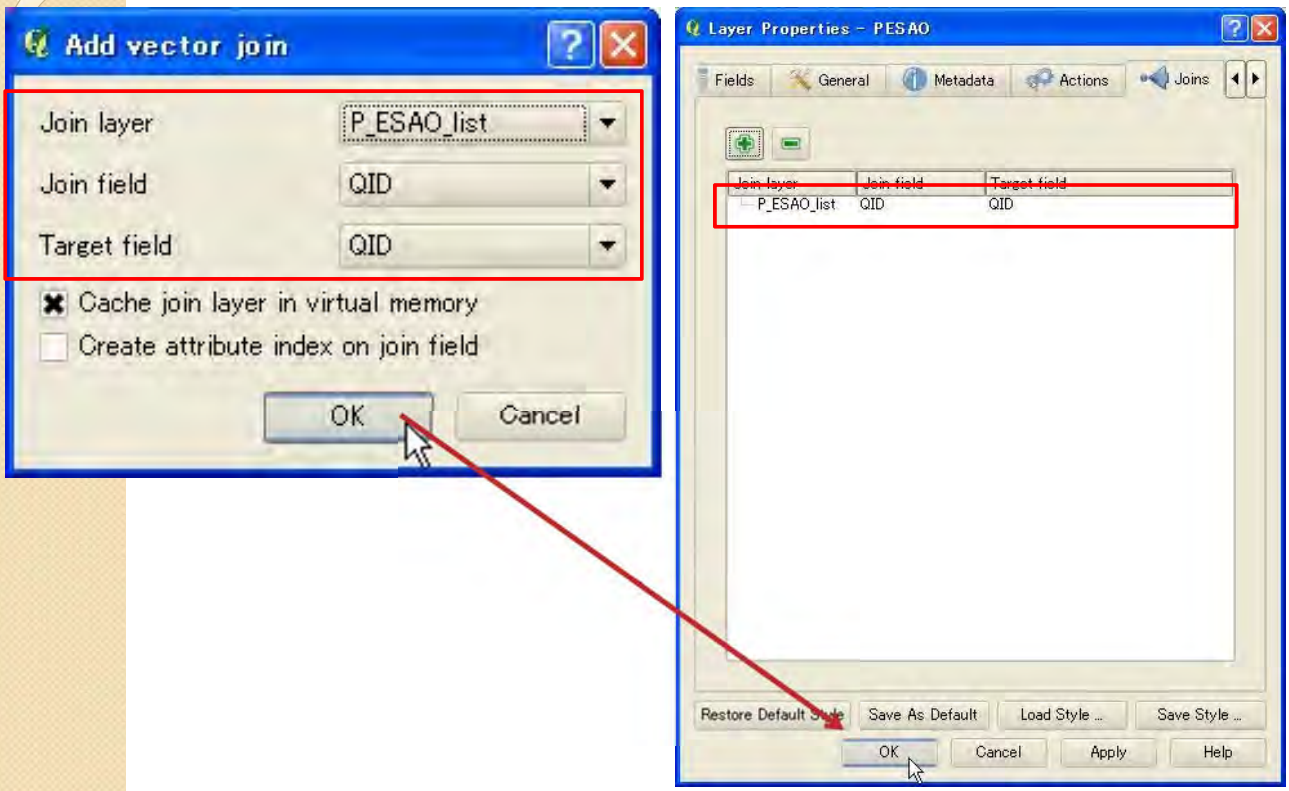
Open "Properties" window and select "Join" tab.



3. Making Inventory Maps

3.1.3 Join attribute table

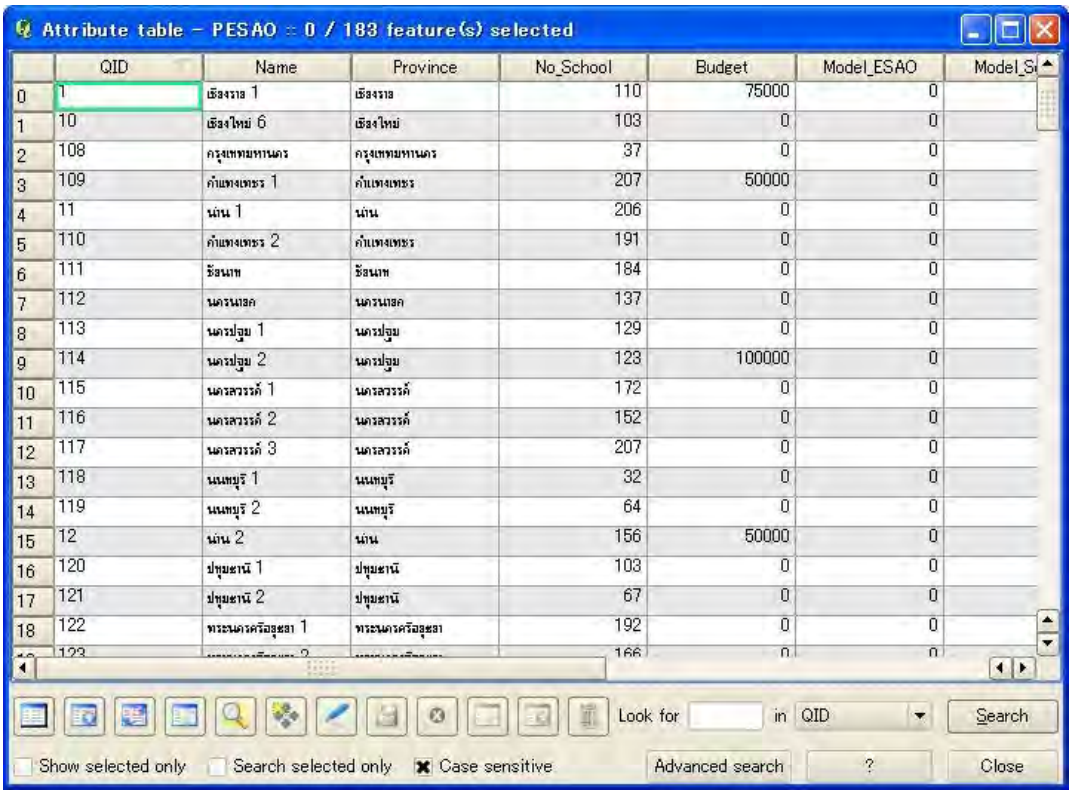
Select "Join layer", Join field" and "Target field".



3. Making Inventory Maps

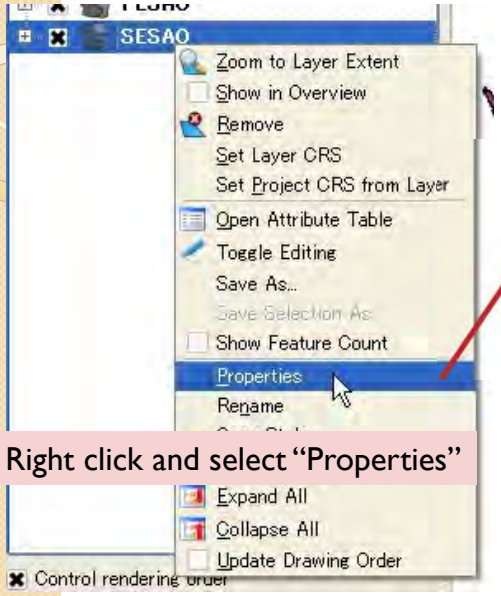
3.1.3 Join attribute table

Then, attribute table should be joined.

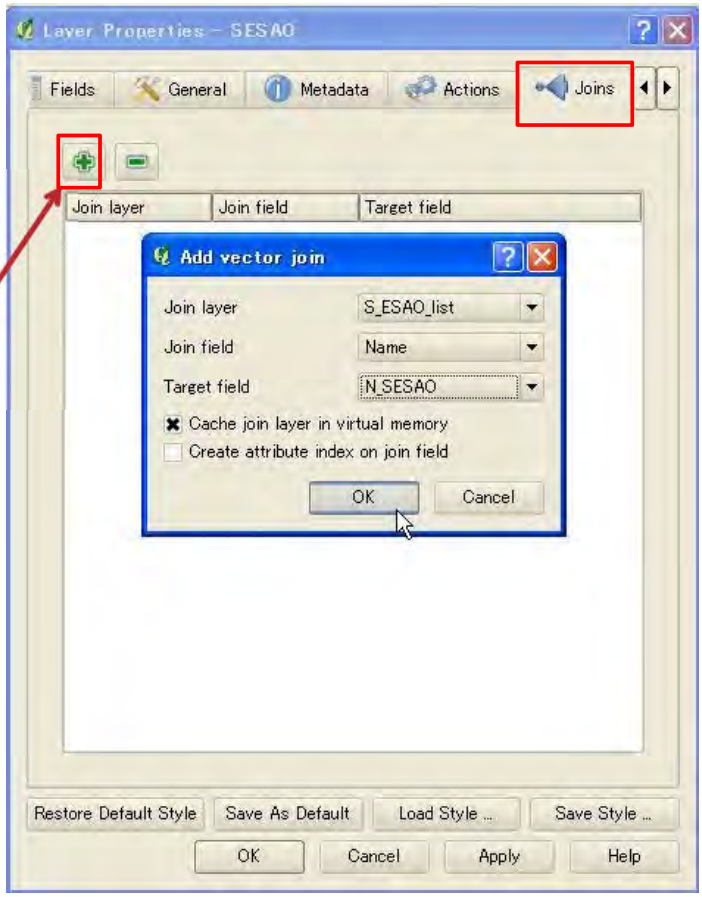


3. Making Inventory Maps

3.1.3 Join attribute table



Right click and select "Properties"



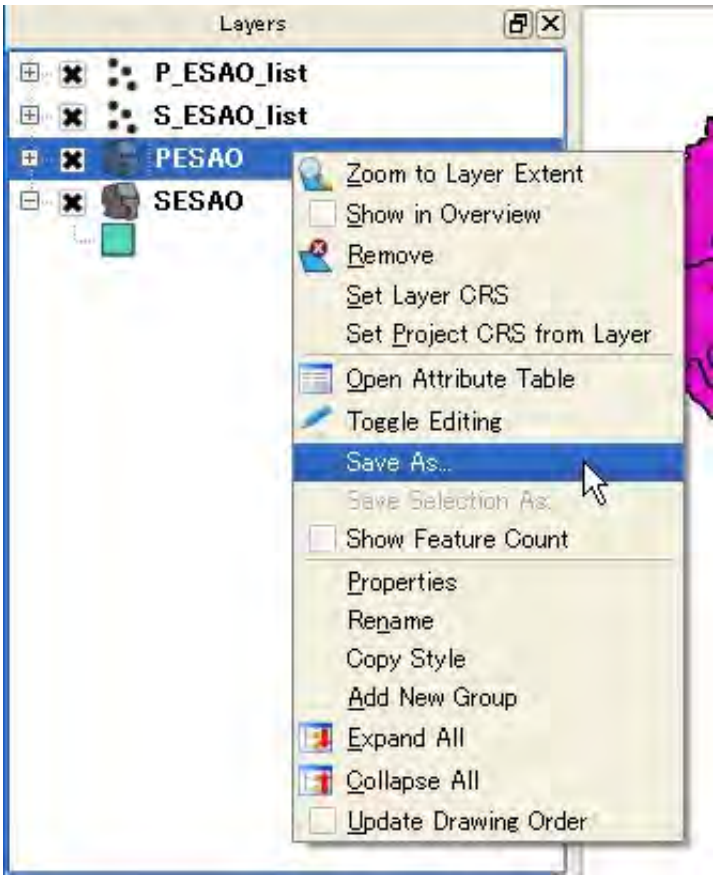
Join "SESAO" and "S_ESAO_list" also.

3. Making Inventory Maps

3.1.3 Join attribute table

The joined attribute table is re-separatable.

To make the joined attribute table permanent, save the "PESAO" and "SESAO" as new file.

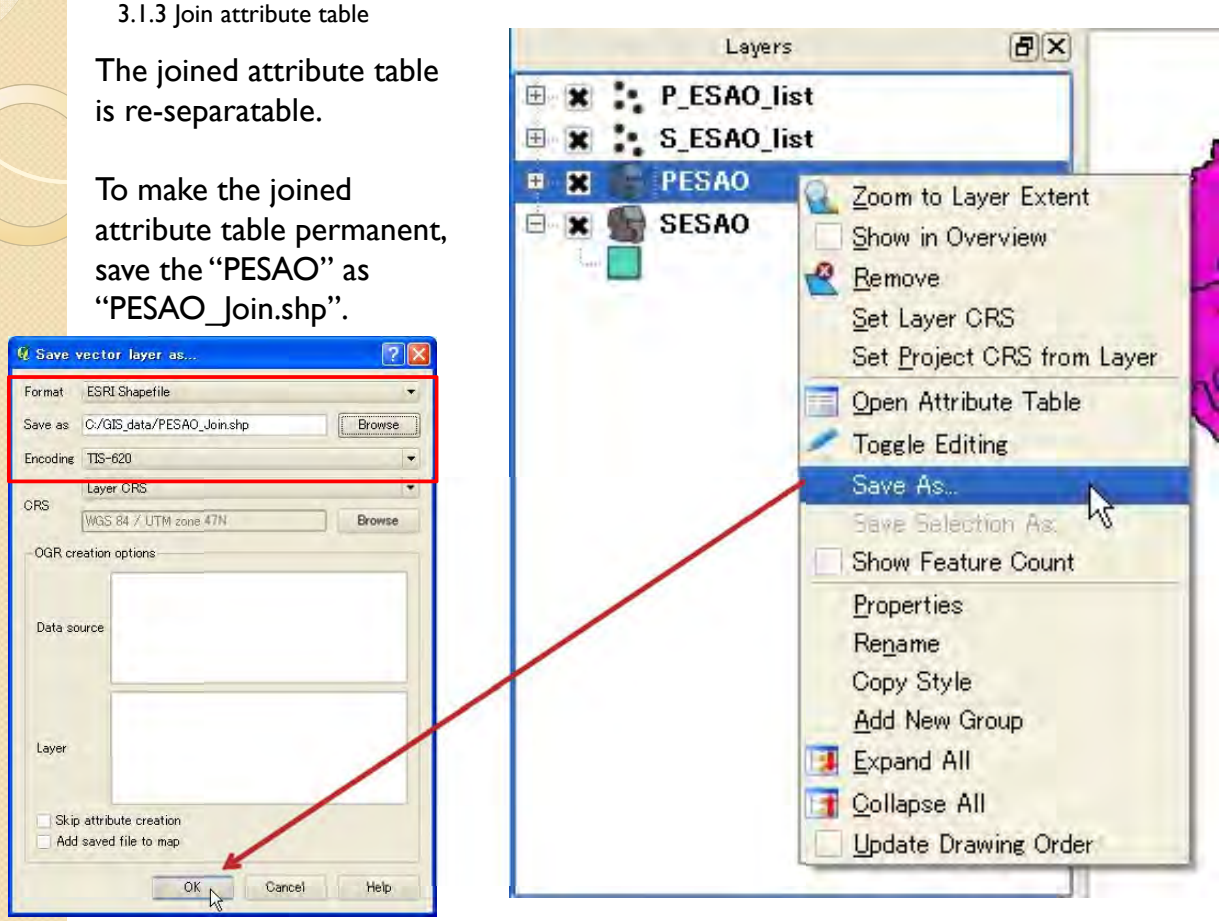


3. Making Inventory Maps

3.1.3 Join attribute table

The joined attribute table is re-separatable.

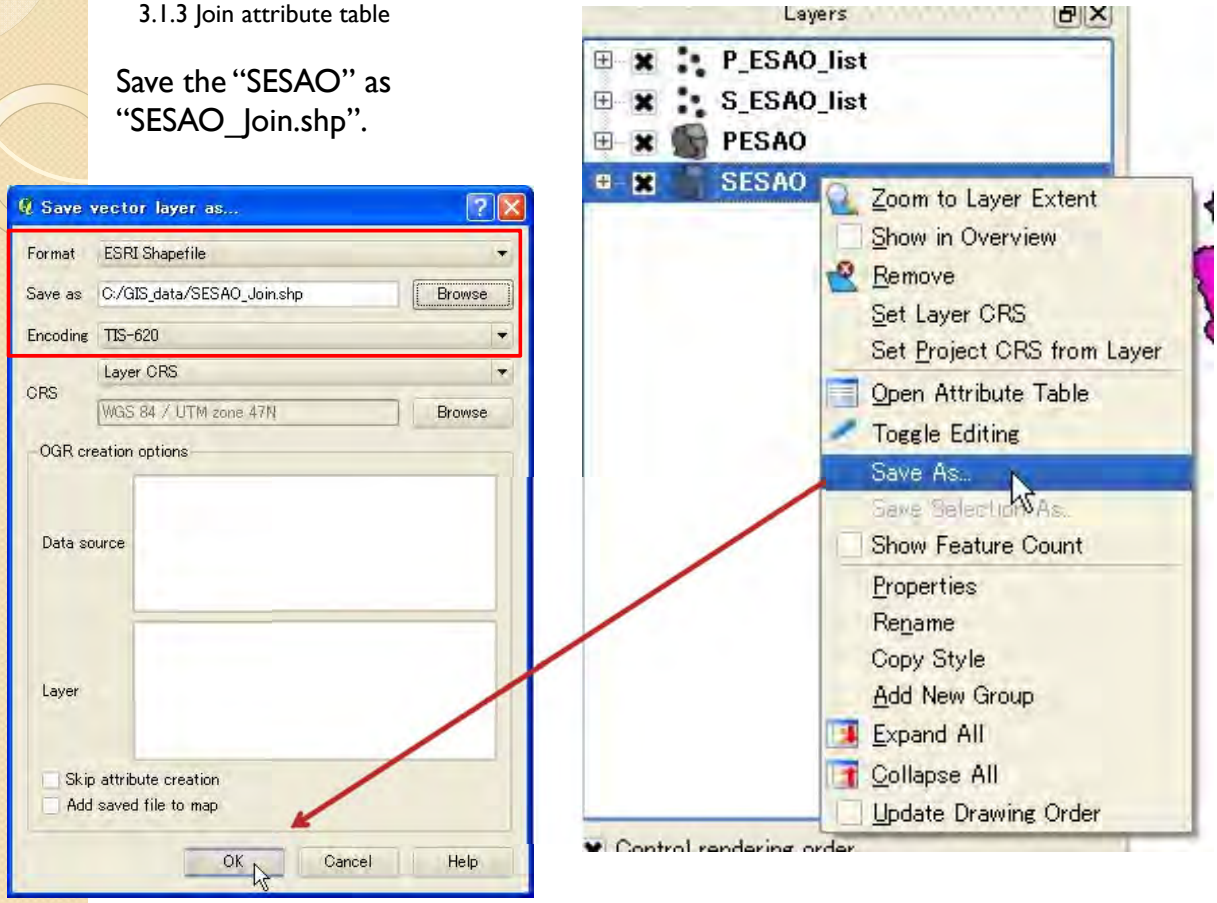
To make the joined attribute table permanent, save the "PESAO" as "PESAO_Join.shp".



3. Making Inventory Maps

3.1.3 Join attribute table

Save the "SESAO" as "SESAO_Join.shp".

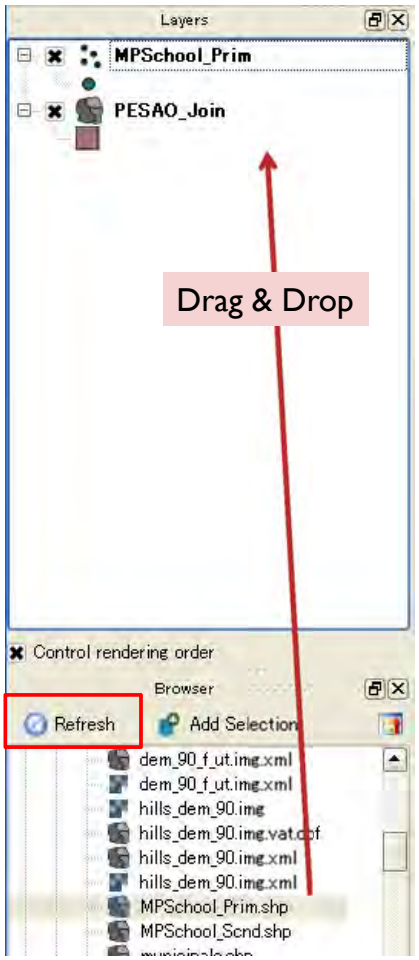


3. Making Inventory Maps

3.2 Making PESAO map

3.2.1 Import data

Click "Refresh", and drag and drop "PESAO_Join" and "MPSchool_Prim" (pilot school data).



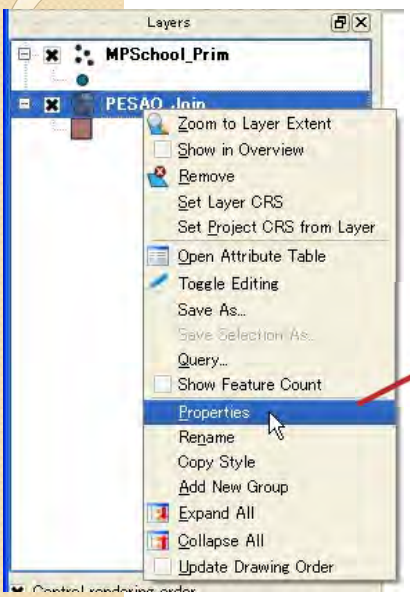
After you made joined shape files, "PESAO_Join" and "SESAO_Join", once, it is not necessary to remake these shape file. You can use these file directly to make inventory maps.

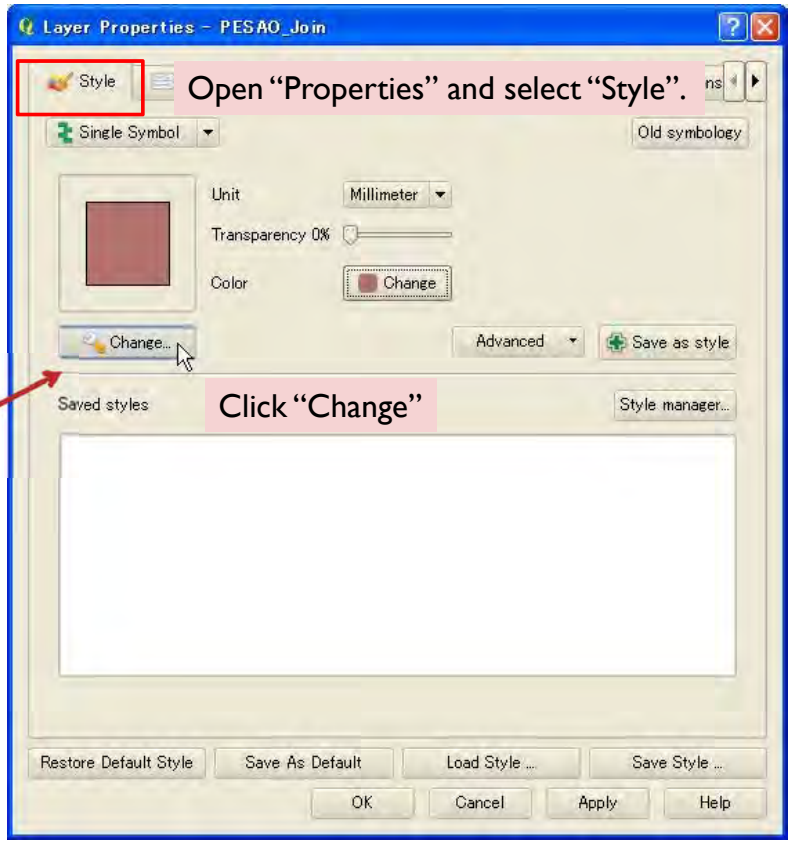
In case you want to update the data, it is required to remake or edit these files.

3. Making Inventory Maps

3.2.2 Color setting

Boundary of PESAO

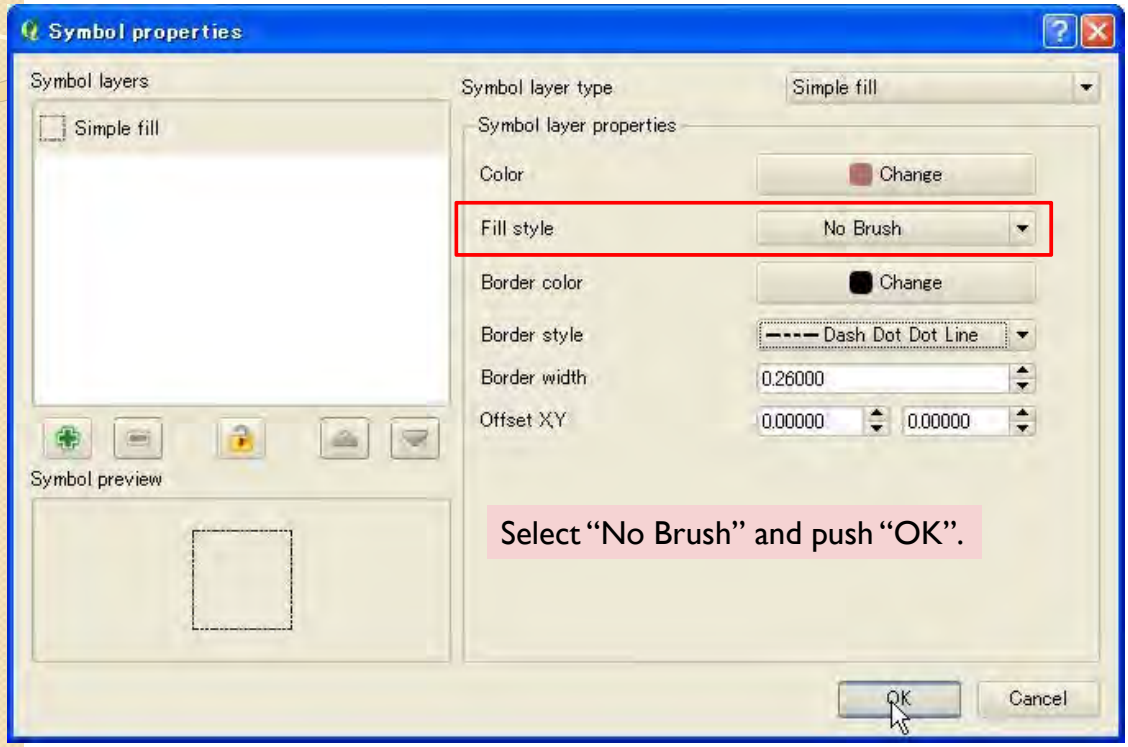




3. Making Inventory Maps

3.2.2 Color setting

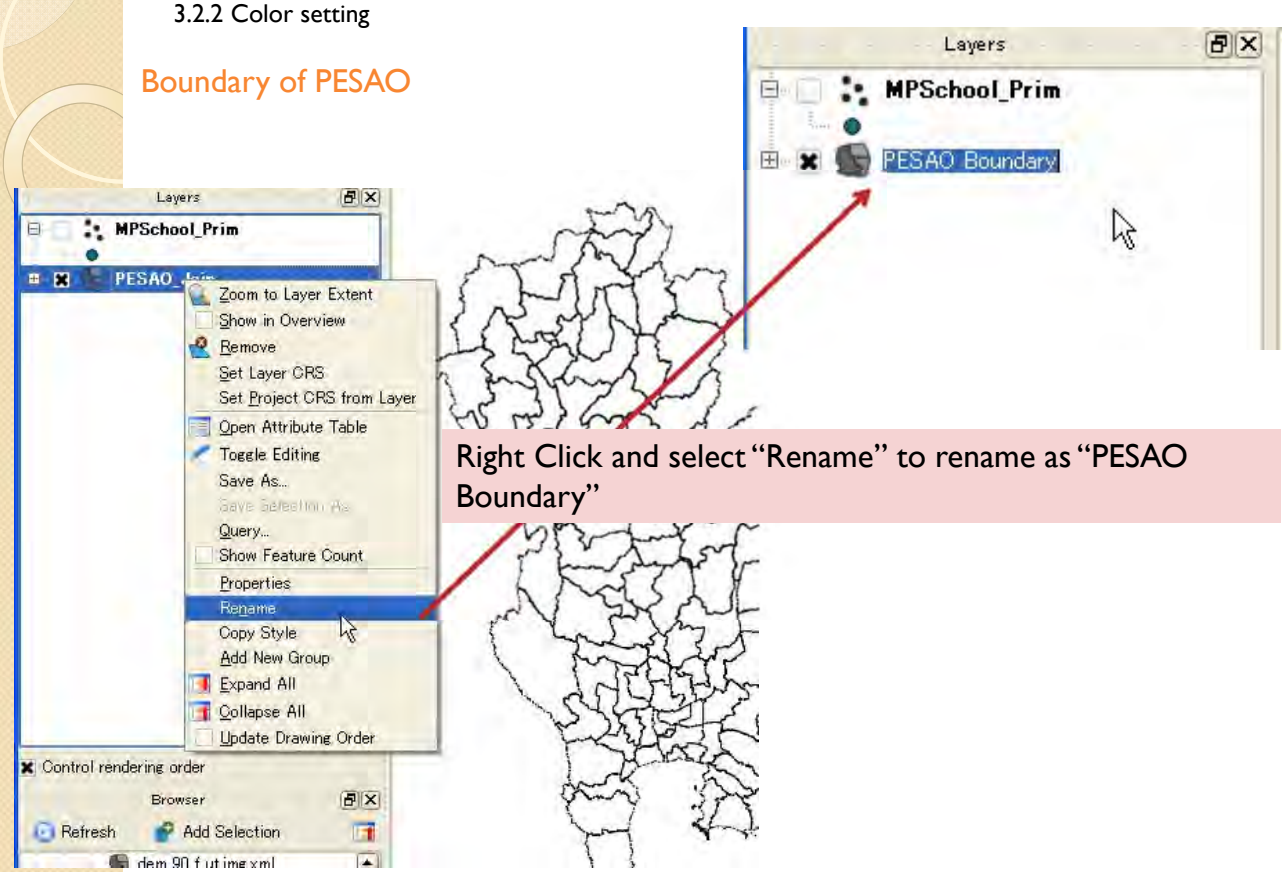
Boundary of PESAO



3. Making Inventory Maps

3.2.2 Color setting

Boundary of PESAO



3. Making Inventory Maps

3.2.2 Color setting

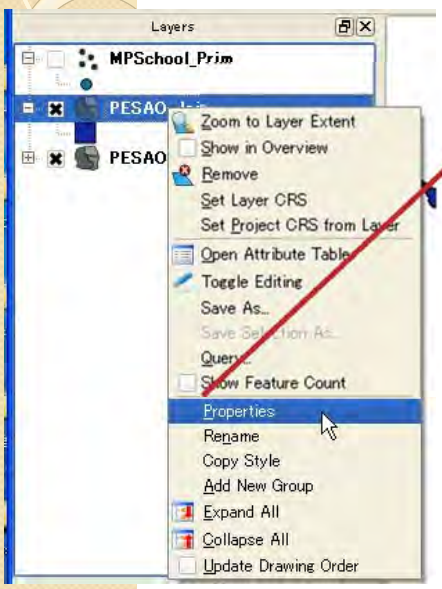
Model PESAO

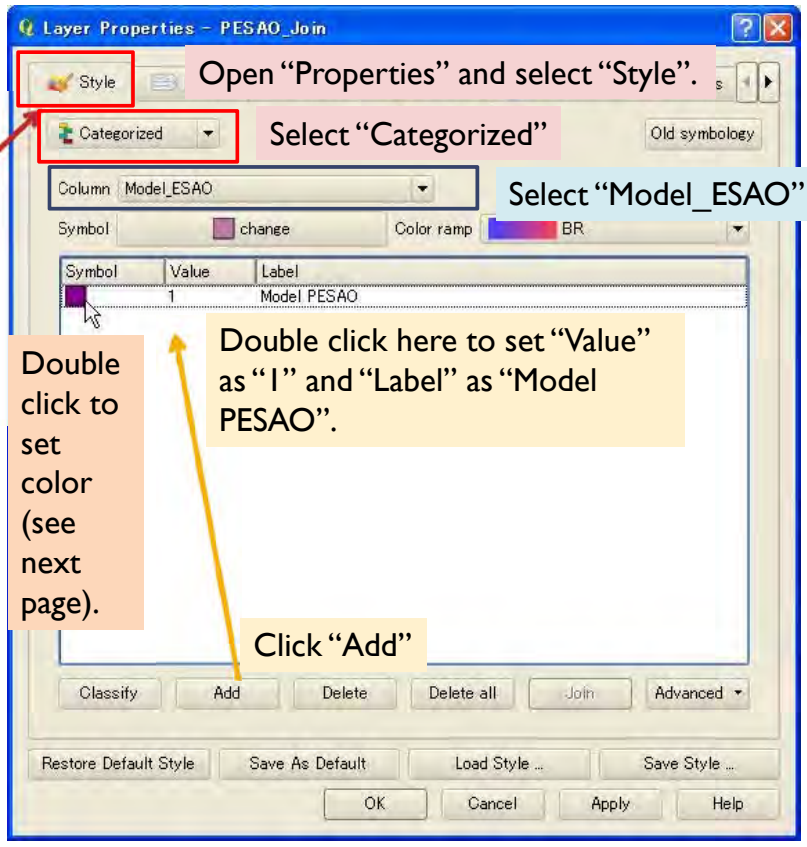
Drag and drop "PESAO_Join" again.

3. Making Inventory Maps

3.2.2 Color setting

Model PESAO

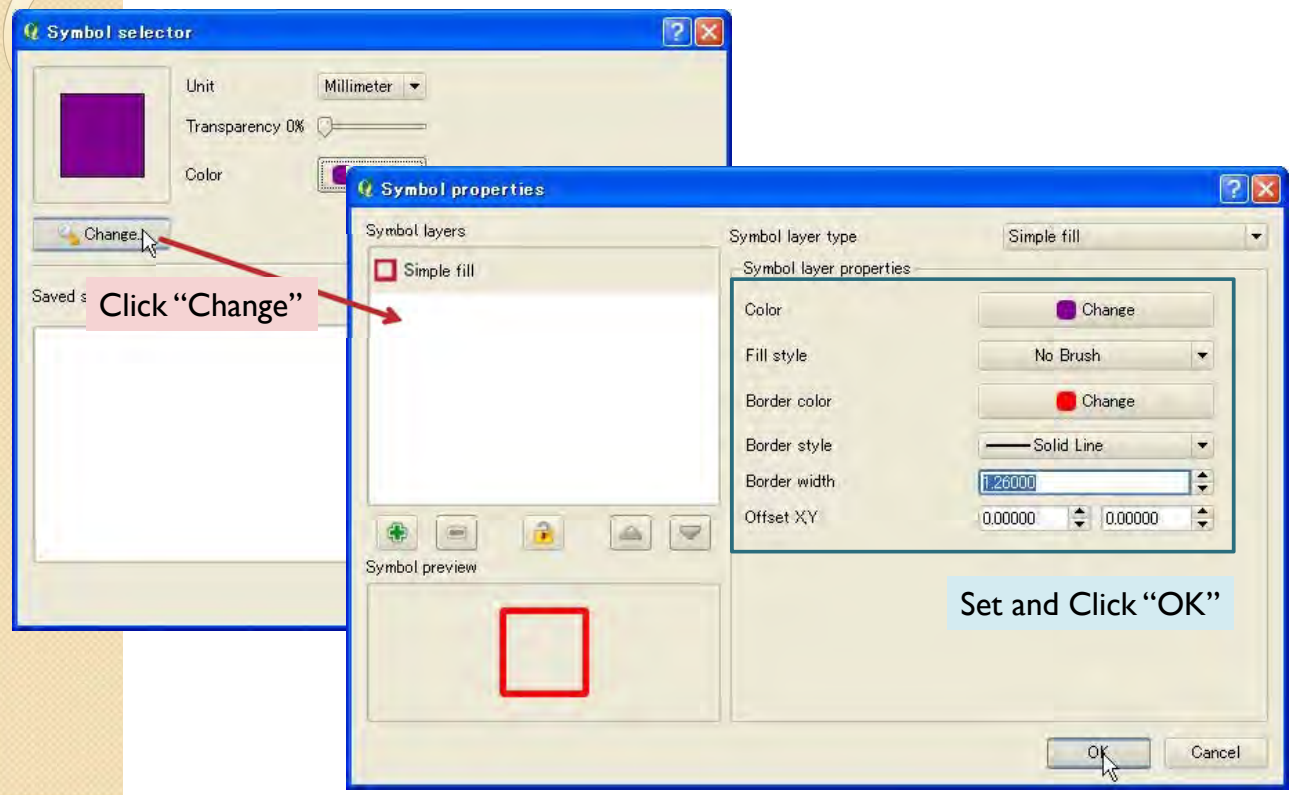




3. Making Inventory Maps

3.2.2 Color setting

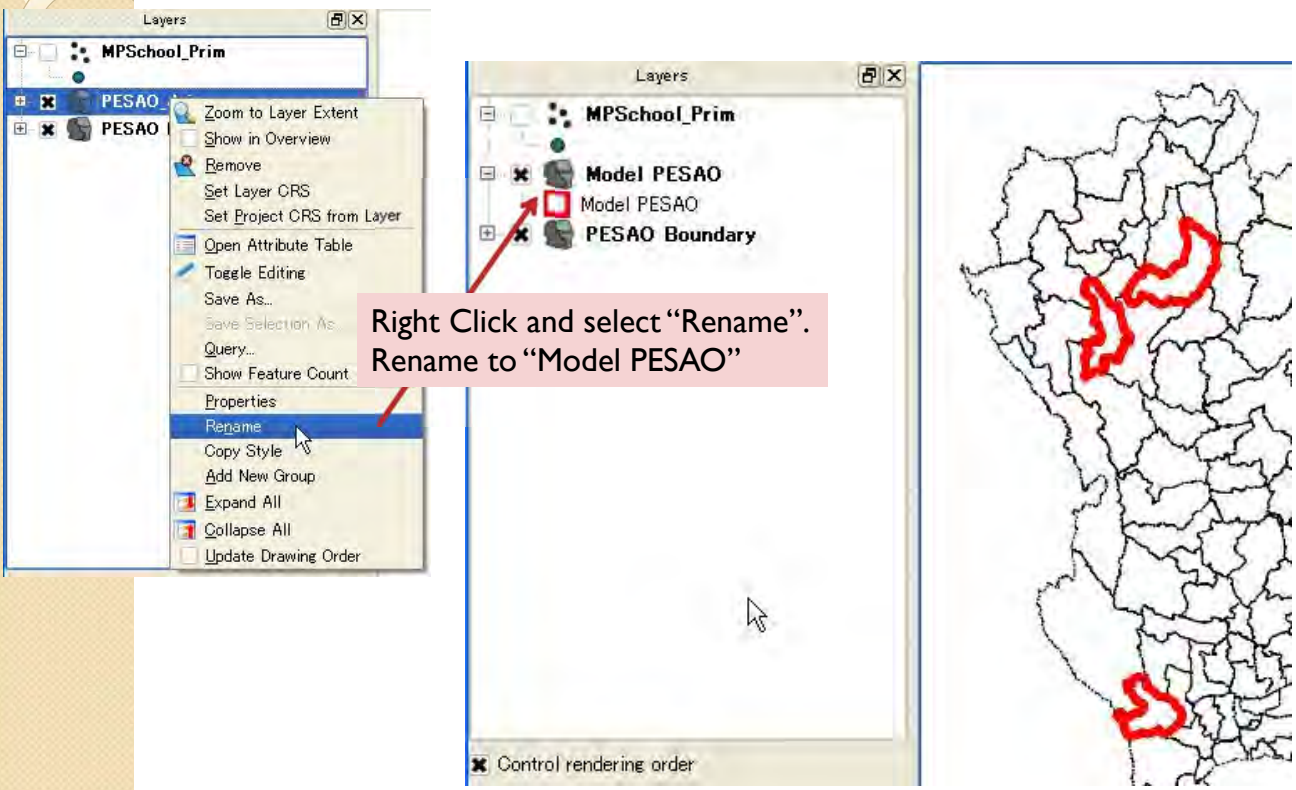
Model PESAO



3. Making Inventory Maps

3.2.2 Color setting

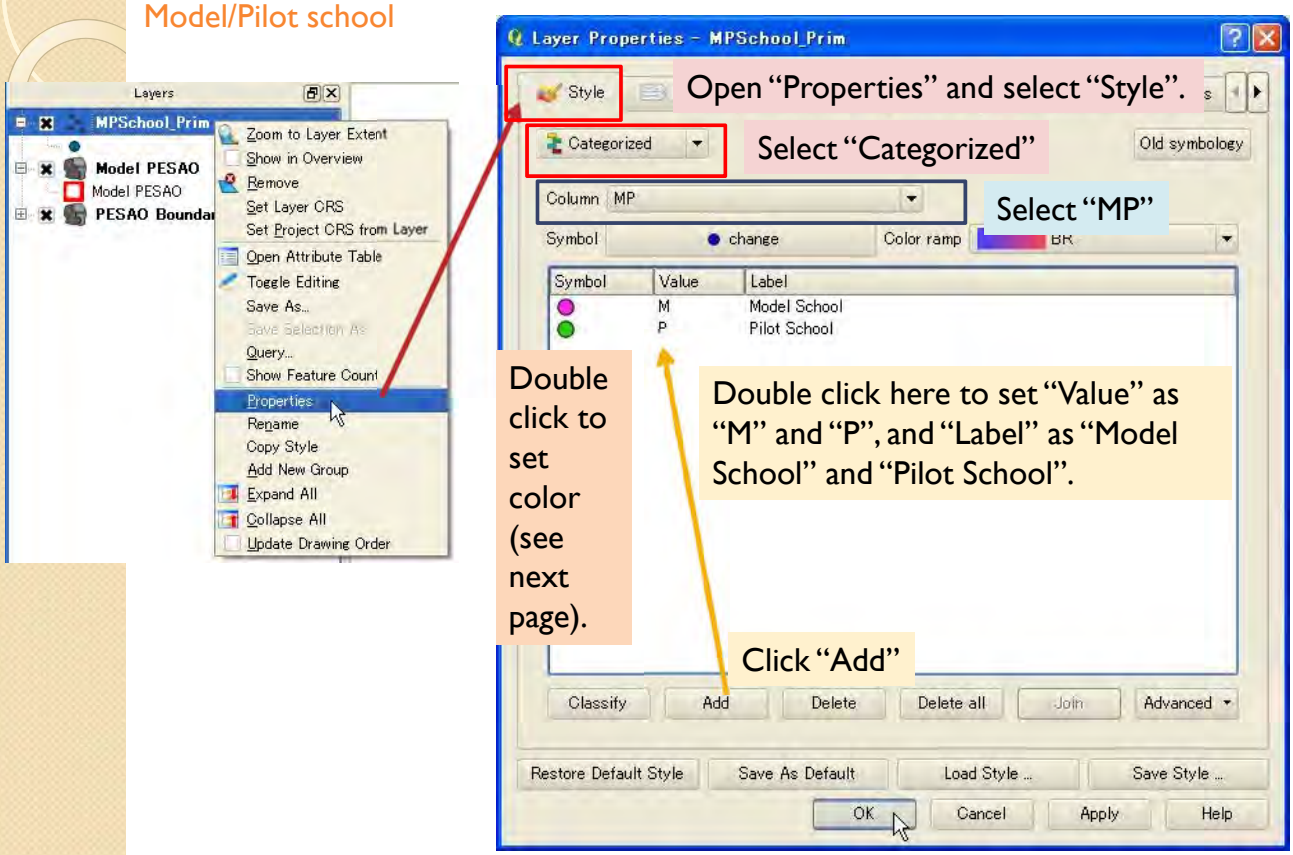
Model PESAO



3. Making Inventory Maps

3.2.2 Color setting

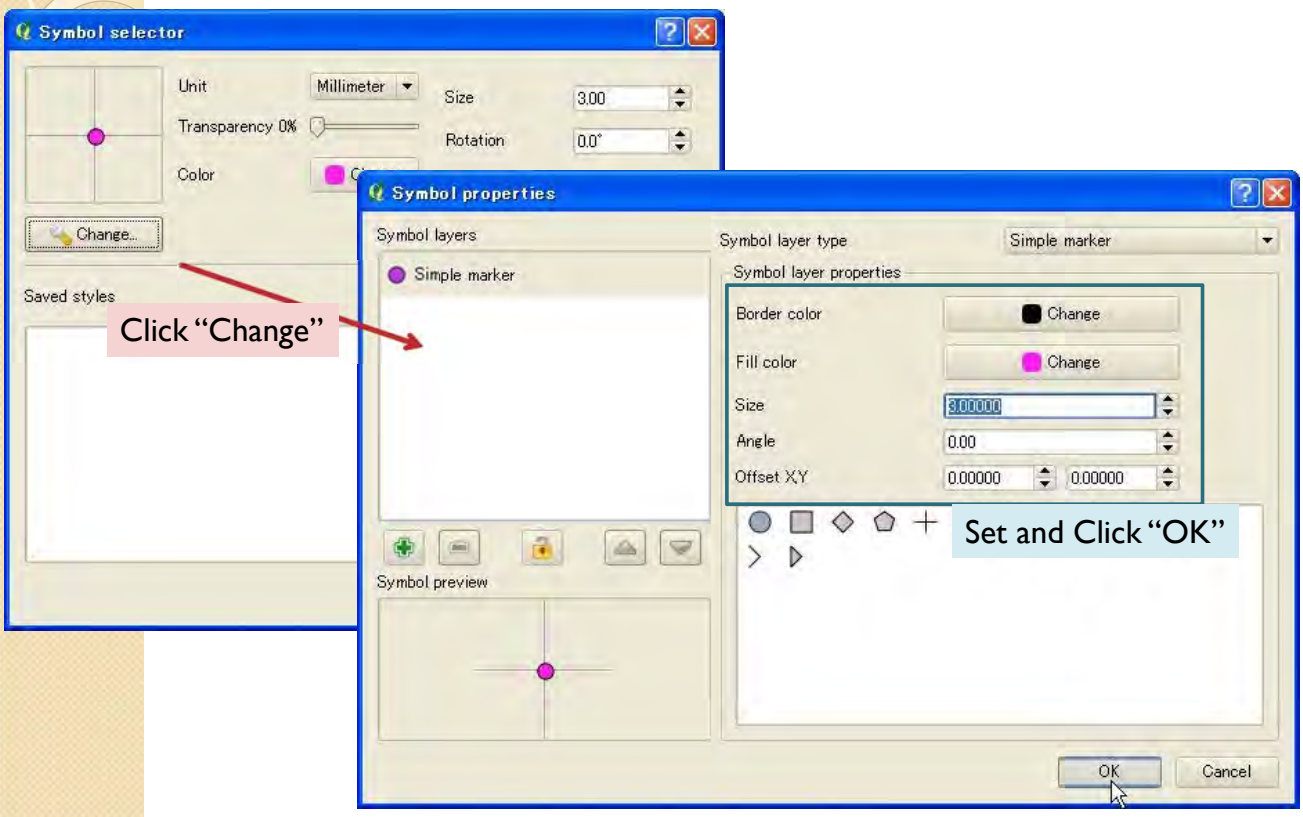
Model/Pilot school



3. Making Inventory Maps

3.2.2 Color setting

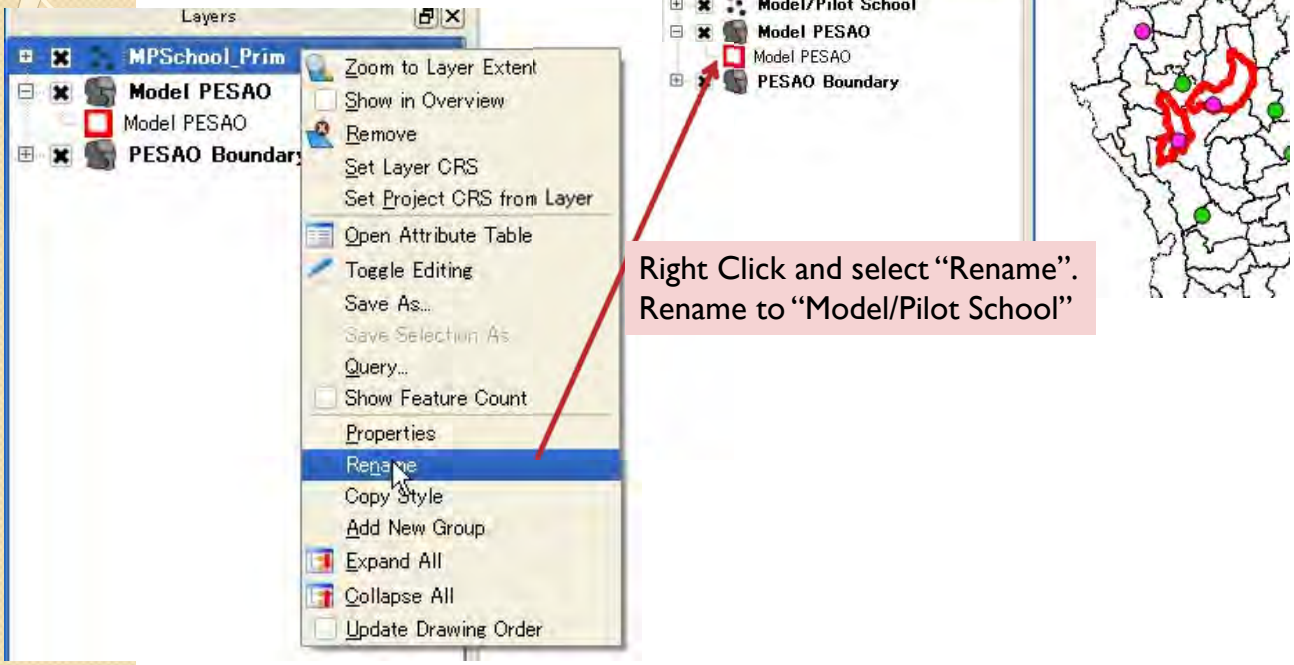
Model/Pilot school



3. Making Inventory Maps

3.2.2 Color setting

Model/Pilot school



Right Click and select "Rename".
Rename to "Model/Pilot School"

3. Making Inventory Maps

3.2.2 Color setting

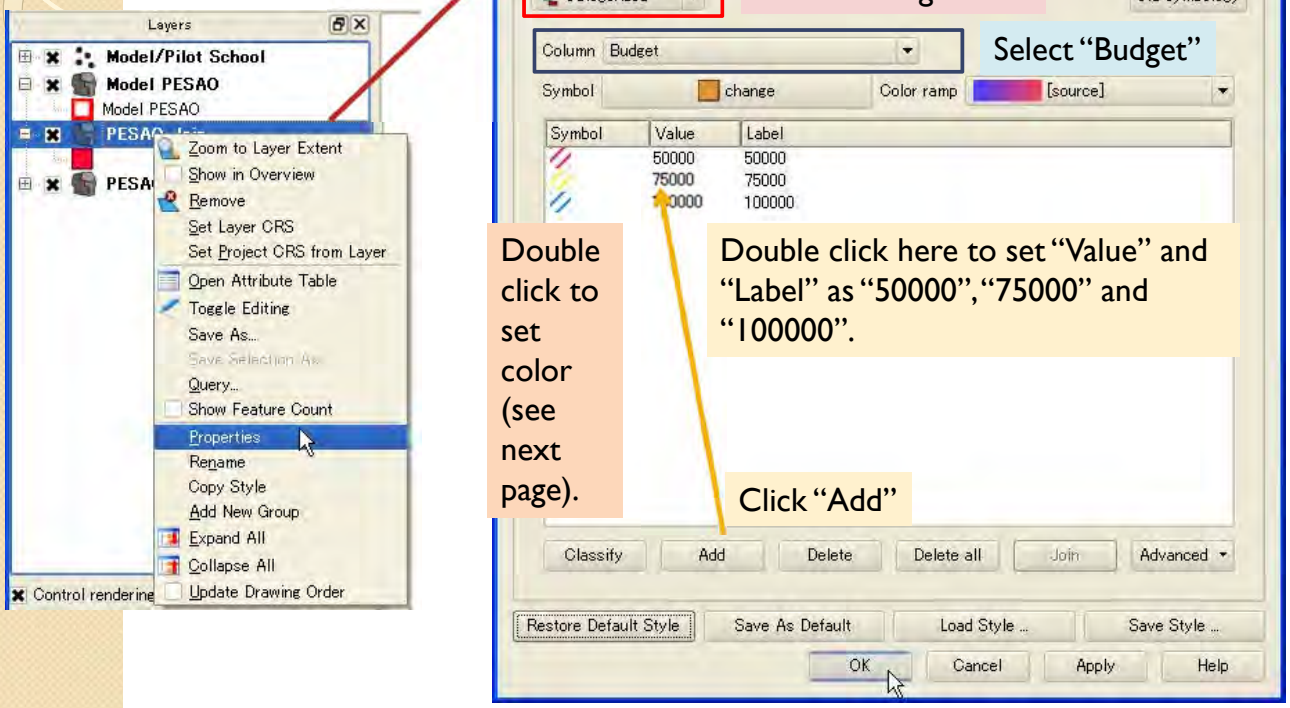
Model/Pilot school rank (budget)

Drag and drop "PESAO_Join" again.

3. Making Inventory Maps

3.2.2 Color setting

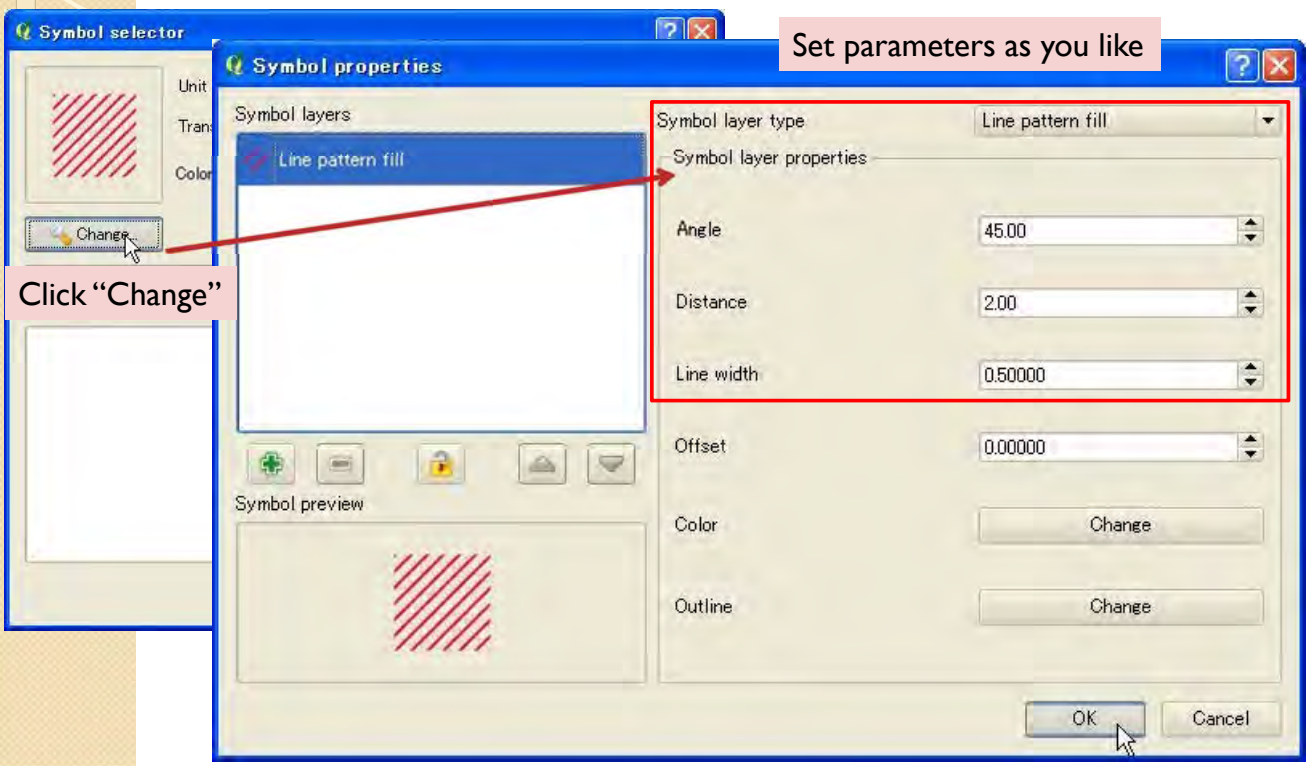
Model/Pilot school rank (budget)



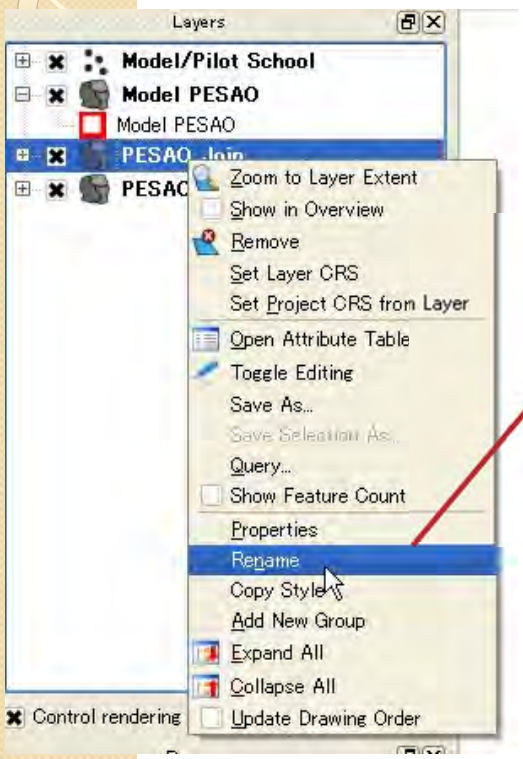
3. Making Inventory Maps

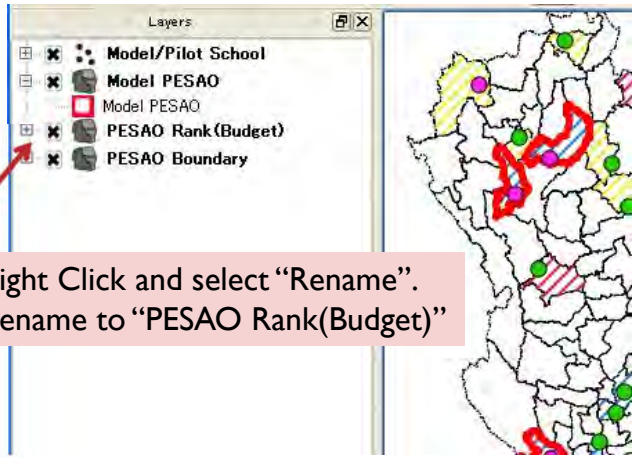
3.2.2 Color setting

Model/Pilot school rank (budget)



Model/Pilot school rank (budget)





Right Click and select "Rename".
Rename to "PESAO Rank(Budget)"

3. Making Inventory Maps

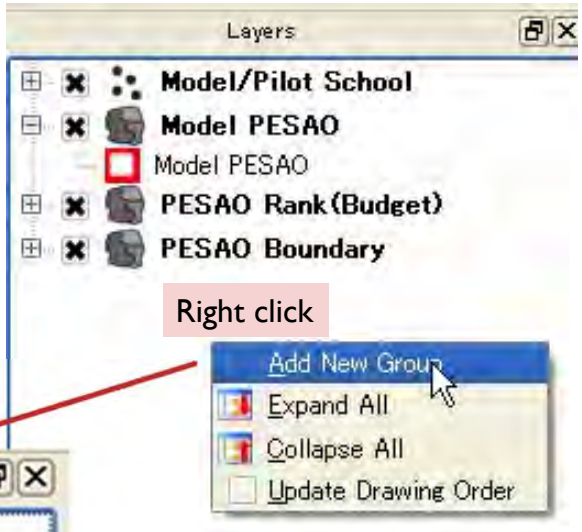
3.2.2 Color setting

Grouping

Right click on "Layers" and select "Add New Group".

Then, "Group" folder should be made. Rename that to "PESAO".

Drag and drop the layers to the "PESAO" group.



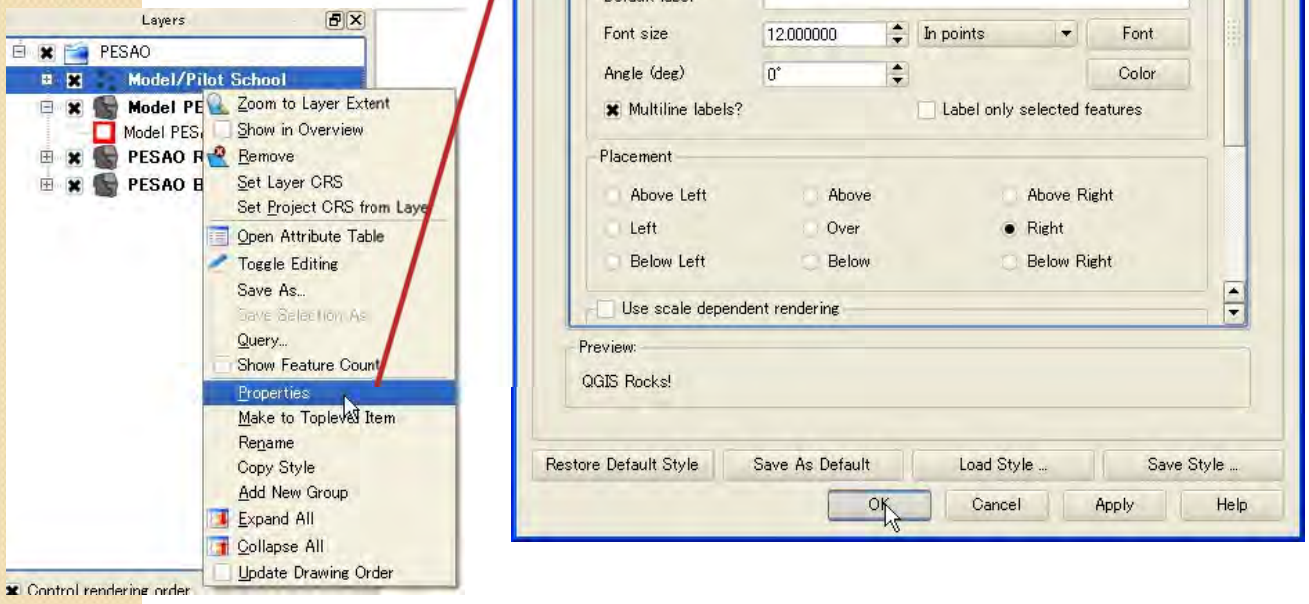
Right click

3. Making Inventory Maps

3.2.2 Color setting

Labeling for schools

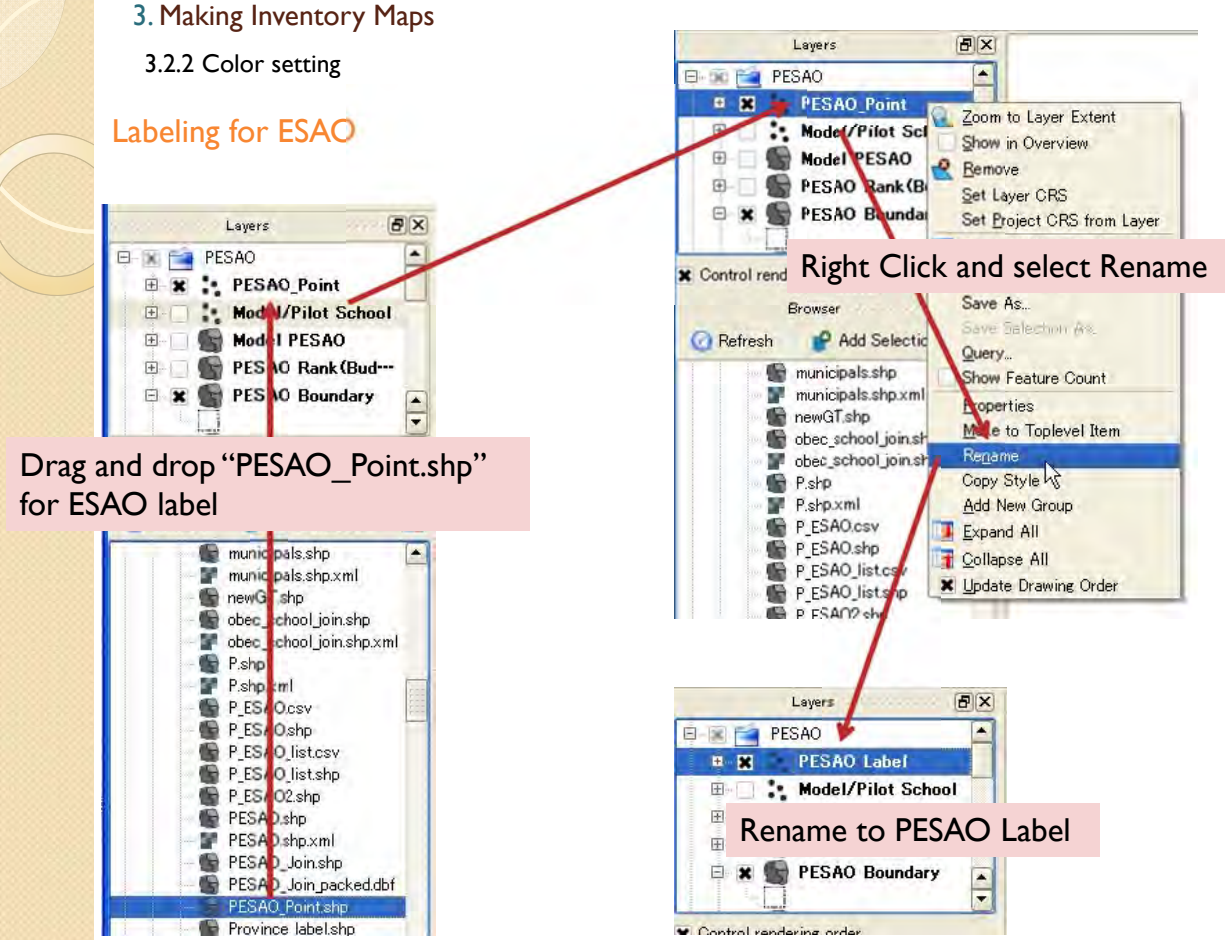
Open "Labels" tab in properties window. Check "Display labels" and select "Field containing label".



3. Making Inventory Maps

3.2.2 Color setting

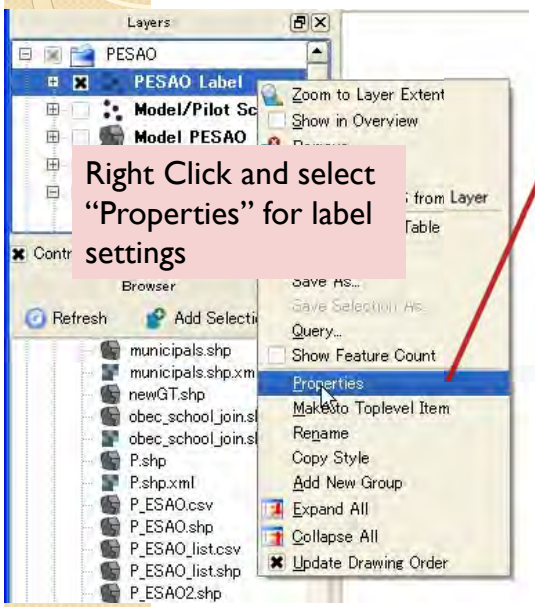
Labeling for ESAO

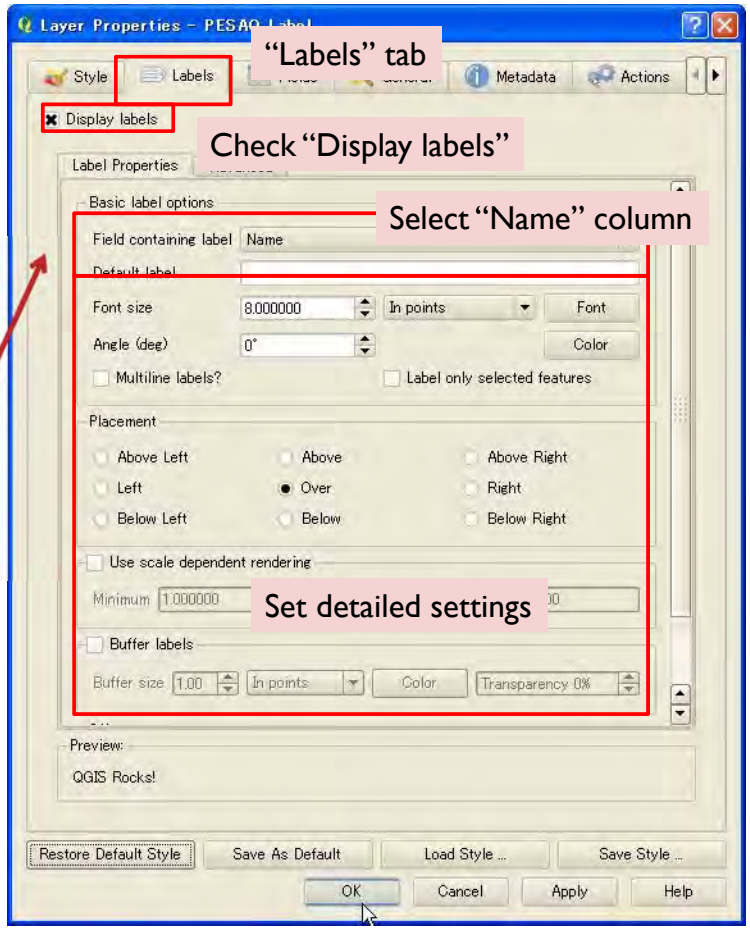


3. Making Inventory Maps

3.2.2 Color setting

Labeling for ESAO



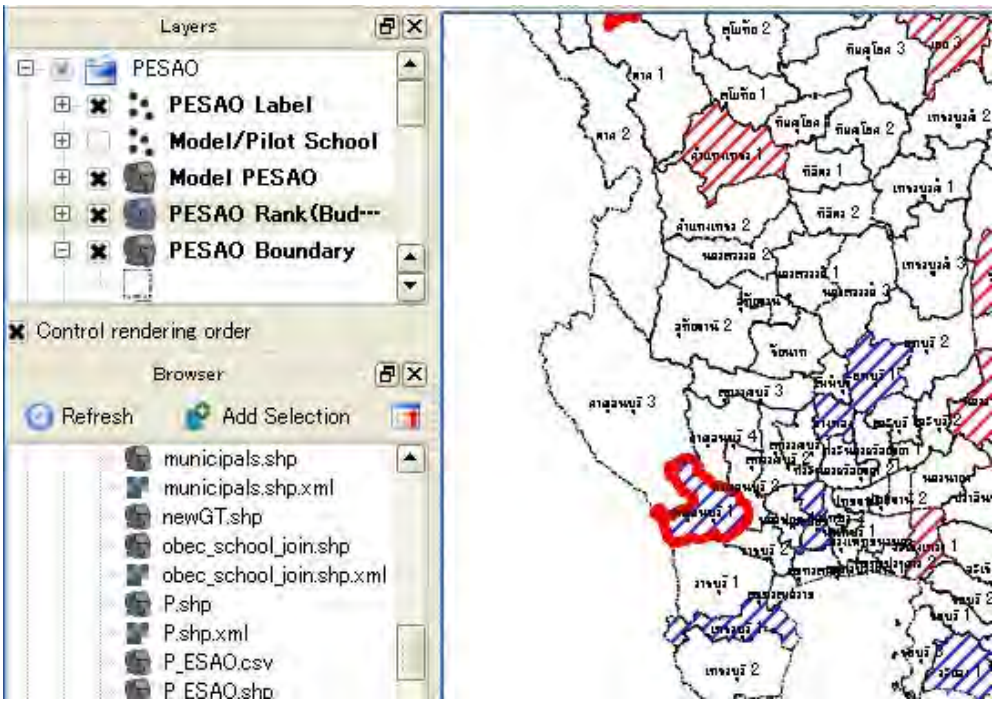


3. Making Inventory Maps

3.2.2 Color setting

Labeling for ESAO

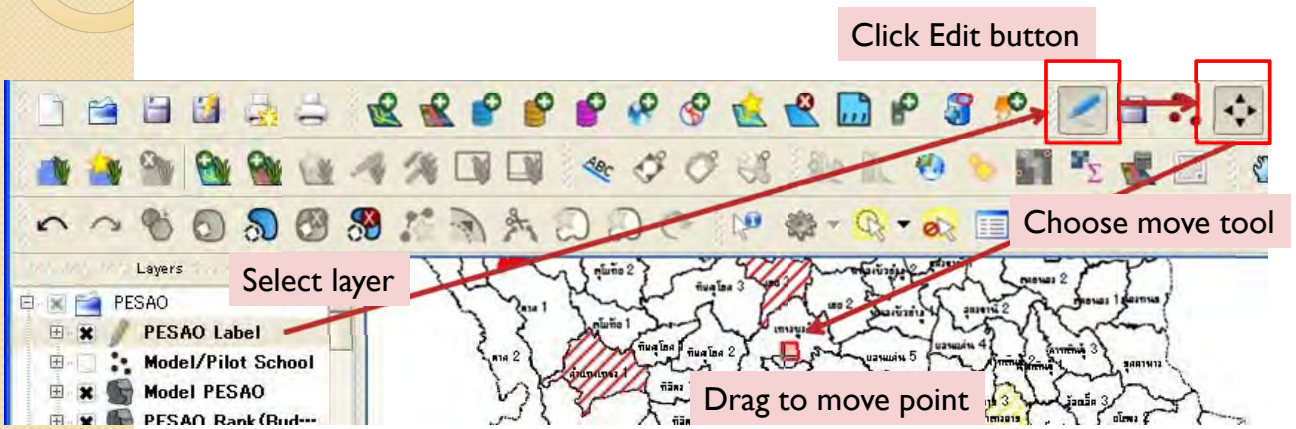
Then, you can see labels for ESAO.



3.2.2 Color setting

Labeling for ESAO

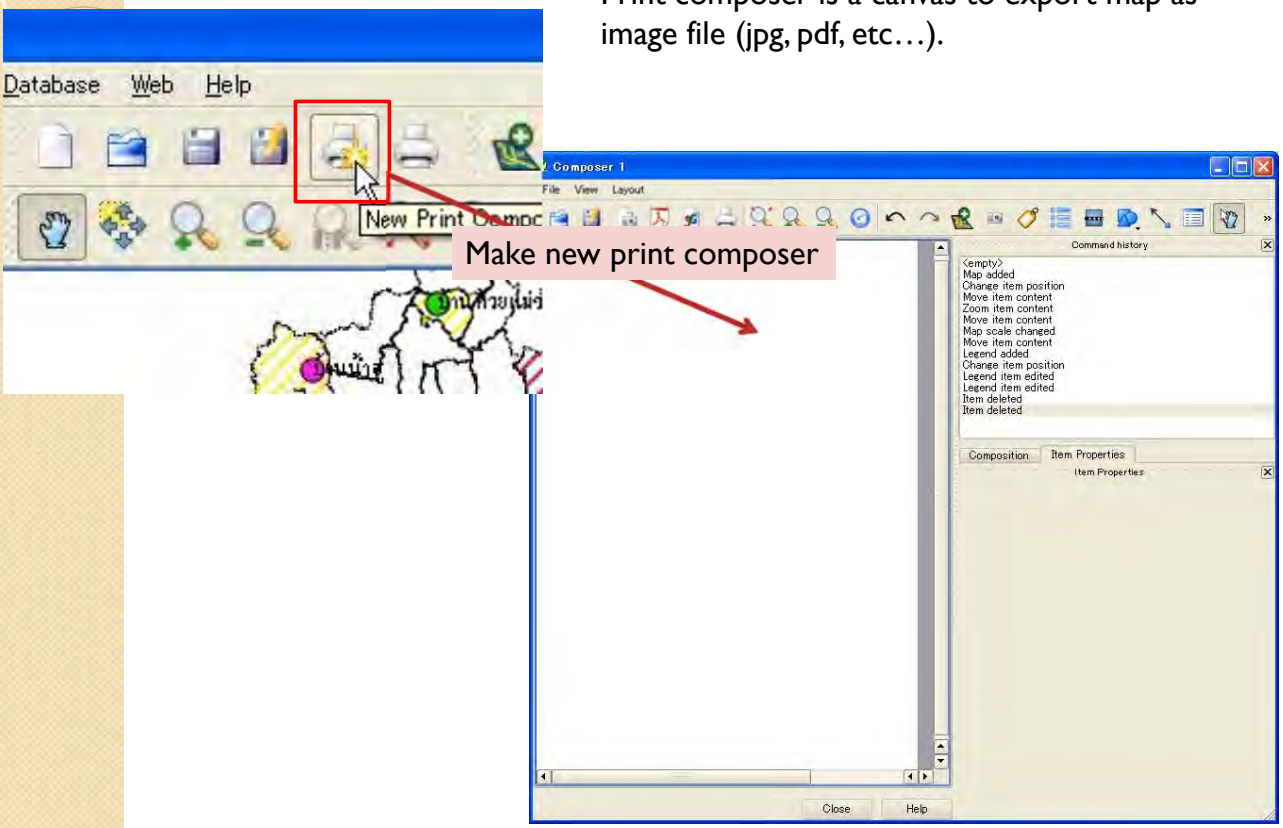
If there are some overlaps of the labels, you can move the points.



After you finish edit, re-click Edit button and save.

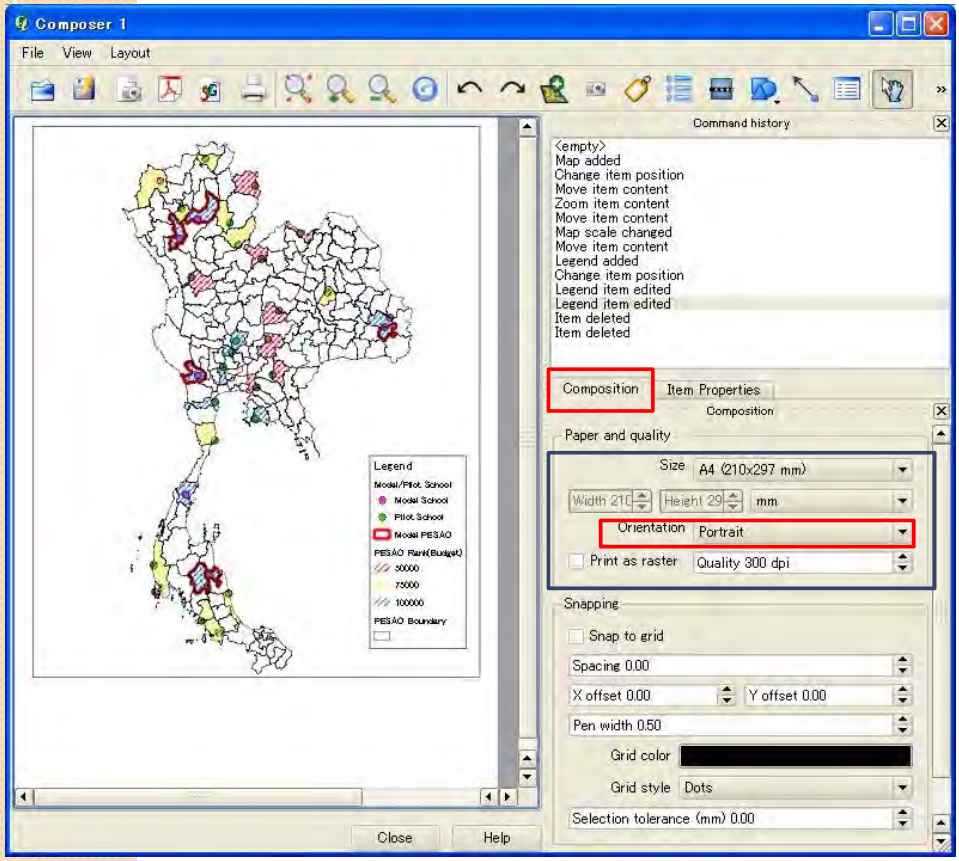
3.2.3 Print composer

Print composer is a canvas to export map as image file (jpg, pdf, etc…).



3. Making Inventory Maps

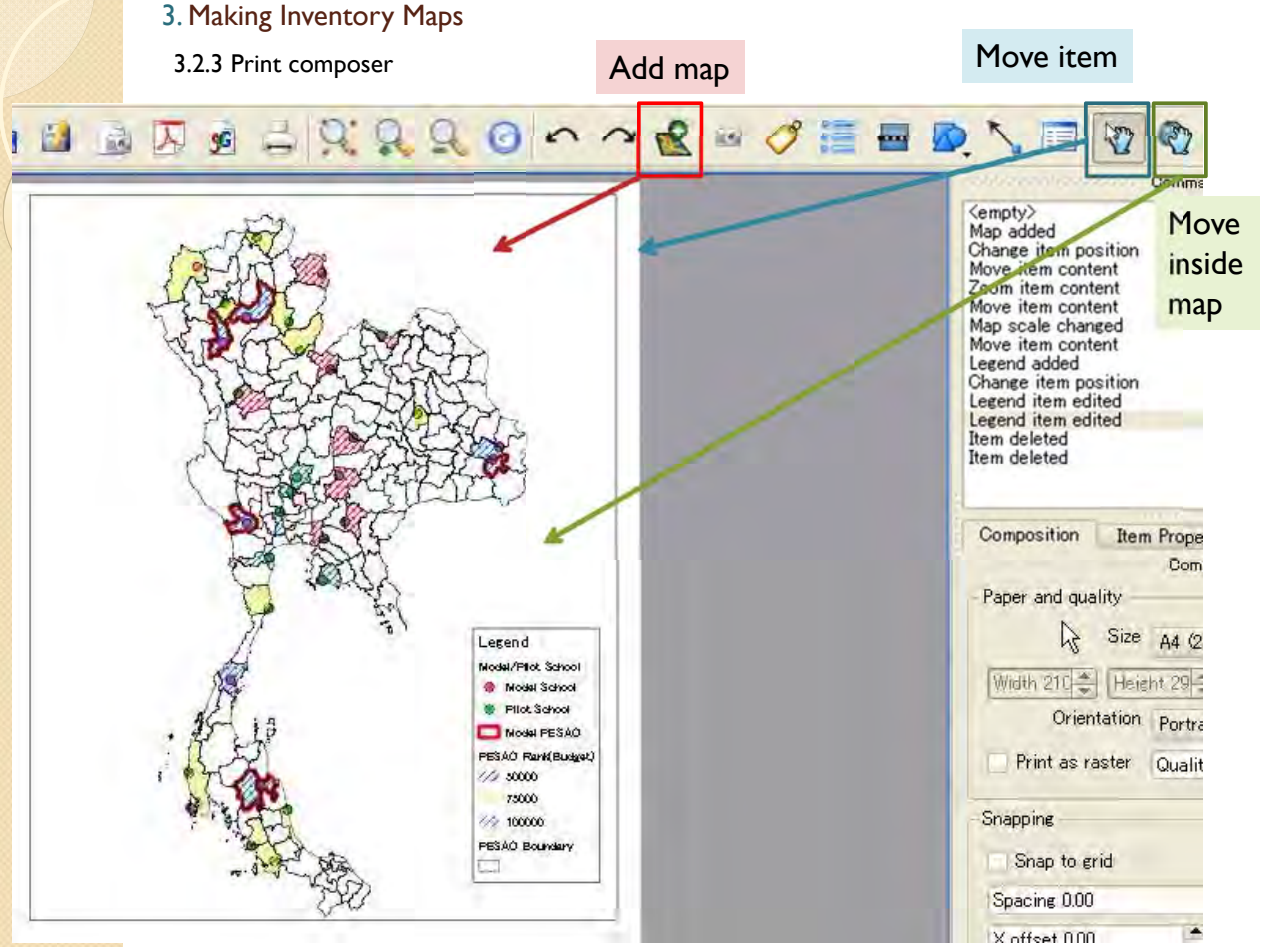
3.2.3 Print composer



Lower right tabs are properties for the canvas.

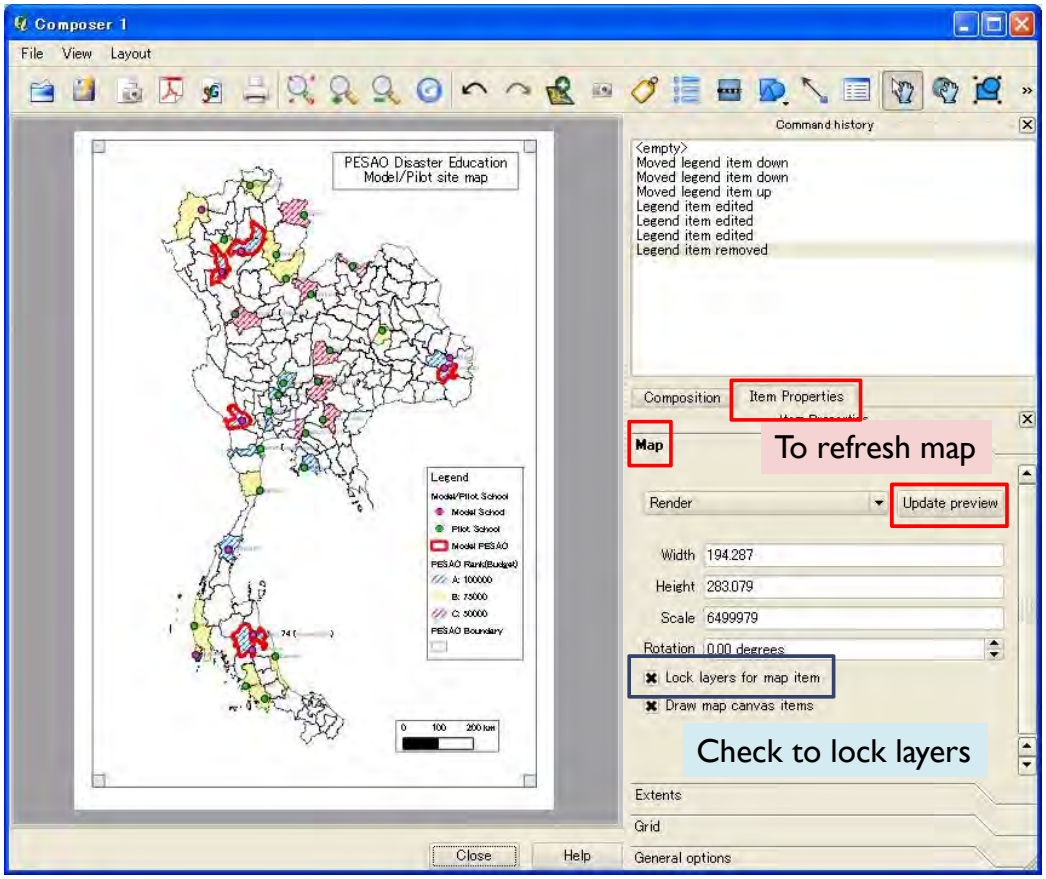
3. Making Inventory Maps

3.2.3 Print composer



3. Making Inventory Maps

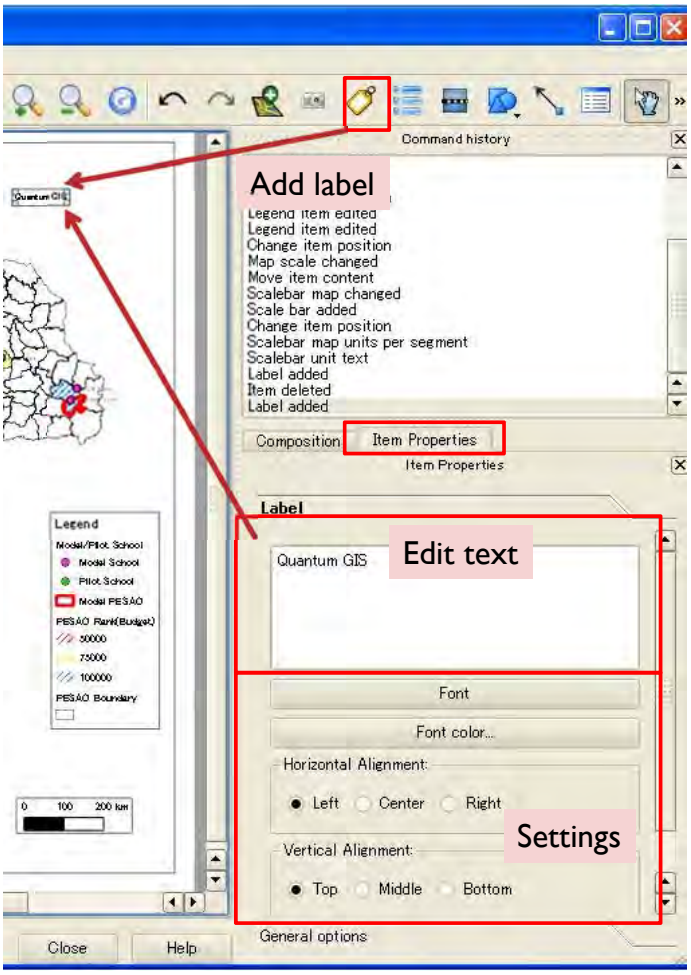
3.2.3 Print composer



3. Making Inventory Maps

3.2.3 Print composer

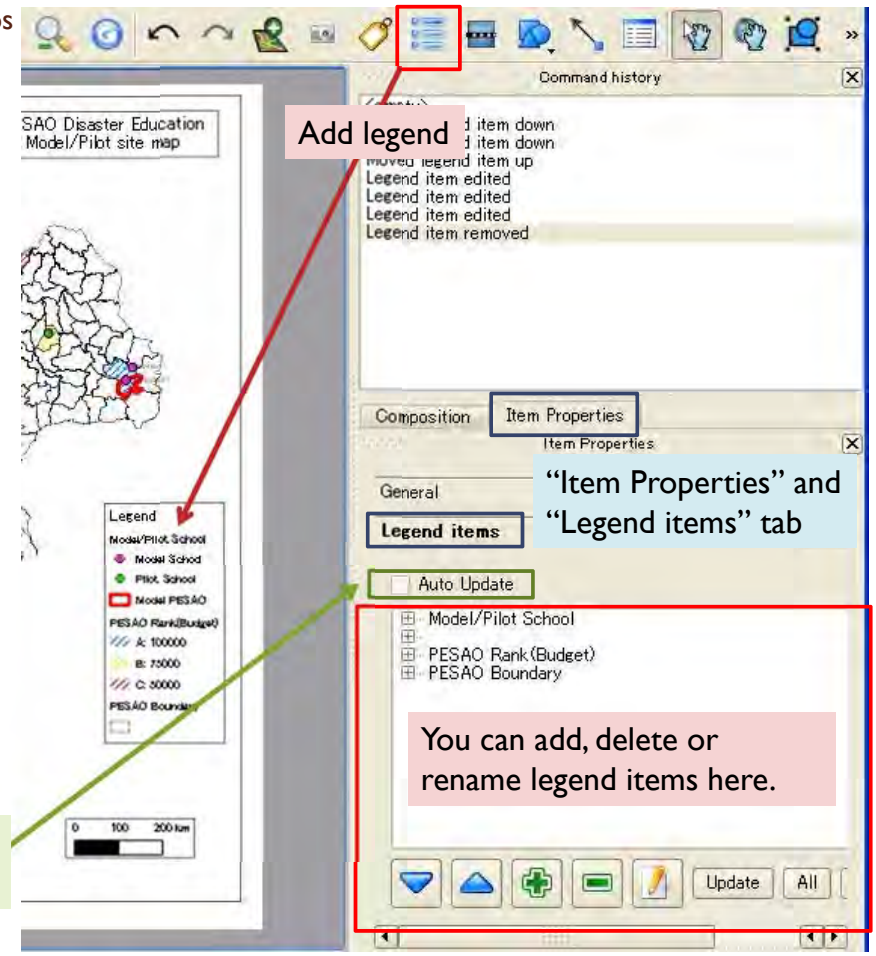
Add label



3. Making Inventory Maps

3.2.3 Print composer

Add legend



3. Making Inventory Maps

3.2.3 Print composer

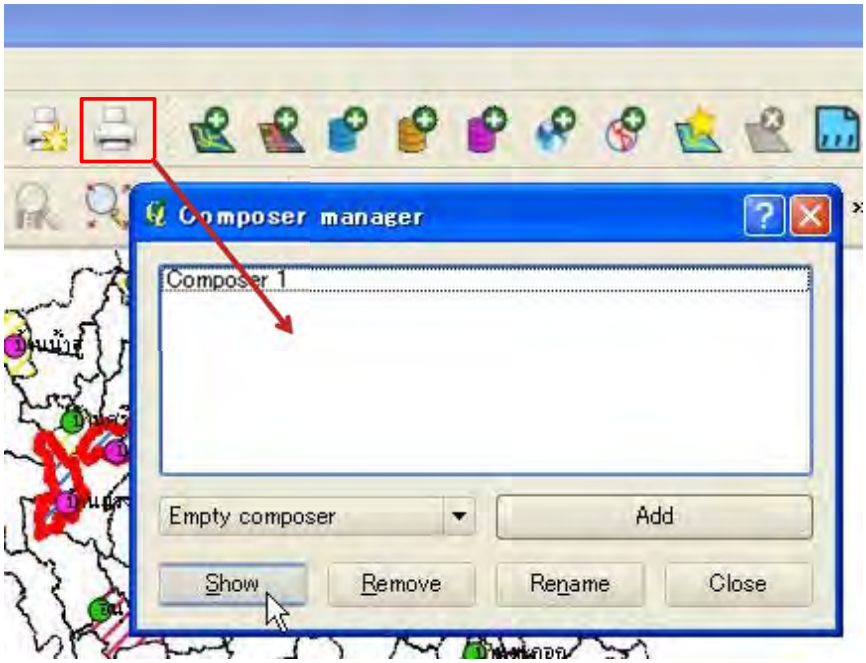
It is able to export map to file.

Export as image file

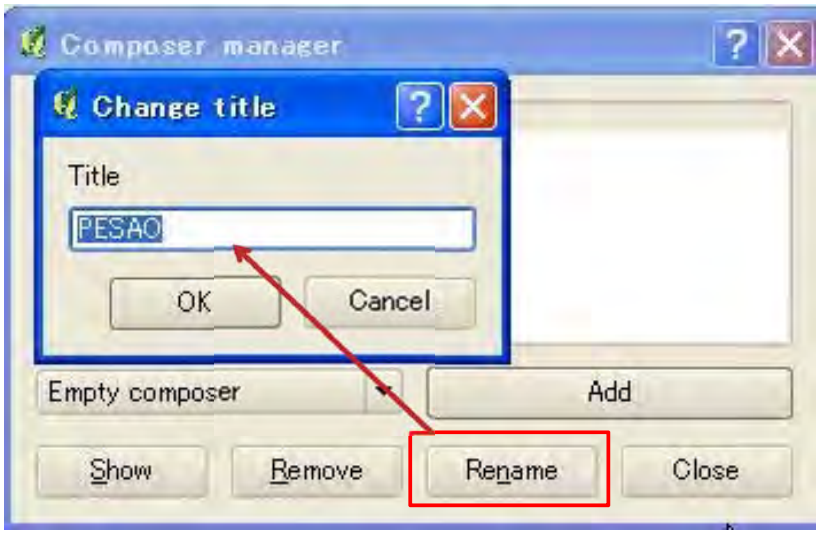
Export as pdf file

Print

After you made composer once, you can recall the canvas from this button.



It is able to rename the canvas.
Please rename the "Composer 1" to "PESAO".

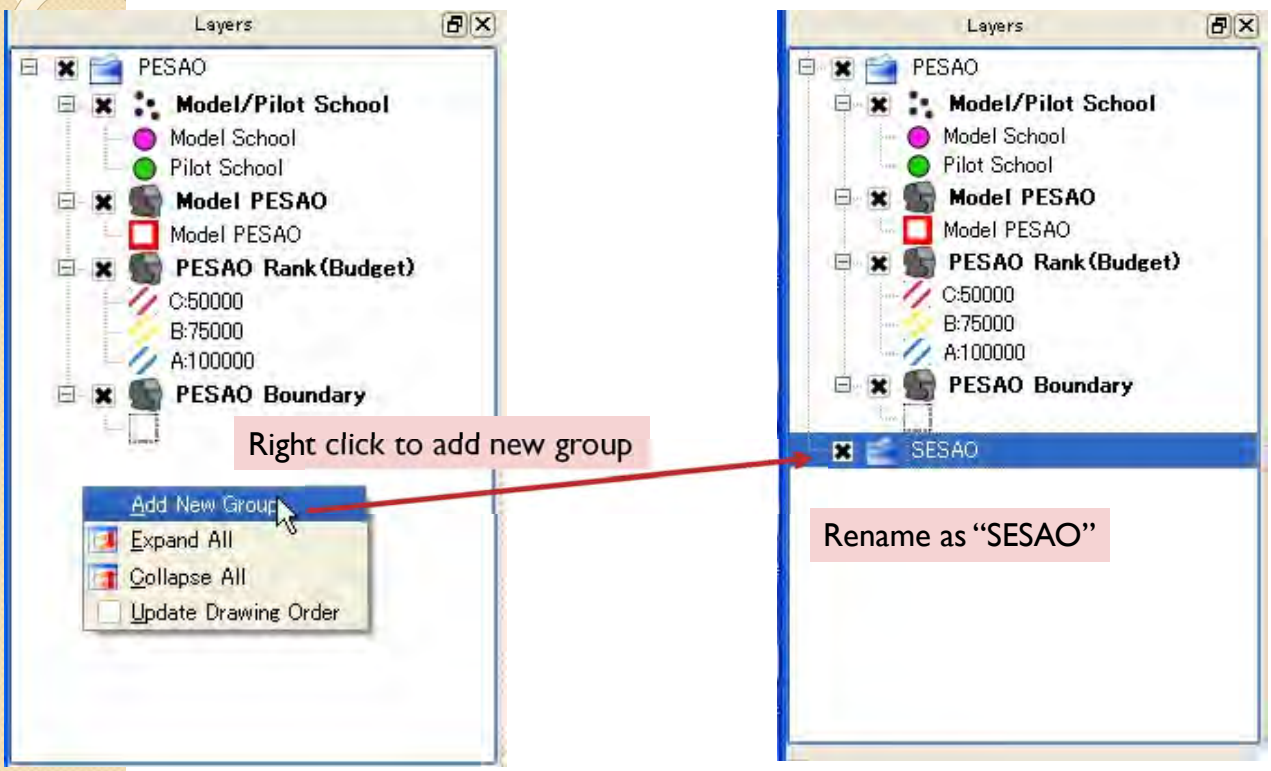


3.2.4 Save project

After you made map, please don't forget to save project.

3.3 SESAO map

3.3.1 Import data



3. Making Inventory Maps

3.3.1 Import data

Drag and drop "MPSchool_Scnd.shp" and "SESAO_Join.shp" into "Layers field.

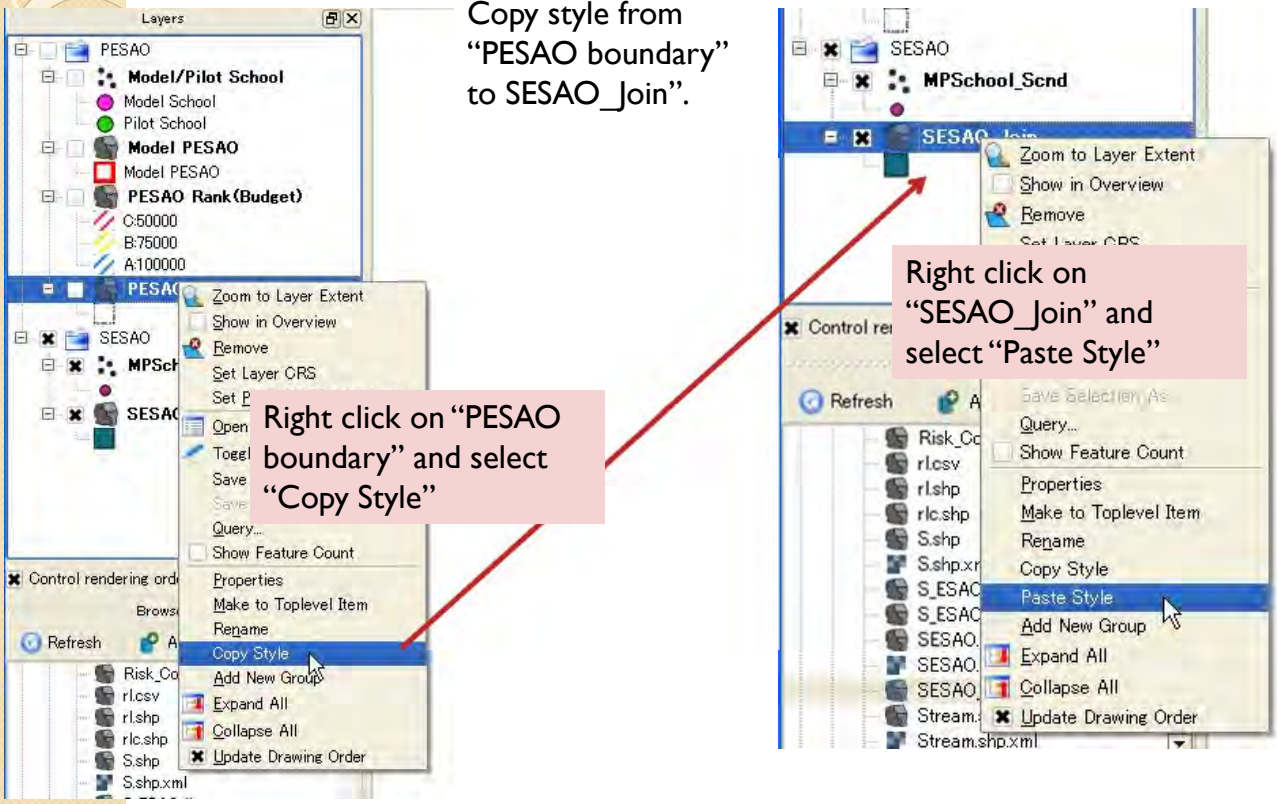
After these files are imported, please move these features to under "SESAO" group.

3. Making Inventory Maps

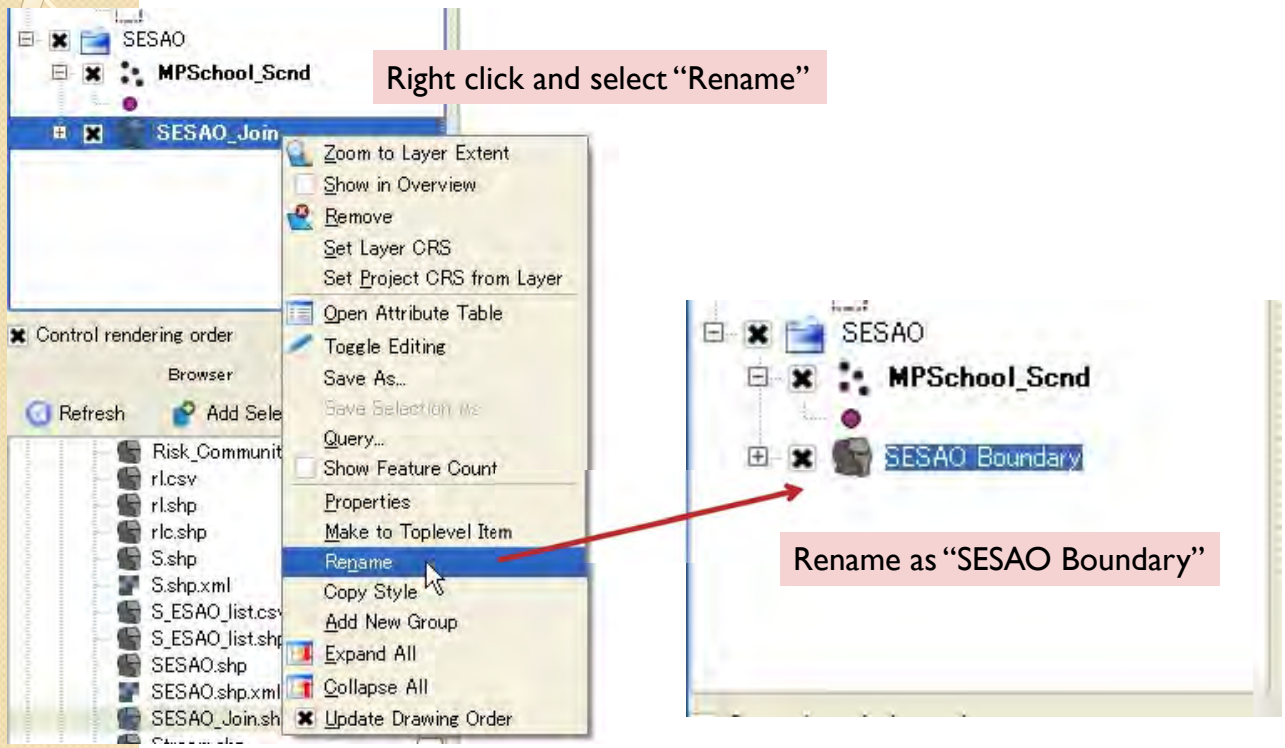
3.3.2 Color settings

SESAO boundary

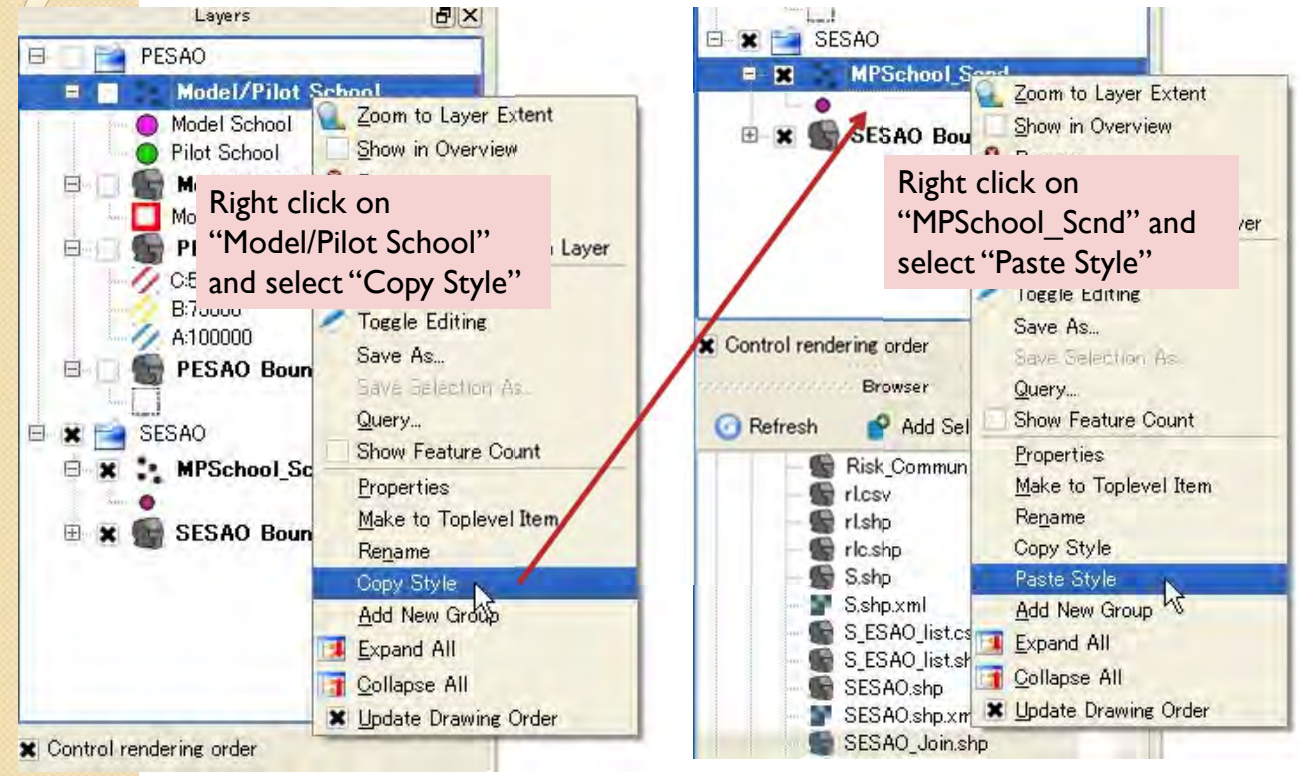
Copy style from "PESAO boundary" to SESAO_Join".



SESAO boundary



Model/Pilot schools

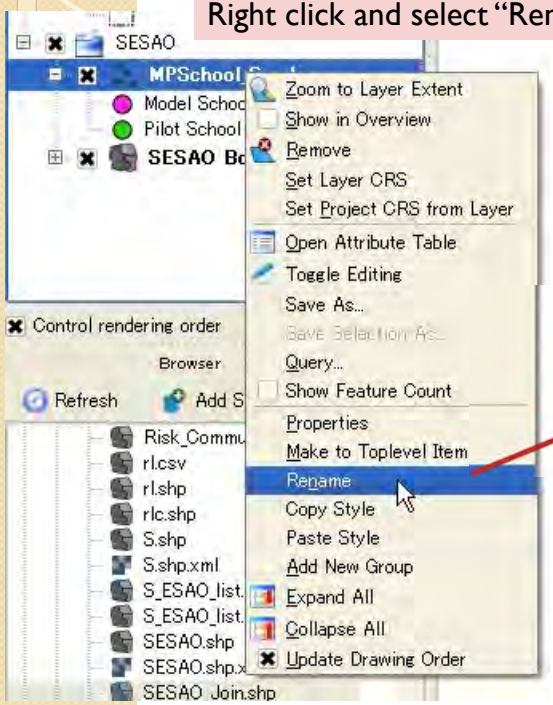


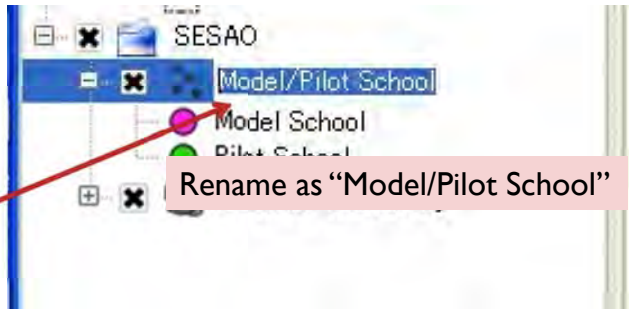
3. Making Inventory Maps

3.3.2 Color settings

Model/Pilot schools

Right click and select "Rename"





Rename as "Model/Pilot School"

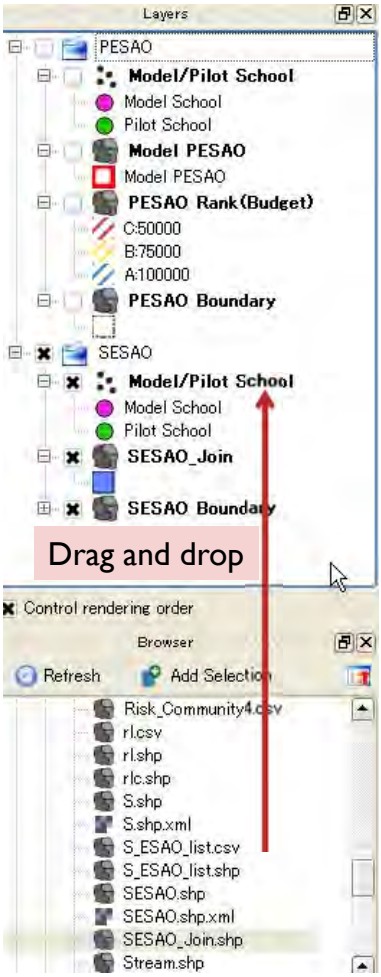
3. Making Inventory Maps

3.3.2 Color settings

Model/Pilot school rank (budget)

Drag and drop "SESAO_Join.shp" into "Layers field again.

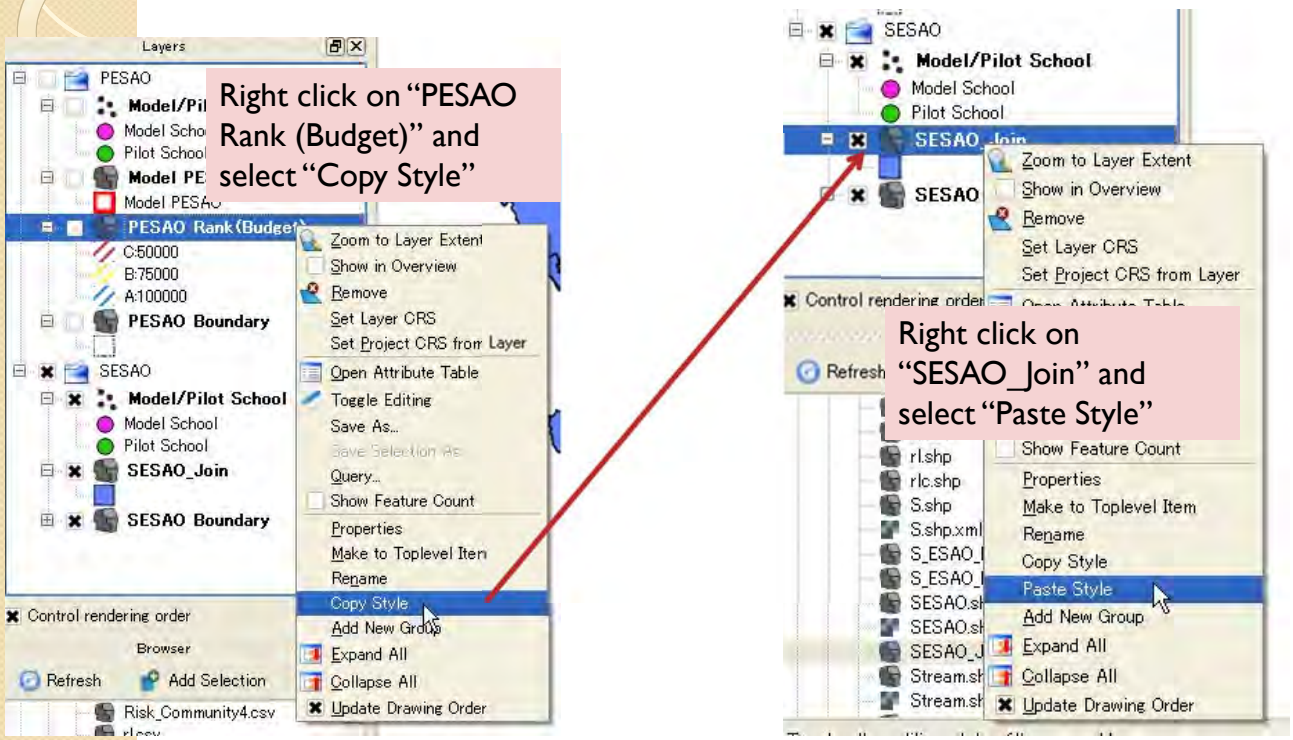
After these file is imported, please move these features to under "SESAO" group.



3. Making Inventory Maps

3.3.2 Color settings

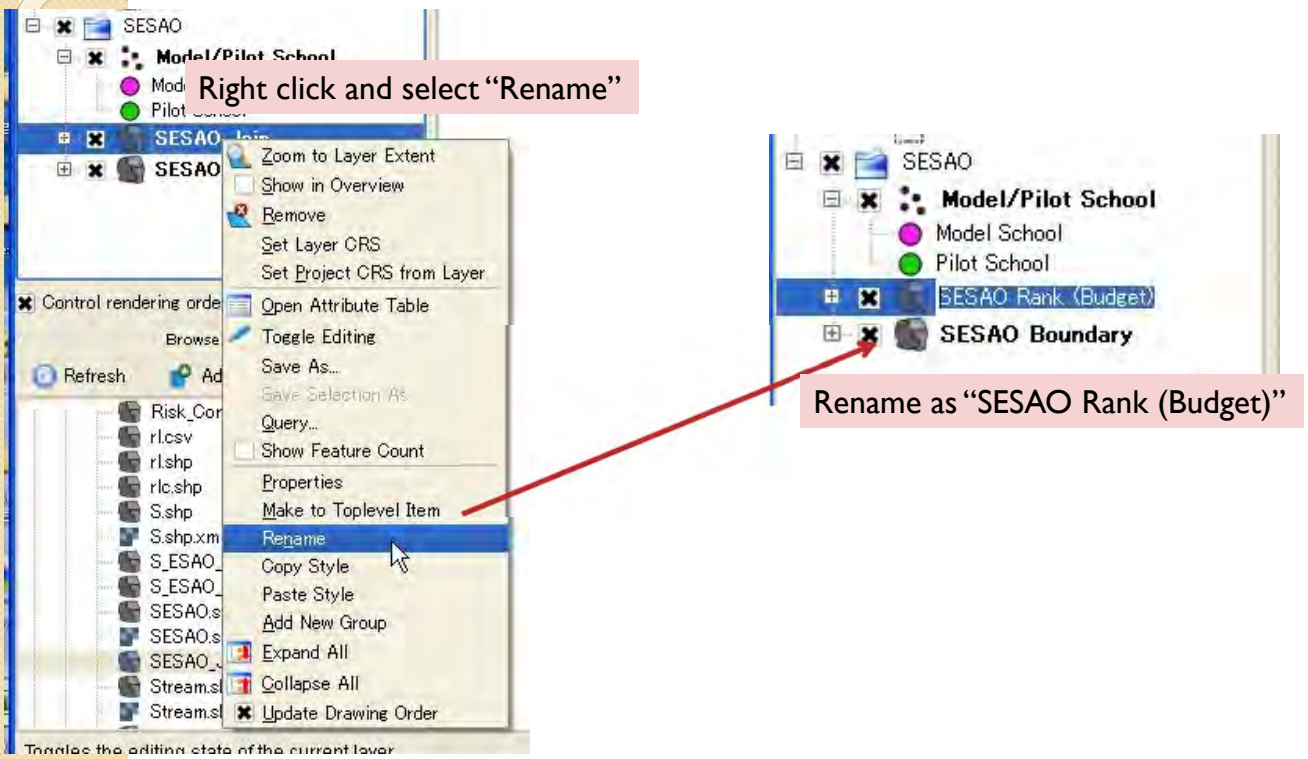
Model/Pilot school rank (budget)



3. Making Inventory Maps

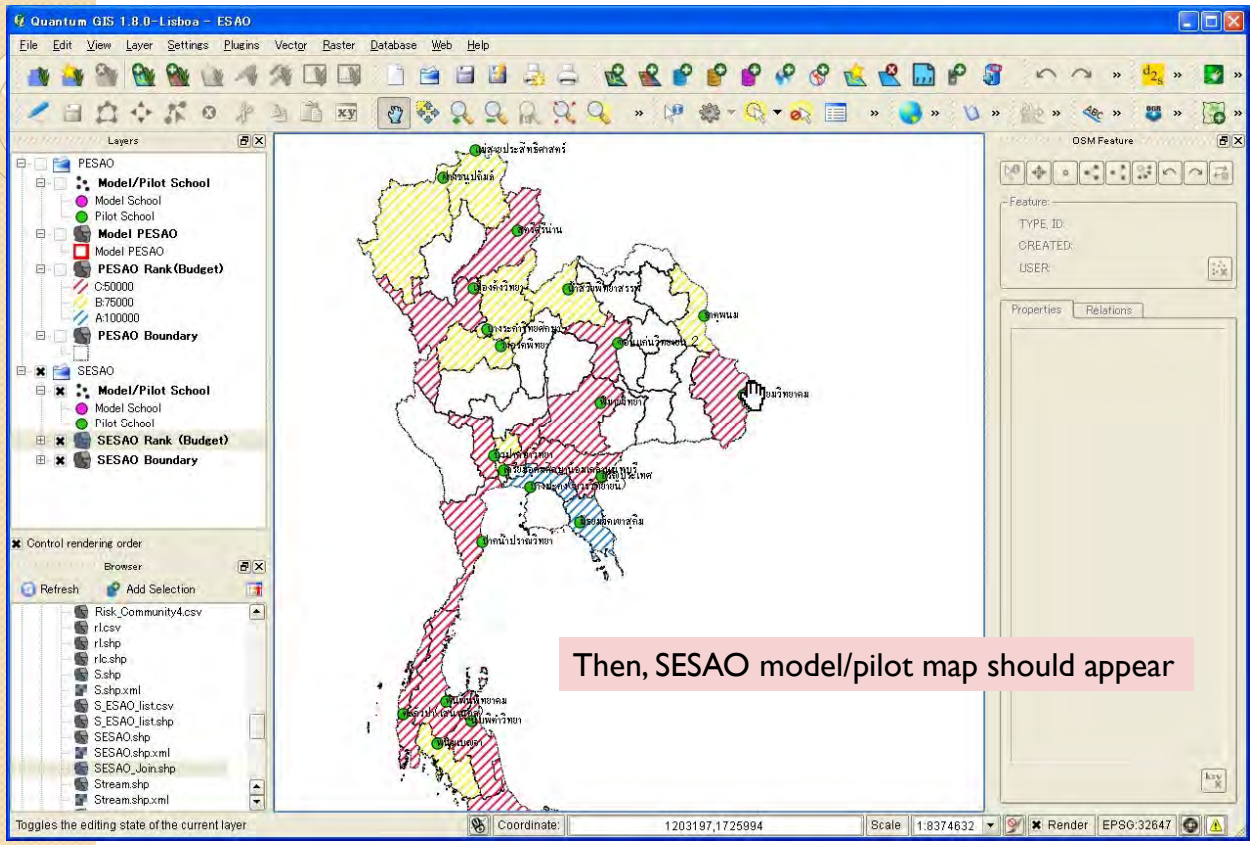
3.3.2 Color settings

Model/Pilot school rank (budget)



3. Making Inventory Maps

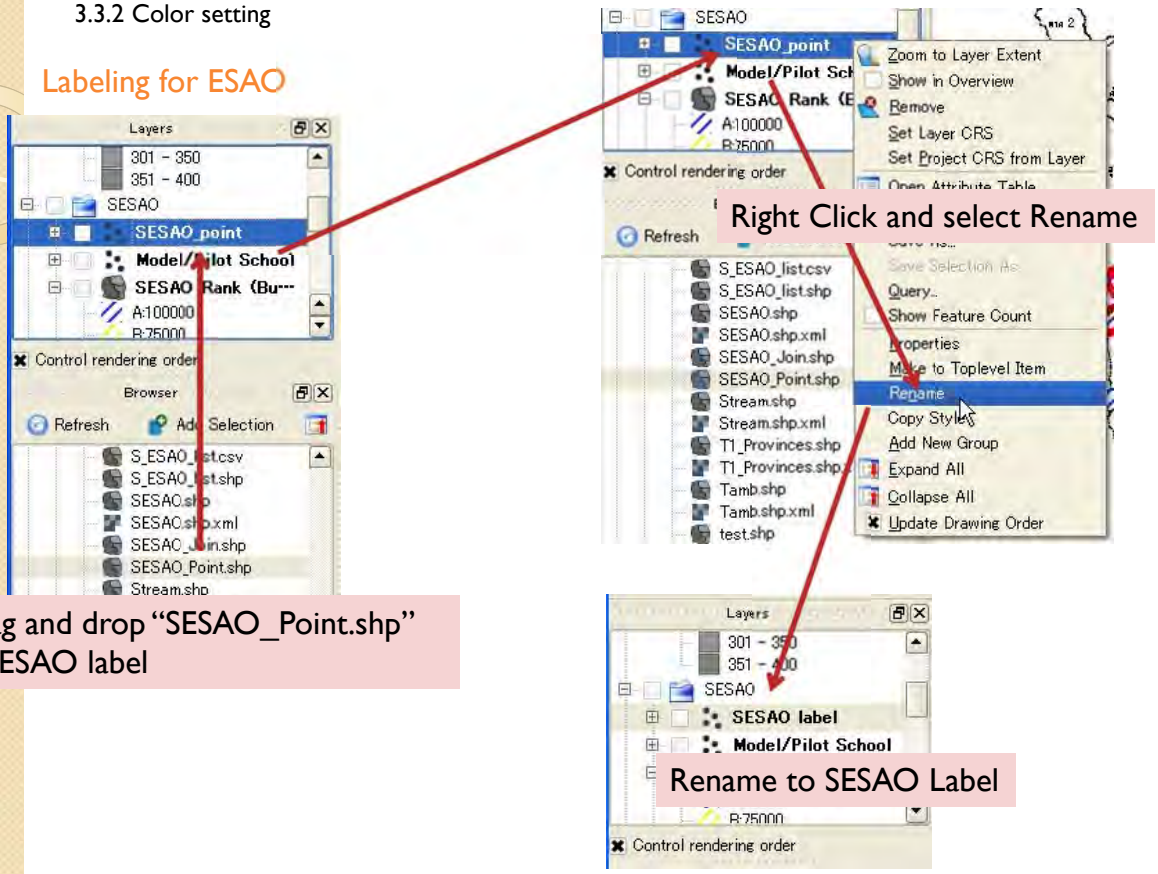
3.3.2 Color settings



3. Making Inventory Maps

3.3.2 Color setting

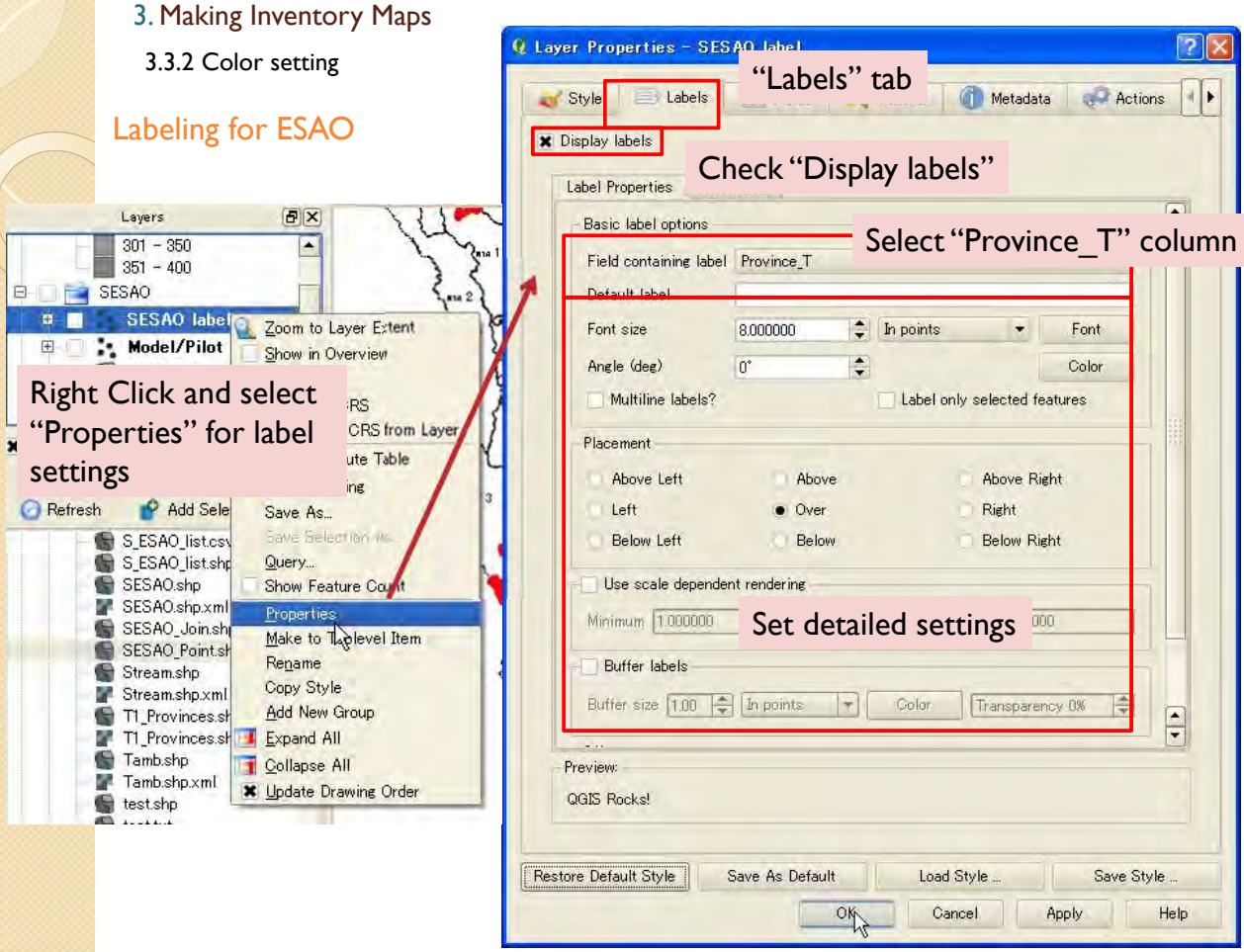
Labeling for ESAO



3. Making Inventory Maps

3.3.2 Color setting

Labeling for ESAO

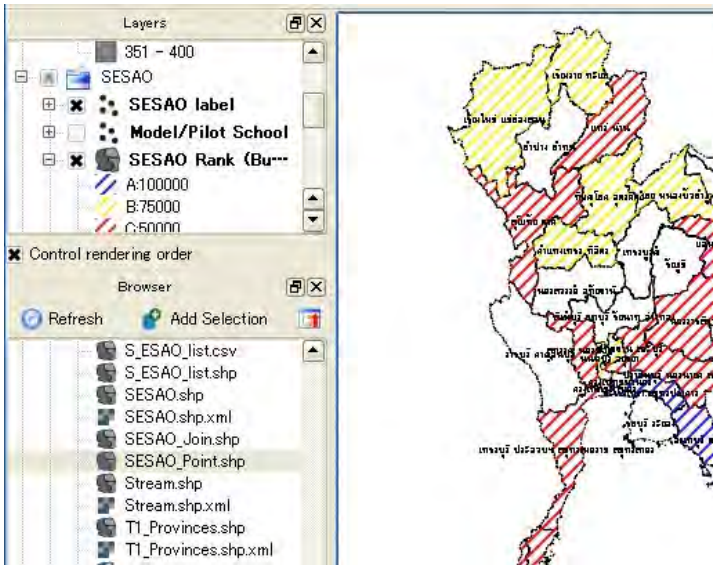


3. Making Inventory Maps

3.3.2 Color setting

Labeling for ESAO

Then, you can see labels for ESAO.

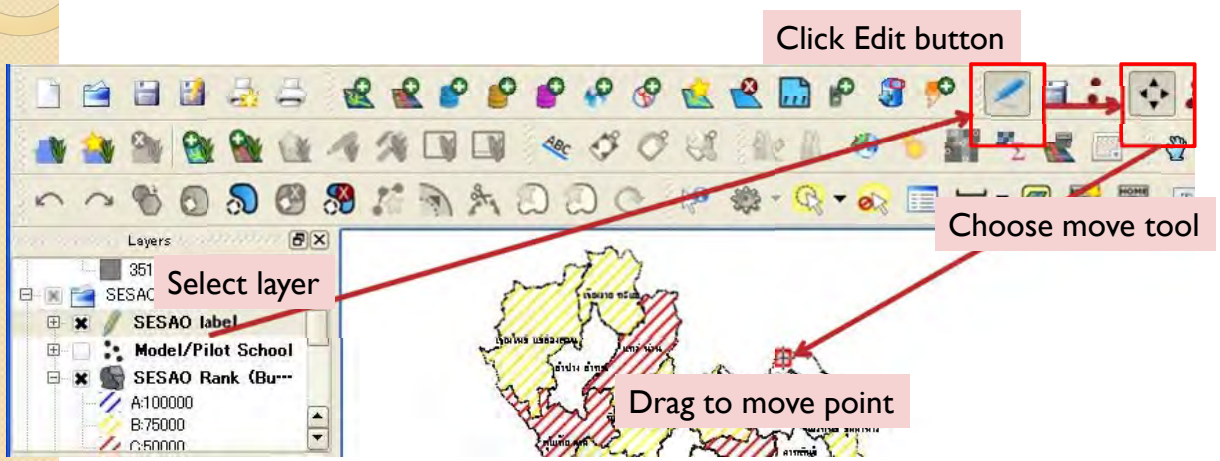


3. Making Inventory Maps

3.2.2 Color setting

Labeling for ESAO

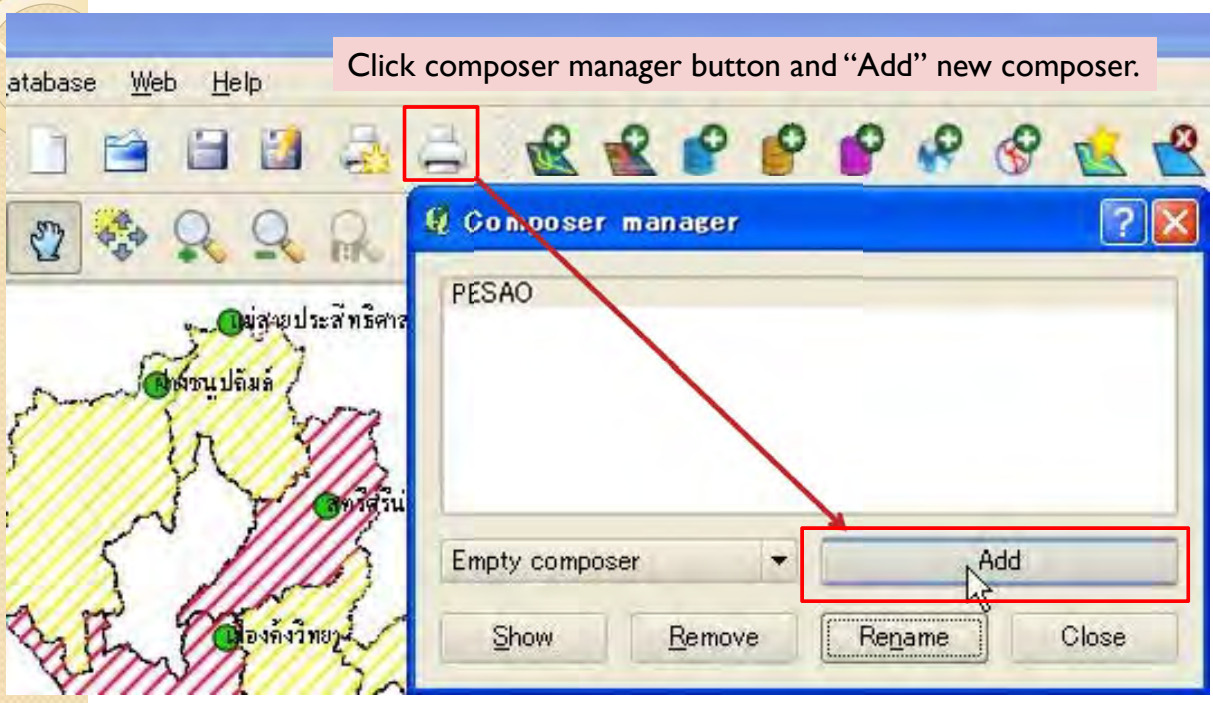
If there are some overlaps of the labels, you can move the points.



After you finish edit, re-click Edit button and save.

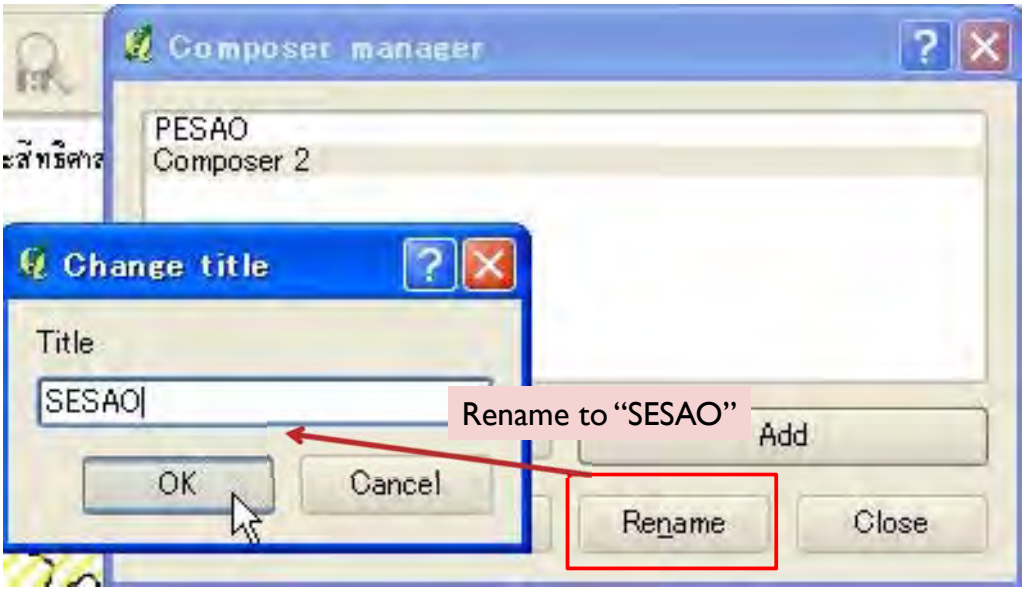
3. Making Inventory Maps

3.3.3 Print composer



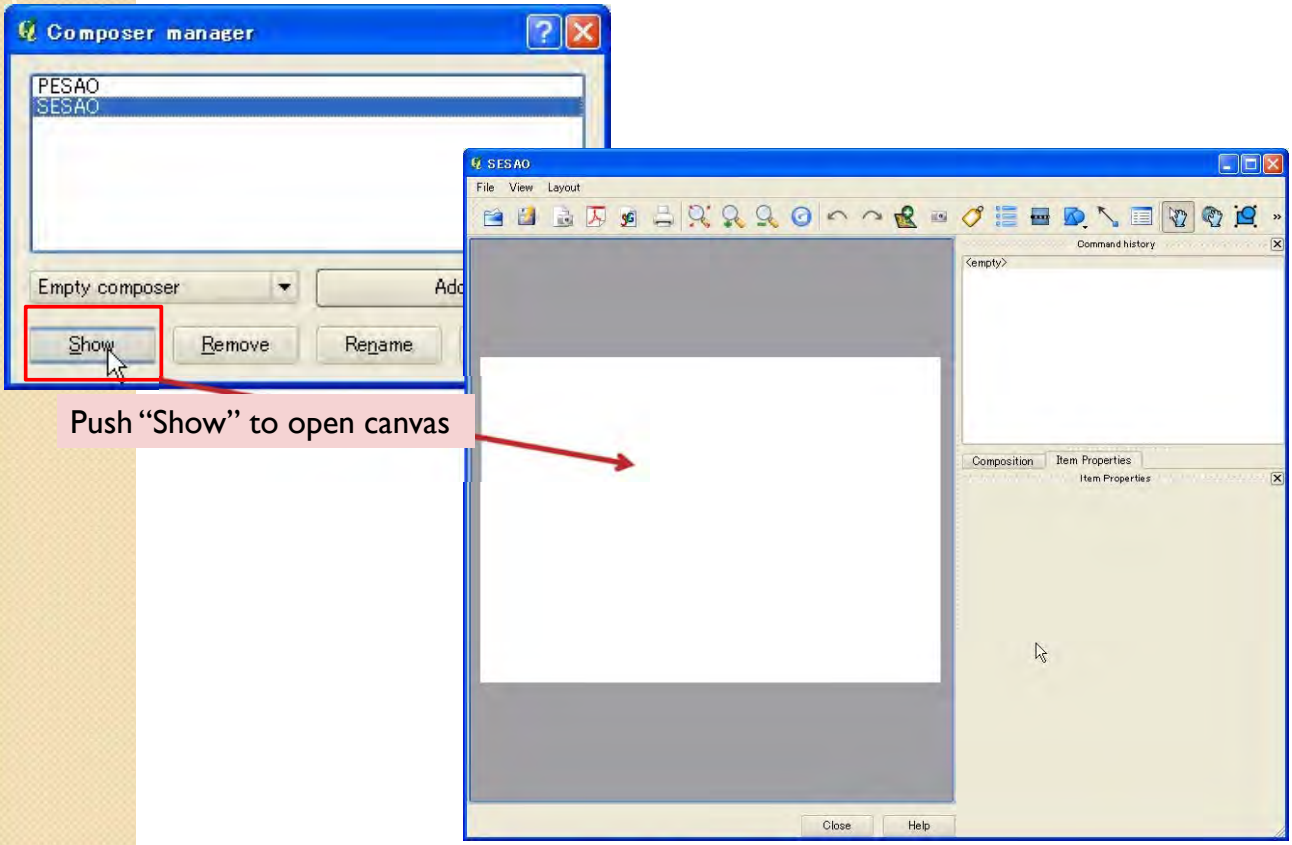
3. Making Inventory Maps

3.3.3 Print composer



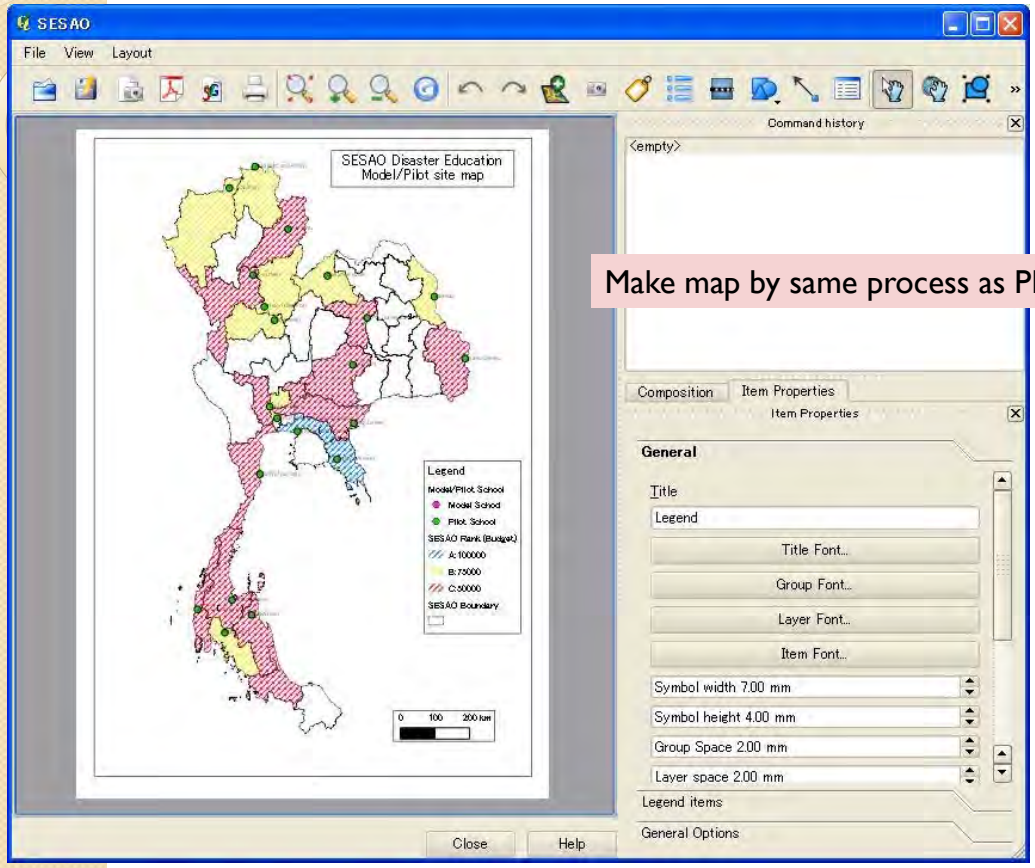
3. Making Inventory Maps

3.3.3 Print composer



3. Making Inventory Maps

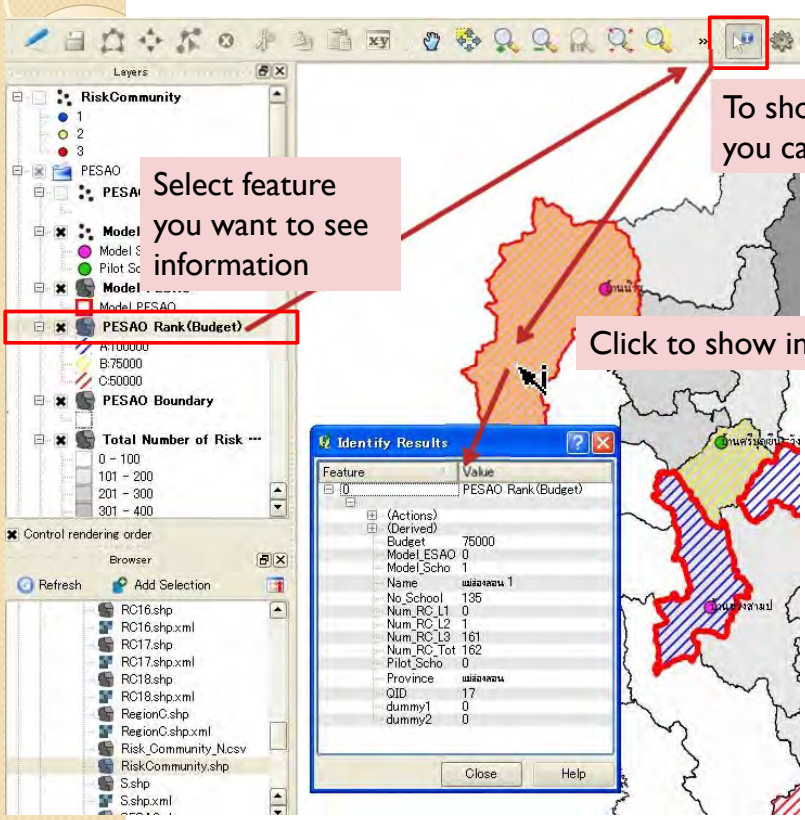
3.3.3 Print composer



Make map by same process as PESAO (3.2.3)

3. Making Inventory Maps

3.4 Indicate detailed information

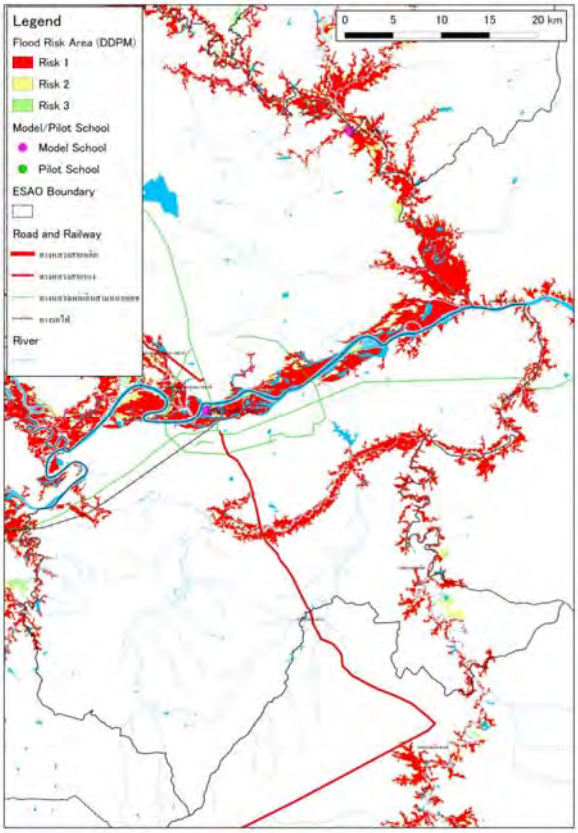


Select feature you want to see information

To show detailed information, you can use “Identify Features”.

Click to show information

3.5 Making risk area with ESAO map



Risk area information shown with ESAO and pilot/model school location is helpful to understand relation between risk area and school or residence location.

In addition, this type of map will be able to be used to select pilot/model schools and to make action plans.

3.5.1 Total numbers of Risk community in ESAO

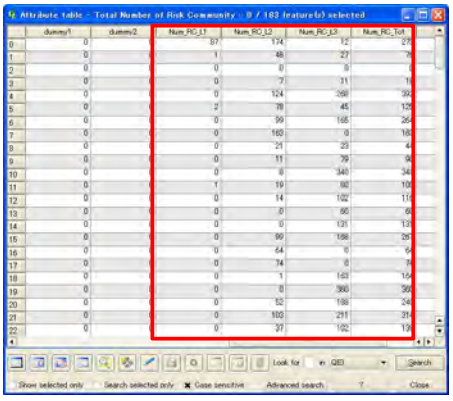
The ESAO file (PESAO_Join.shp or SESAO_Join.shp) contain data of total risk community numbers in each ESAO.

Explanation for the columns of attribution table of PESAO_Join.shp or SESAO_Join.shp.

"No_R1Vill" : numbers of risk level 1 communities
"No_R2Vill" : numbers of risk level 2 communities
"No_R3Vill" : numbers of risk level 3 communities (highest)
"No_TotRVill" : total (level 1-3) numbers of risk communities

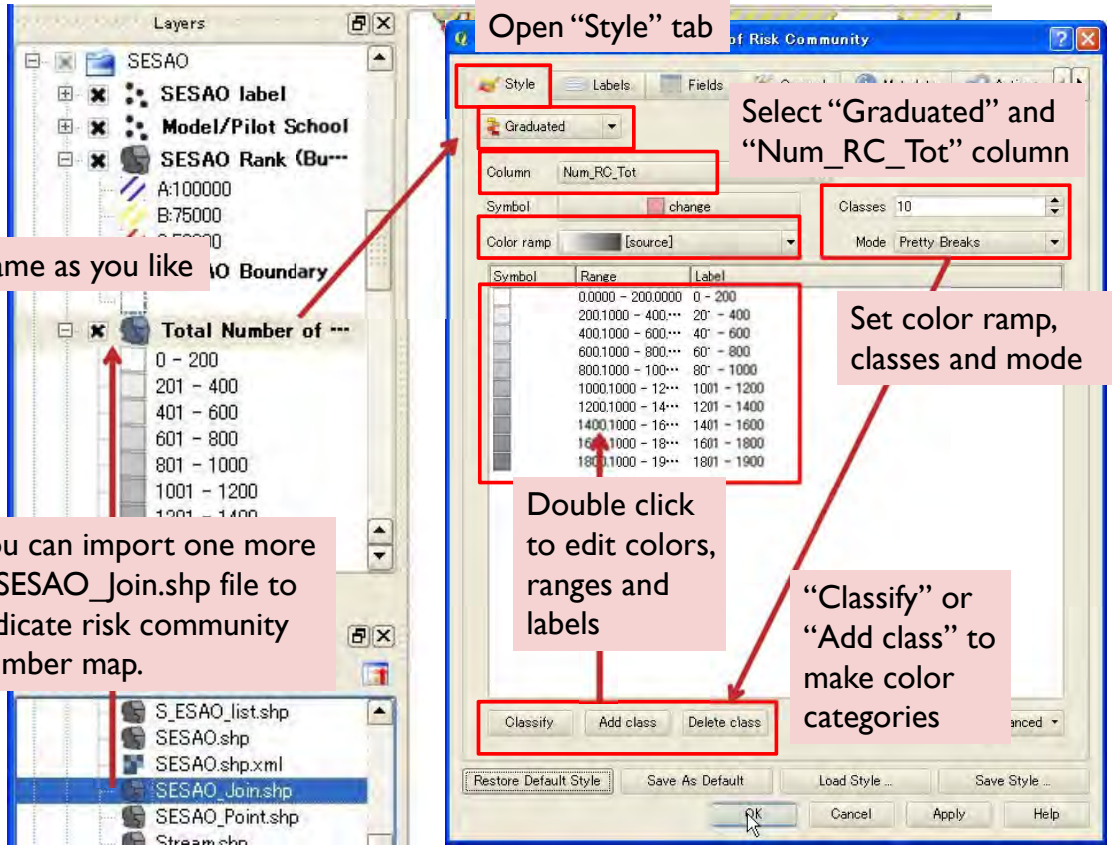
This total numbers of risk communities can be shown with ESAO map you made above.

You can compare the risk community and model/pilot ESAO.



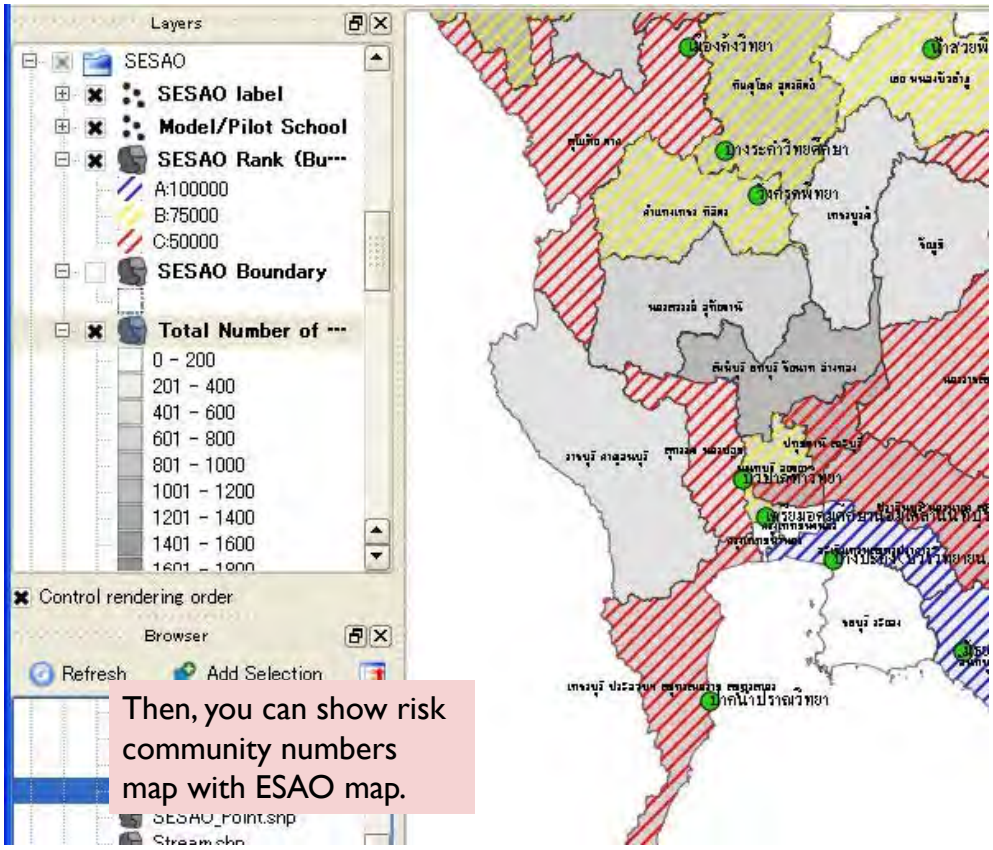
3. Making Inventory Maps

3.5.1 Total numbers of Risk community in ESAO

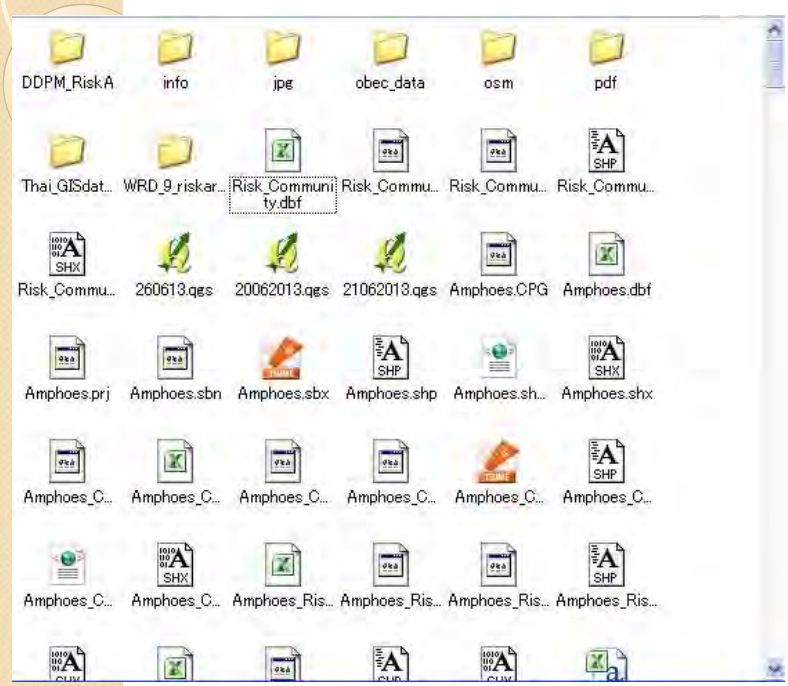


3. Making Inventory Maps

3.5.1 Total numbers of Risk community in ESAO

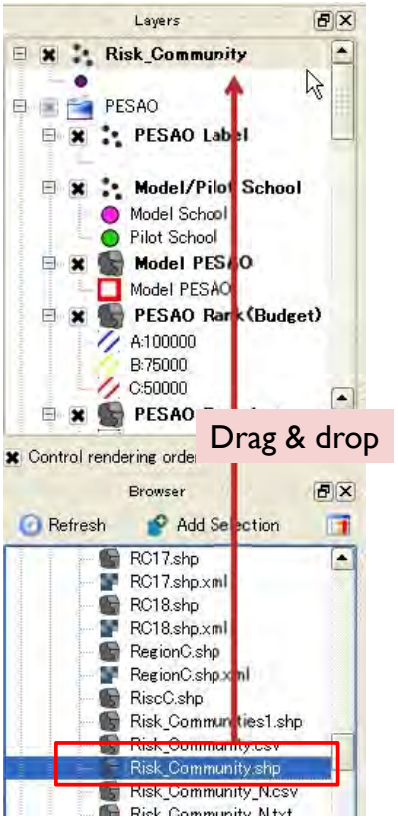


3.5.2 Other Risk area information



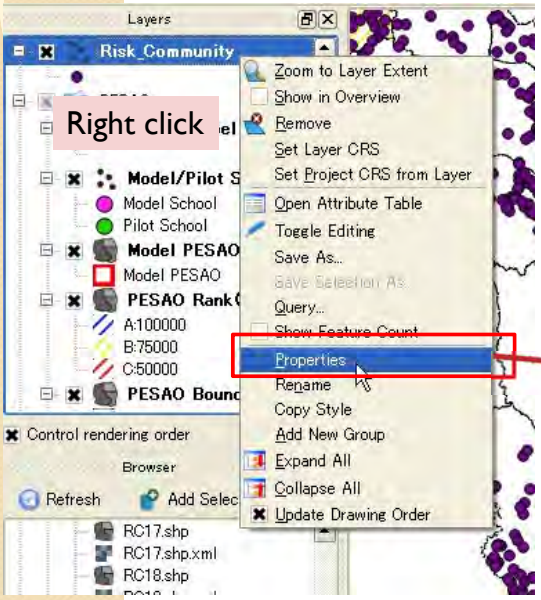
- Risk community "Risk_Community" shapefile (data from DDPM)
- Flood risk area "DDPM_RiskA" folder (data from DDPM)
- Sediment disaster risk area "WRD_9_riskarea" folder (data from WRD)

3.5.3 Risk community map

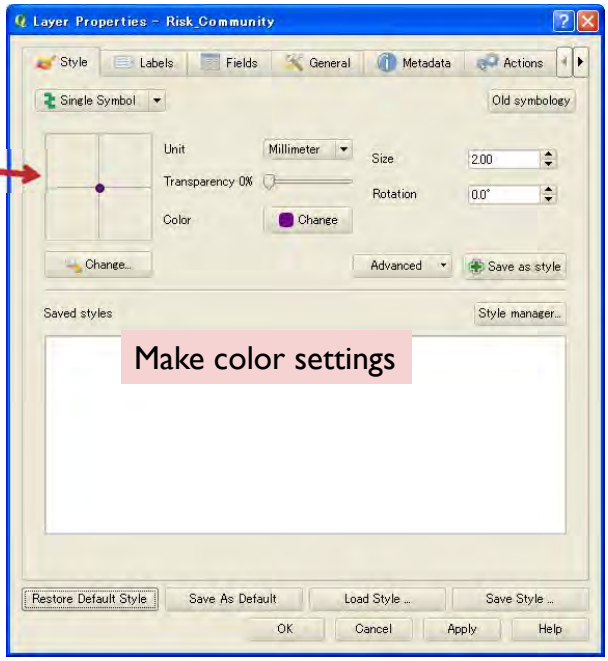


Import "Risk_Community" shape file from browser field.

3.5.3 Risk community map

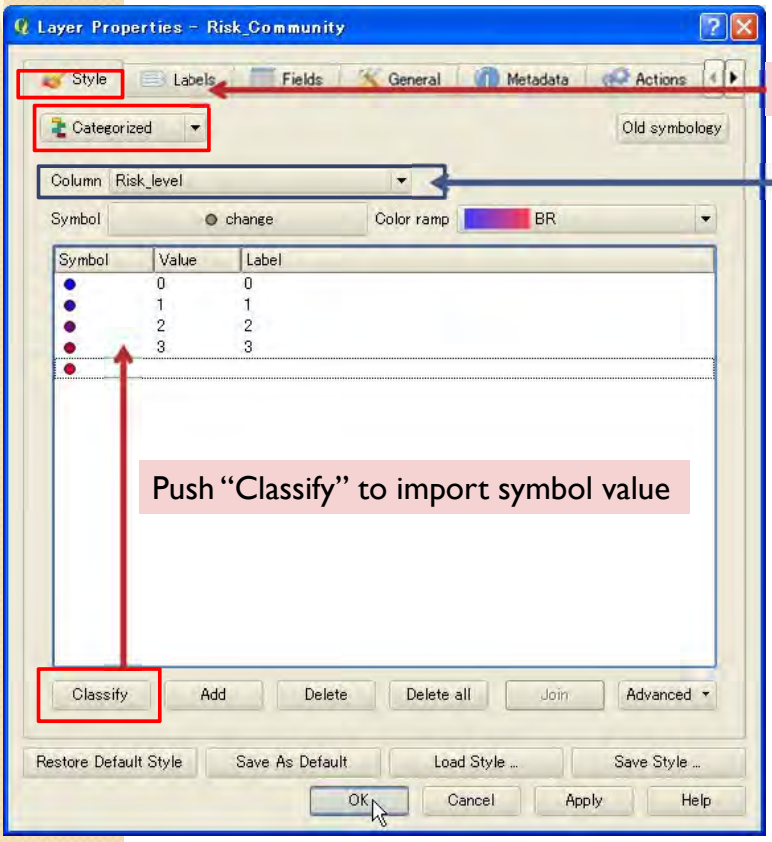


Right click and select "Properties"



3. Making Inventory Maps

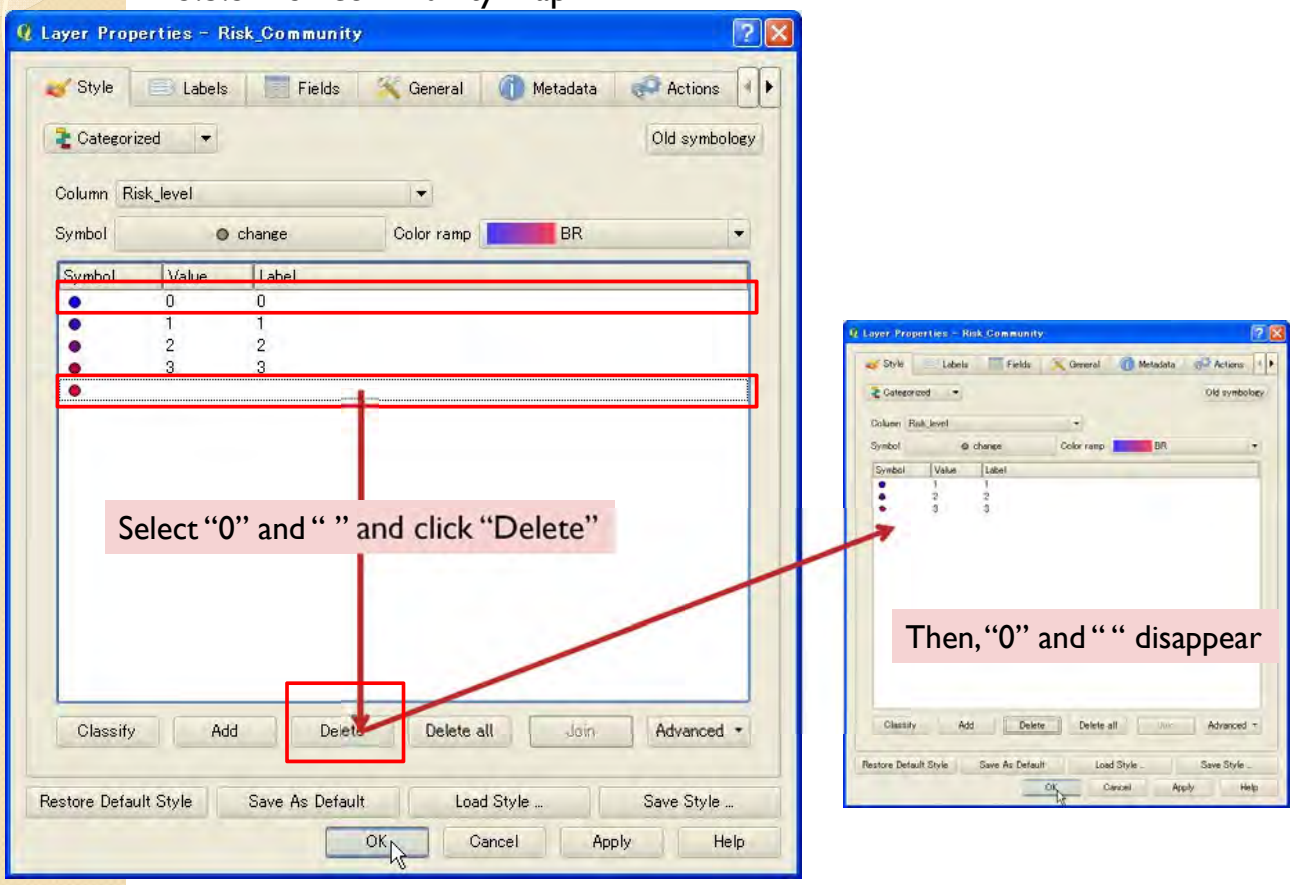
3.5.3 Risk community map



Select "Style" tab and "Categorized"

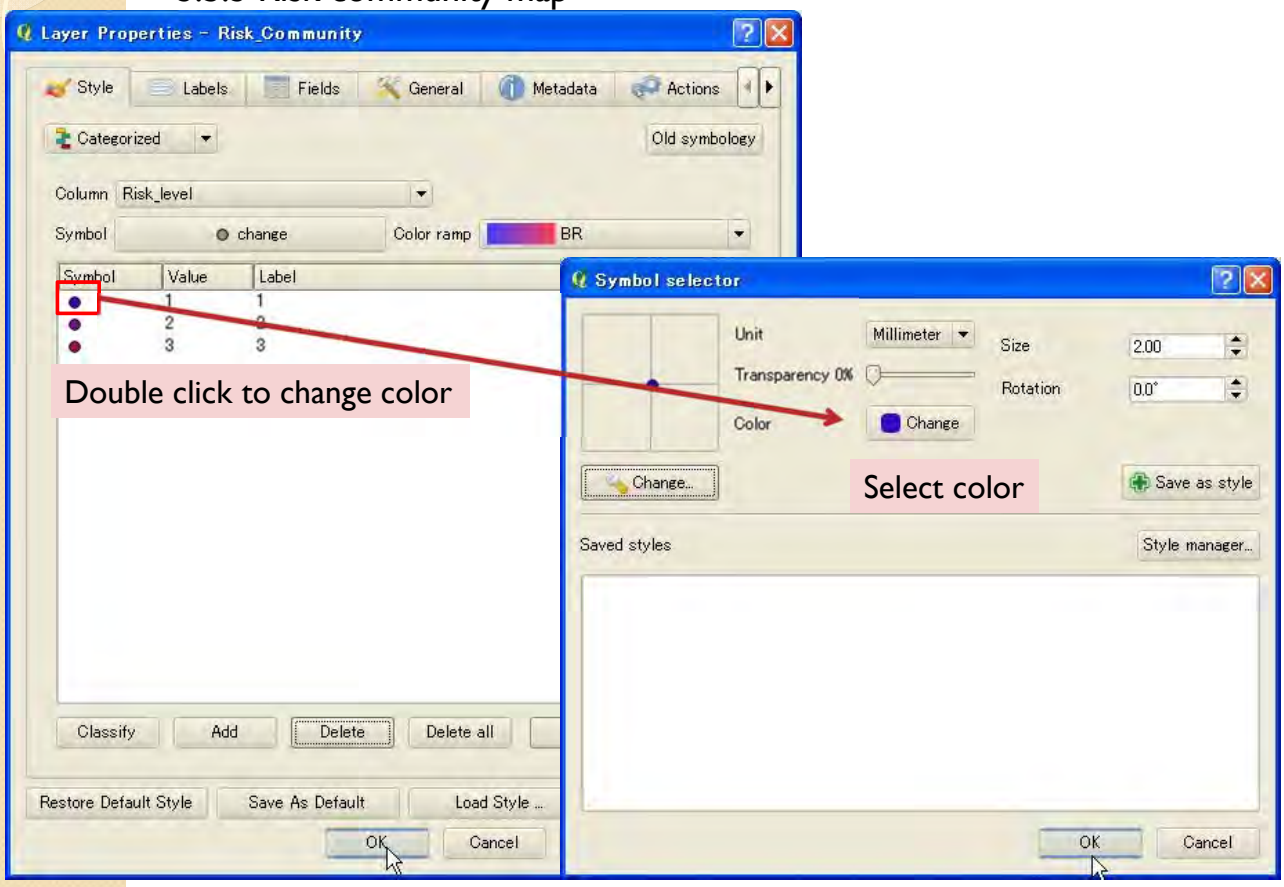
Target column is "Risk_level"

3.5.3 Risk community map

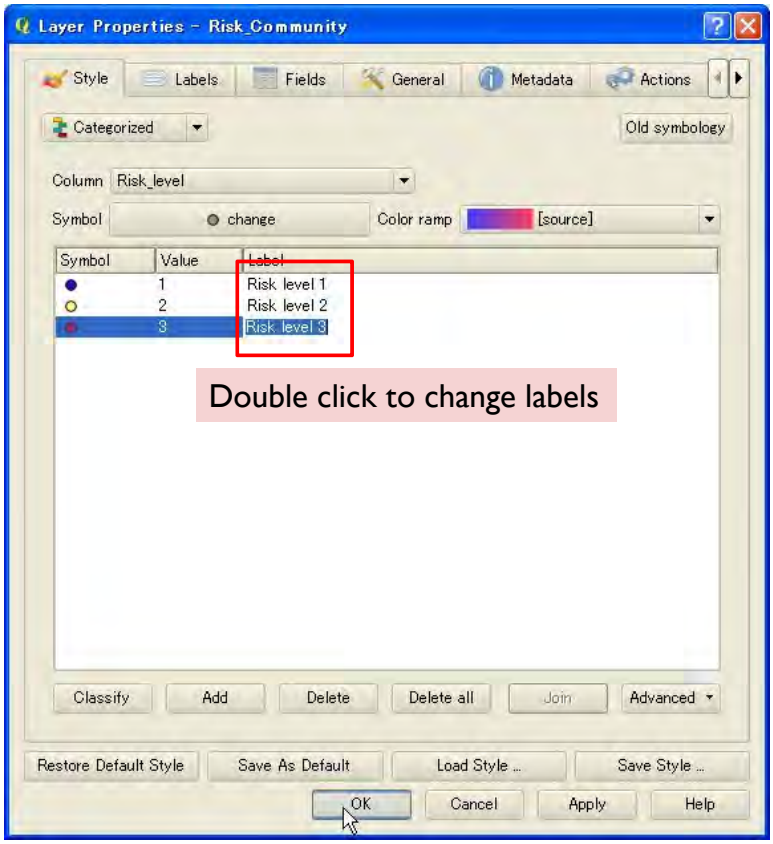


3. Making Inventory Maps

3.5.3 Risk community map



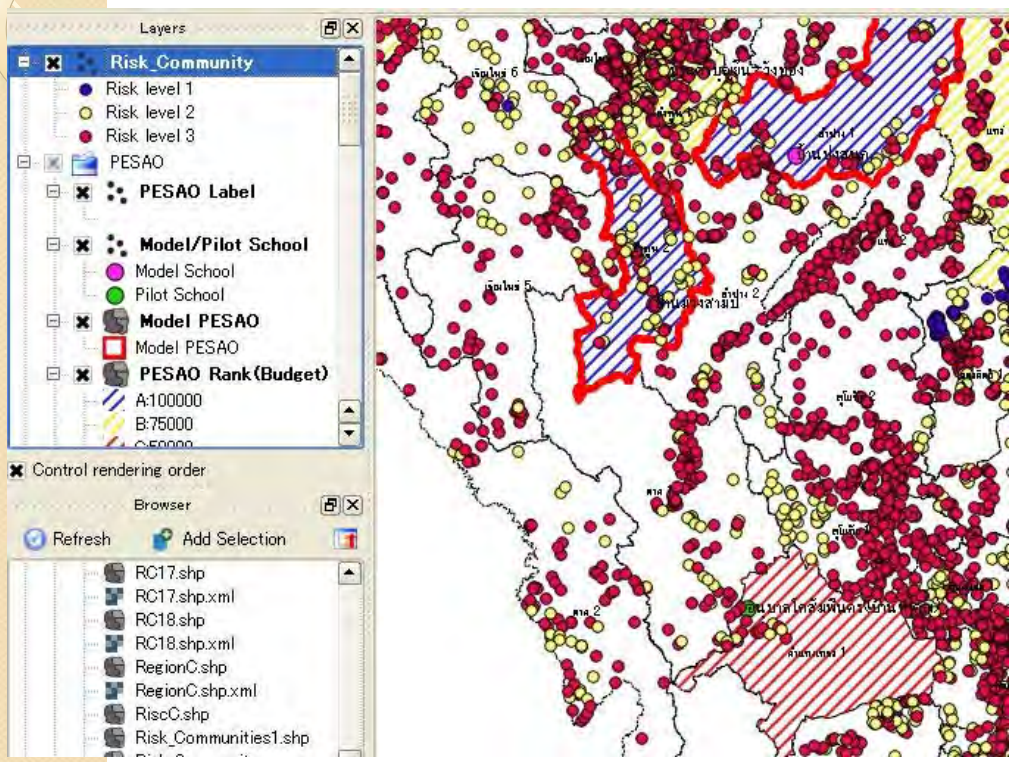
3.5.3 Risk community map



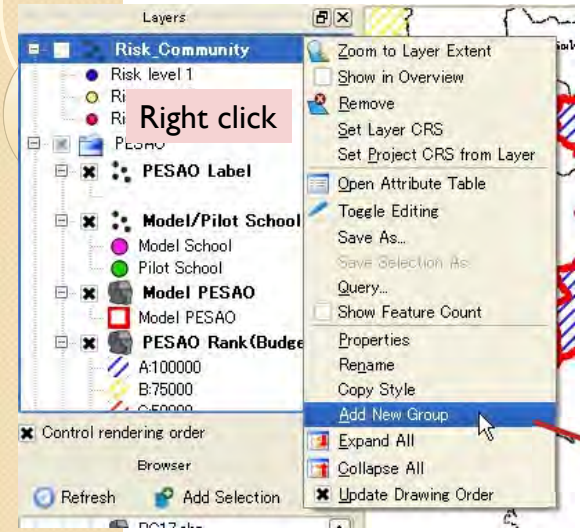
3. Making Inventory Maps

3.5.3 Risk community map

Then, you can see risk community locations.

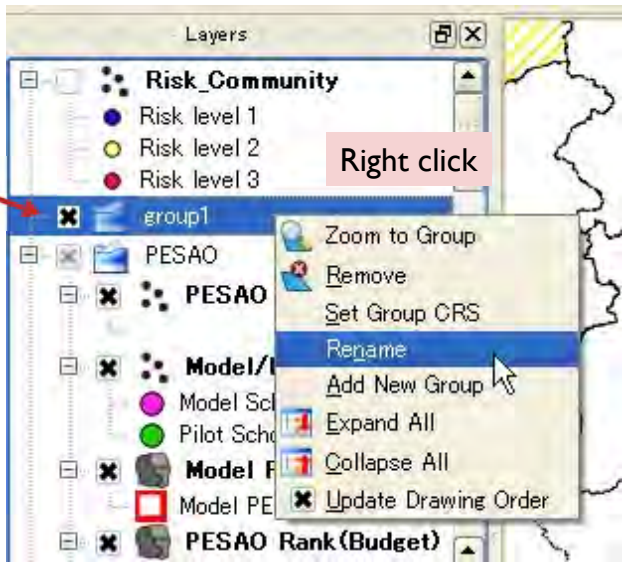


3.5.4 Flood risk area map



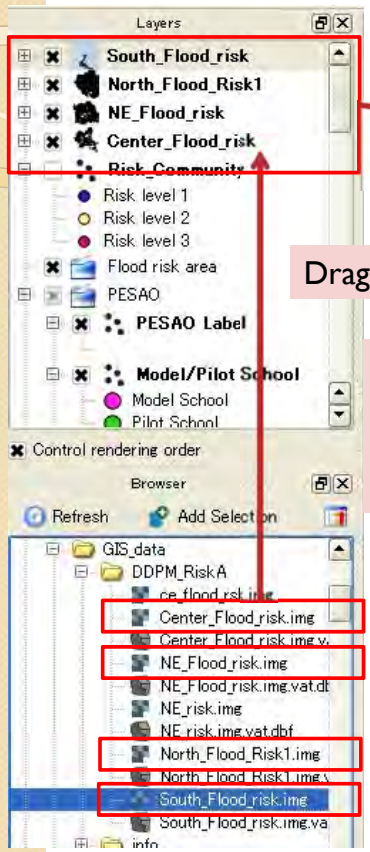
Right click and select "Add New Group".

And, right click and select "Rename" to Flood risk area.



3. Making Inventory Maps

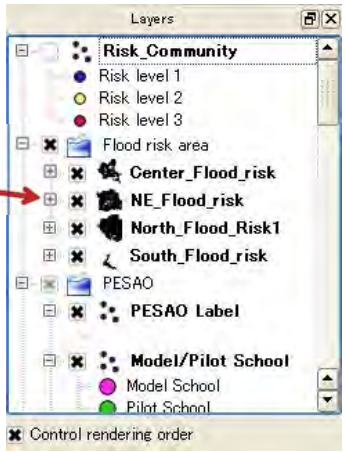
3.5.4 Flood risk area map



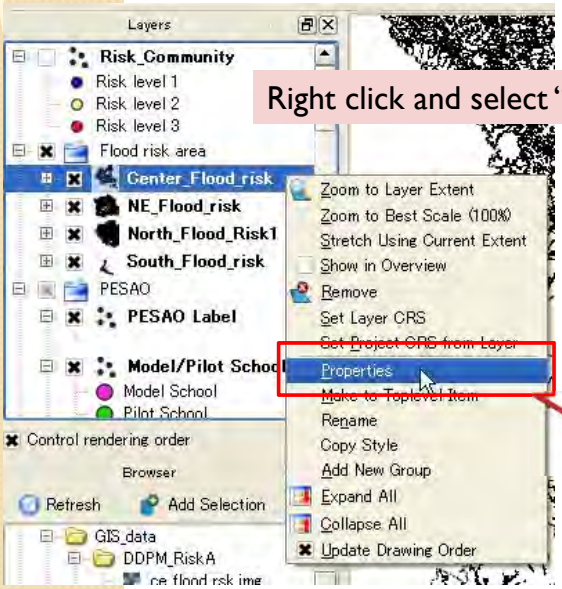
Move under the "Flood risk area" folder

Drag & drop

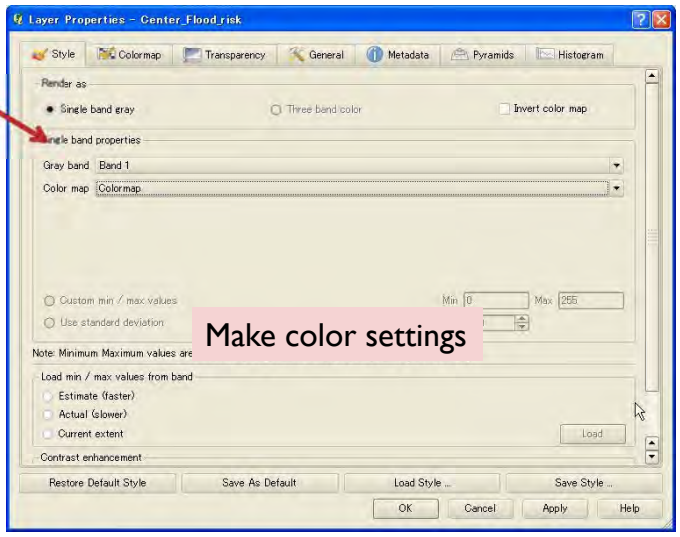
South_Flood_Risk
North_Flood_Risk
NE_Flood_Risk
Center_Flood_Risk



3.5.4 Flood risk area map



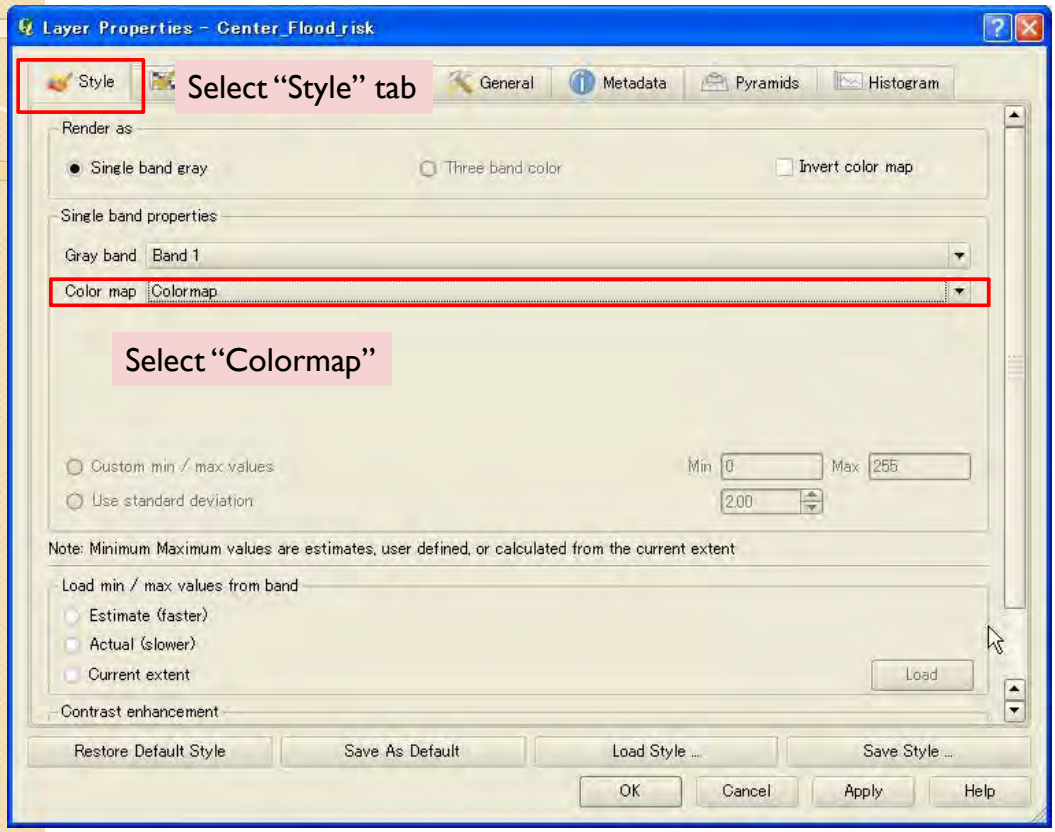
Right click and select "Properties"



Make color settings

3. Making Inventory Maps

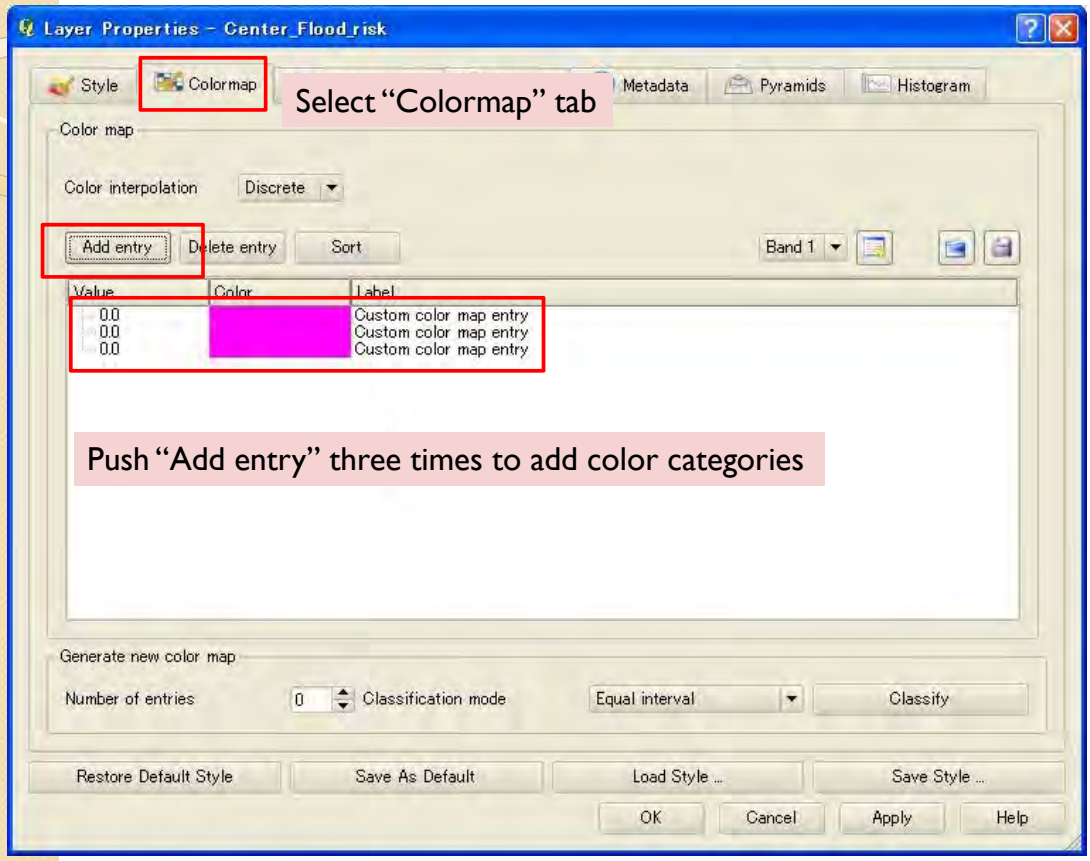
3.5.4 Flood risk area map



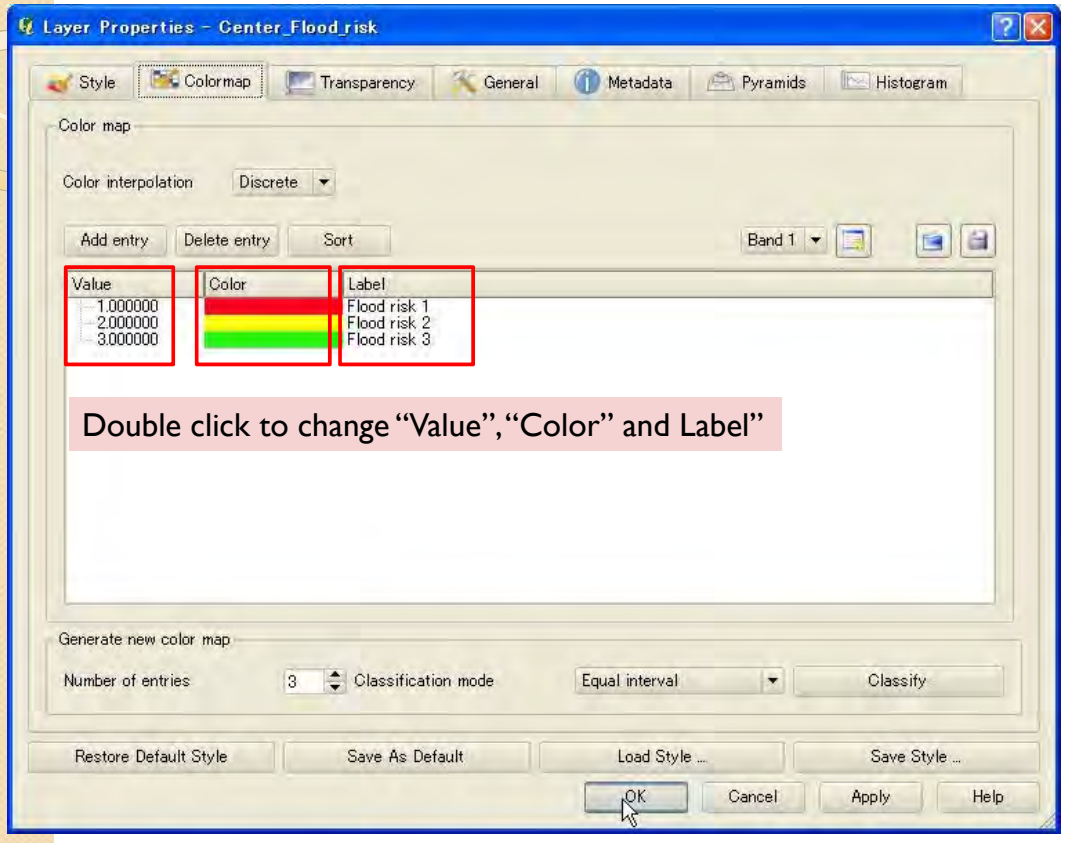
Select "Style" tab

Select "Colormap"

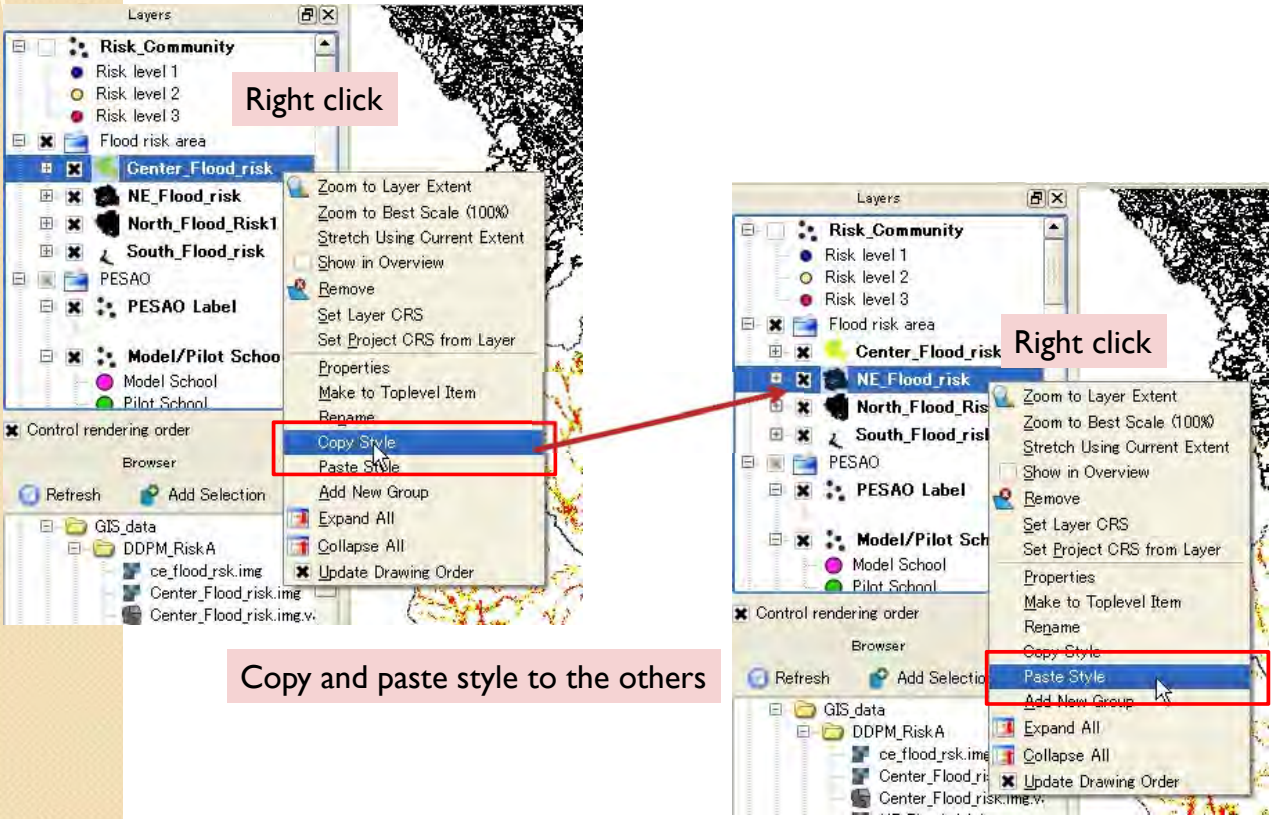
3.5.4 Flood risk area map



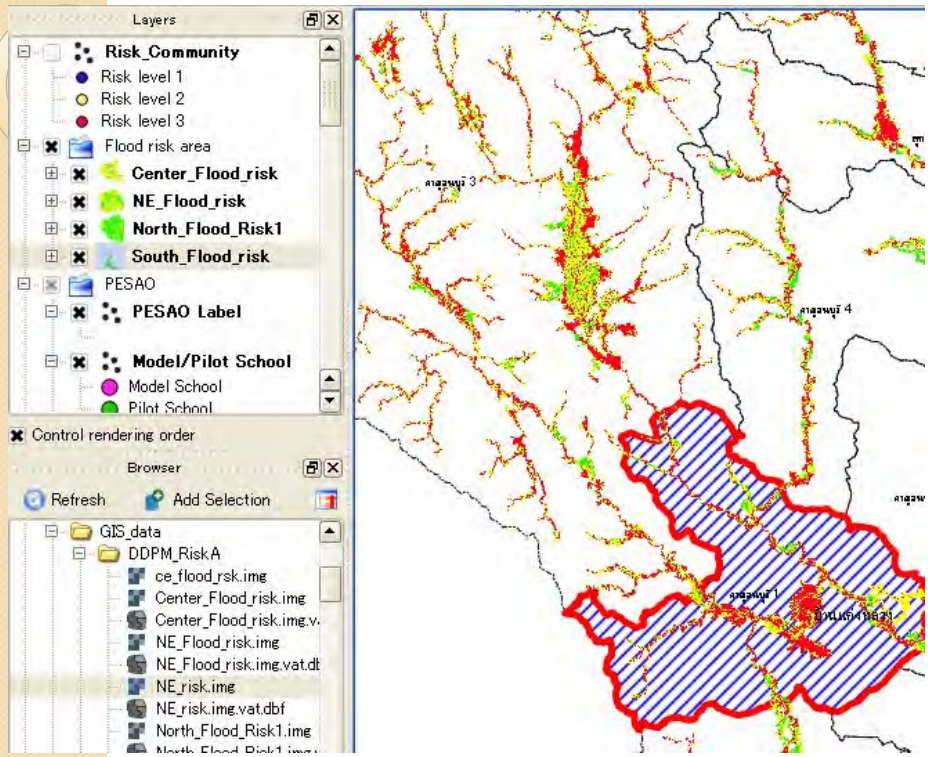
3.5.4 Flood risk area map



3.5.4 Flood risk area map

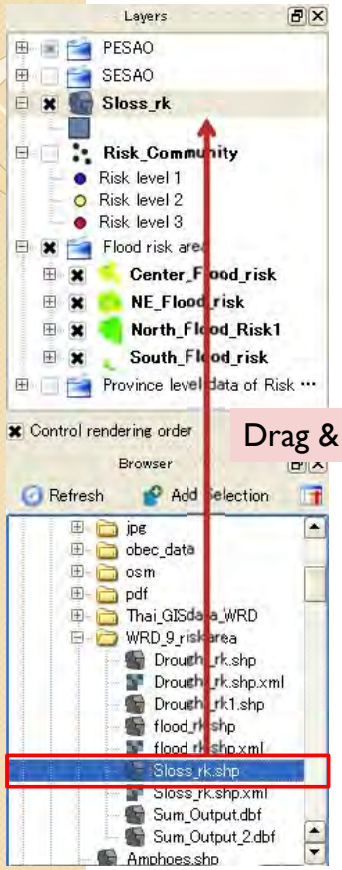


3.5.4 Flood risk area map



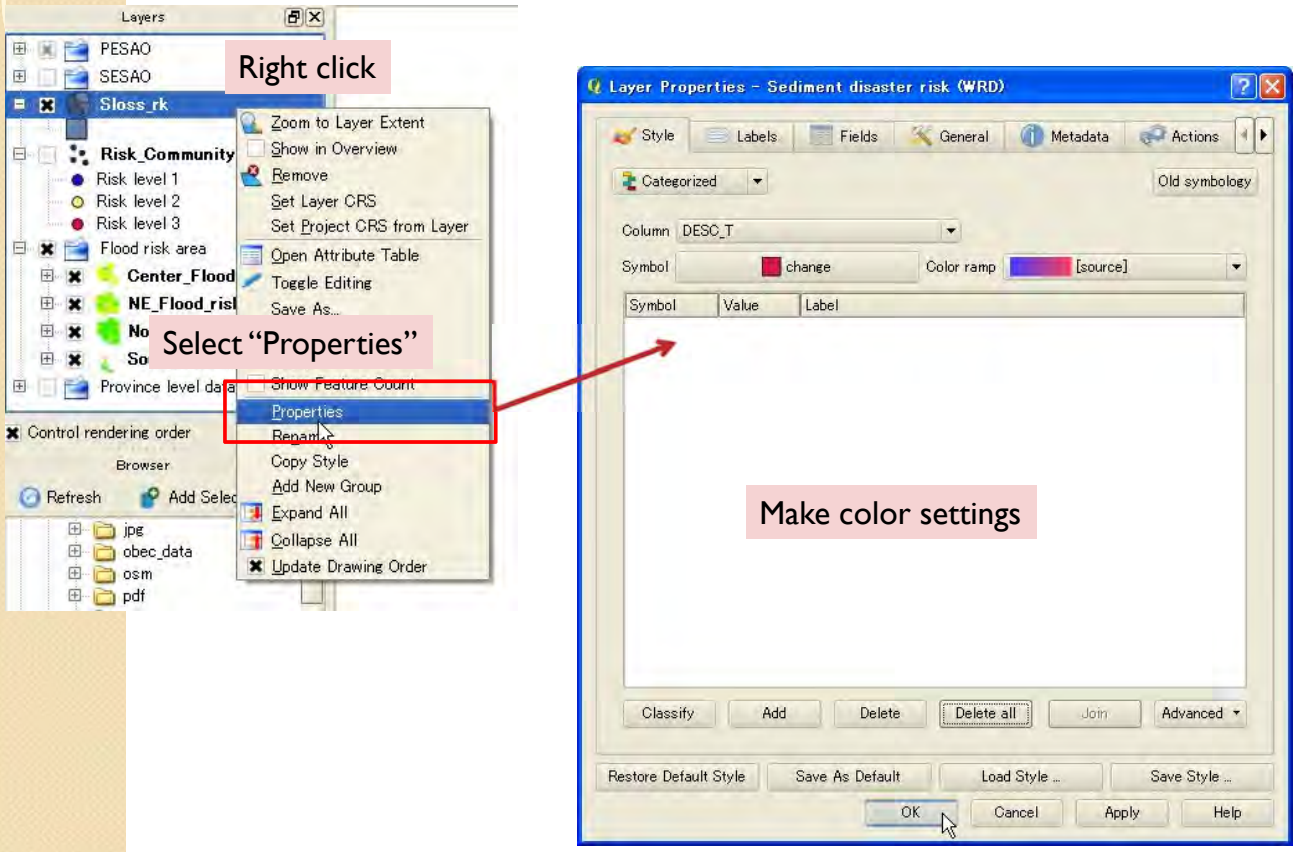
Then, you can see flood risk area

3.5.5 Sediment disaster risk area map

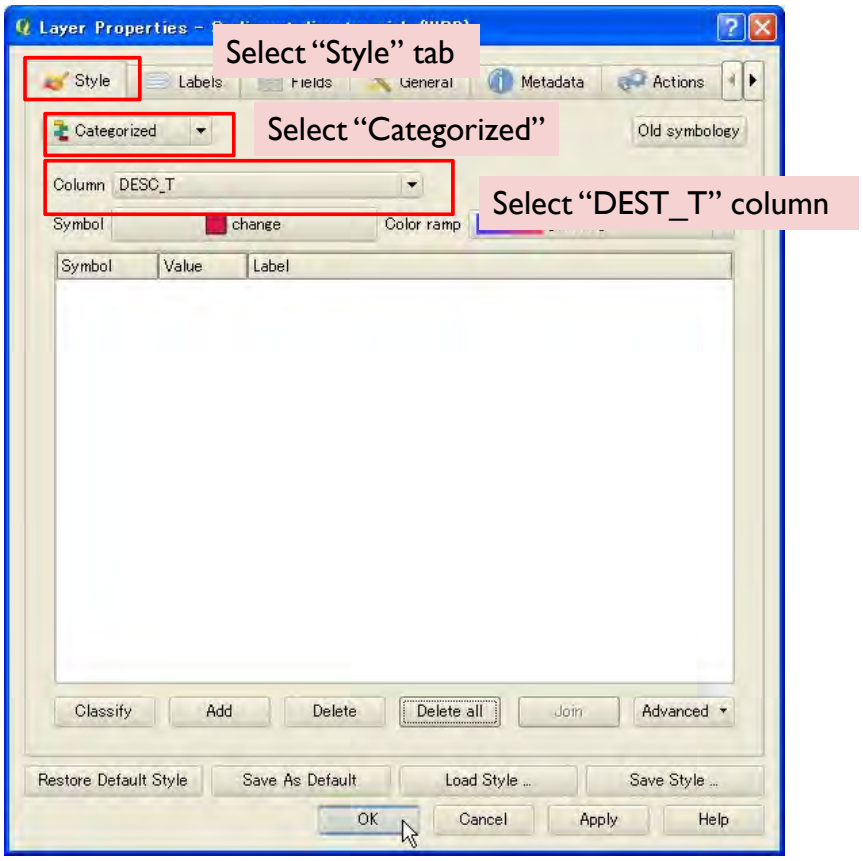


At first, import "Sloss_rk.shp"

3.5.5 Sediment disaster risk area map

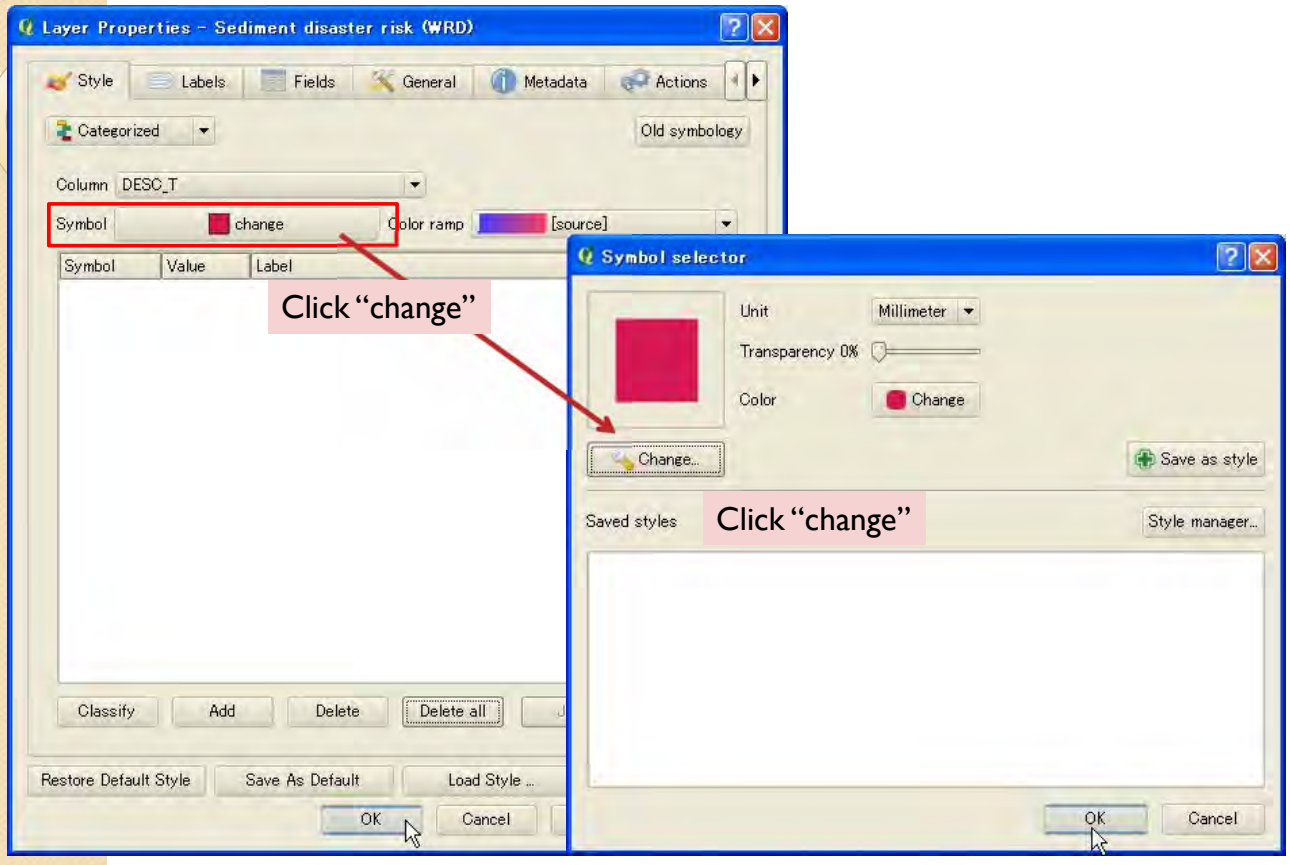


3.5.5 Sediment disaster risk area map

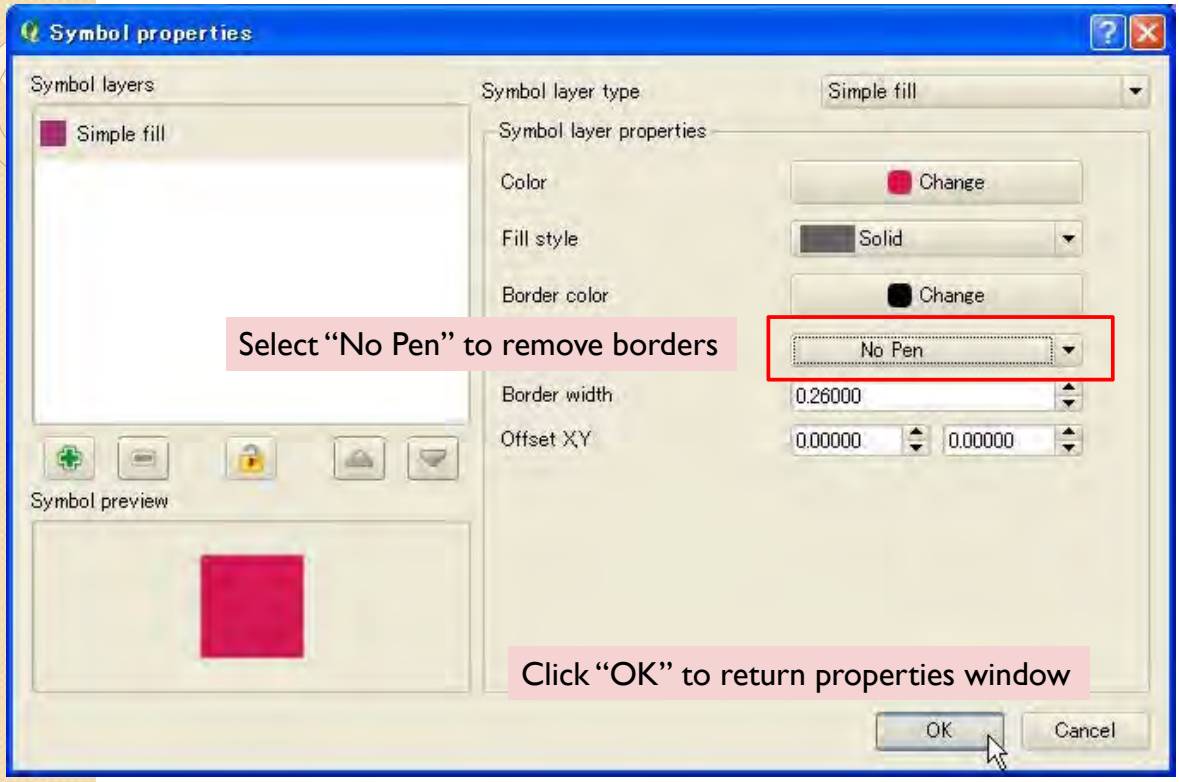


3. Making Inventory Maps

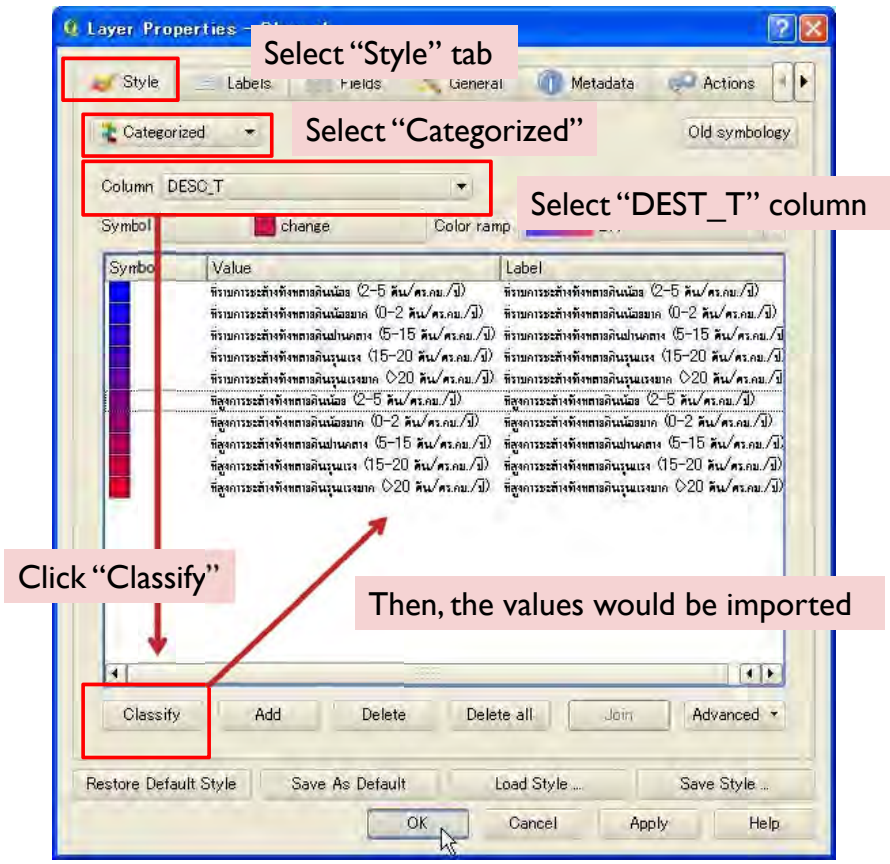
3.5.5 Sediment disaster risk area map



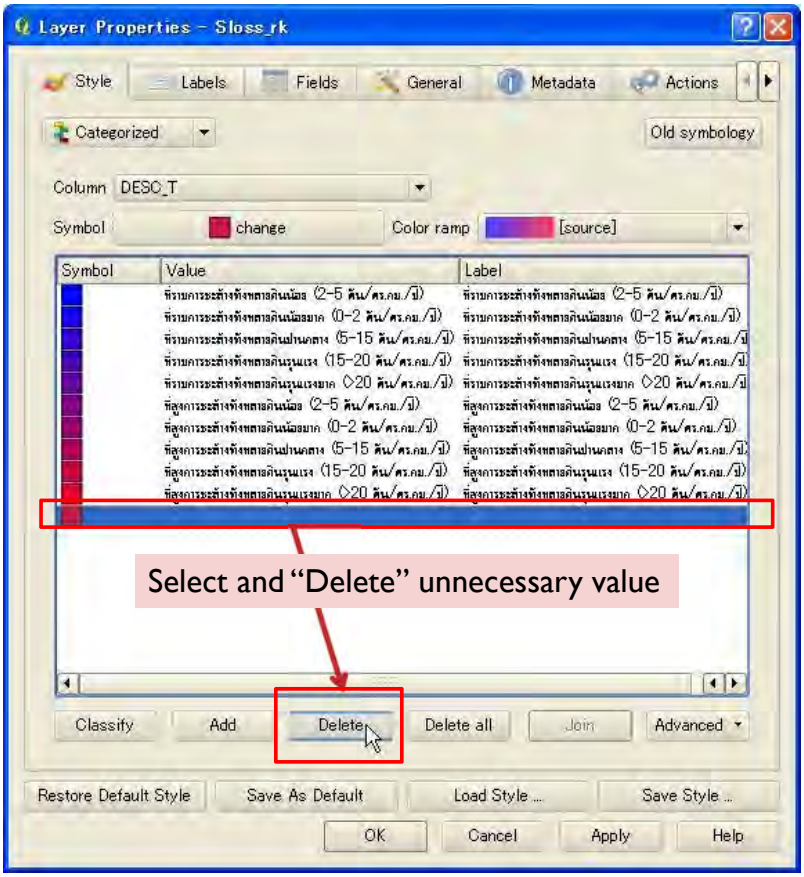
3.5.5 Sediment disaster risk area map



3.5.5 Sediment disaster risk area map

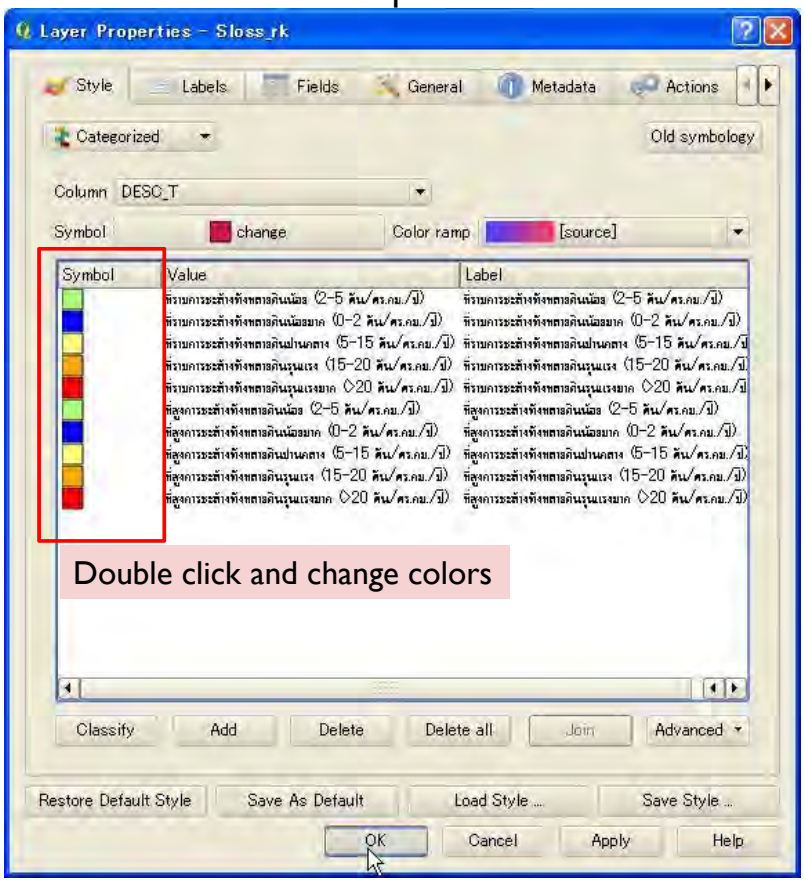


3.5.5 Sediment disaster risk area map

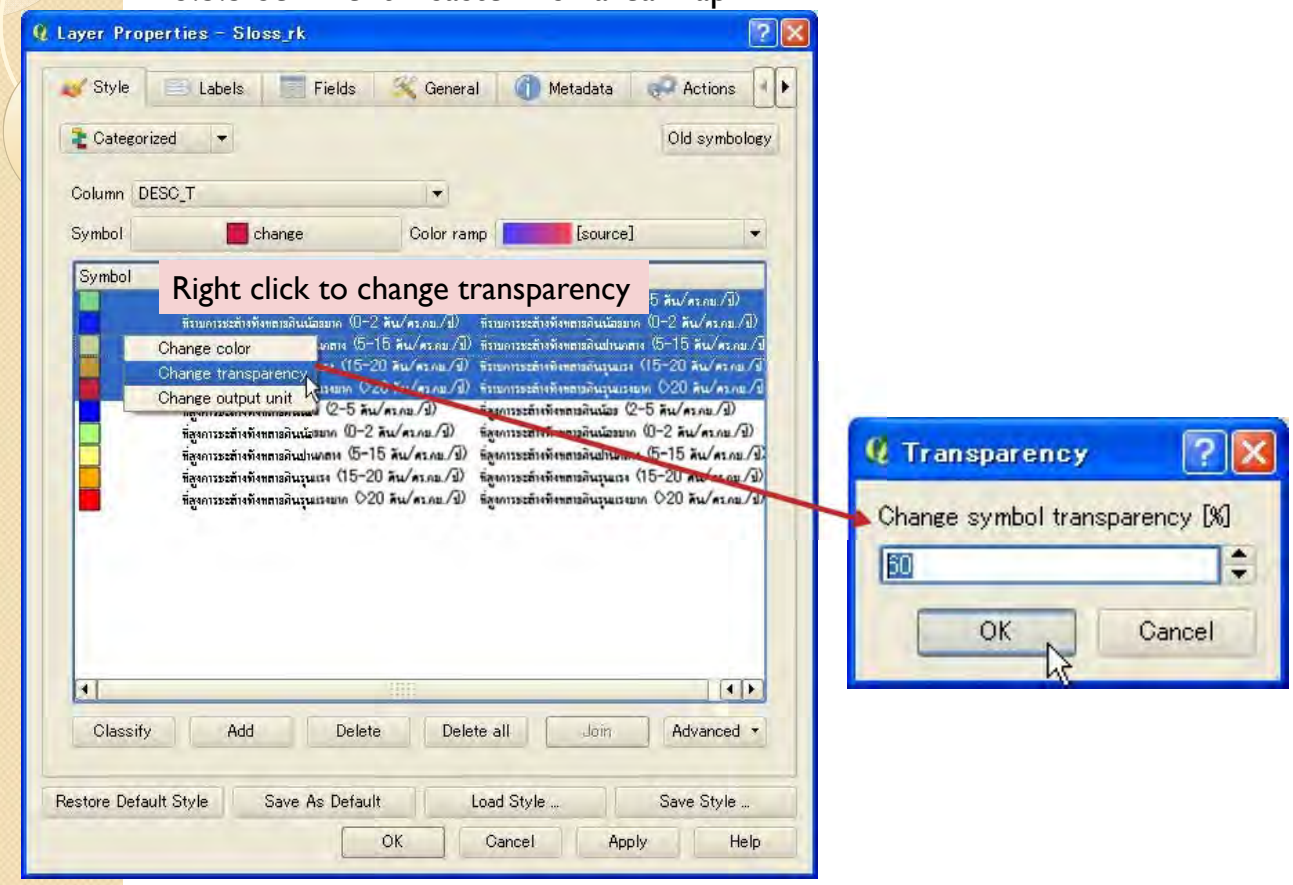


3. Making Inventory Maps

3.5.5 Sediment disaster risk area map

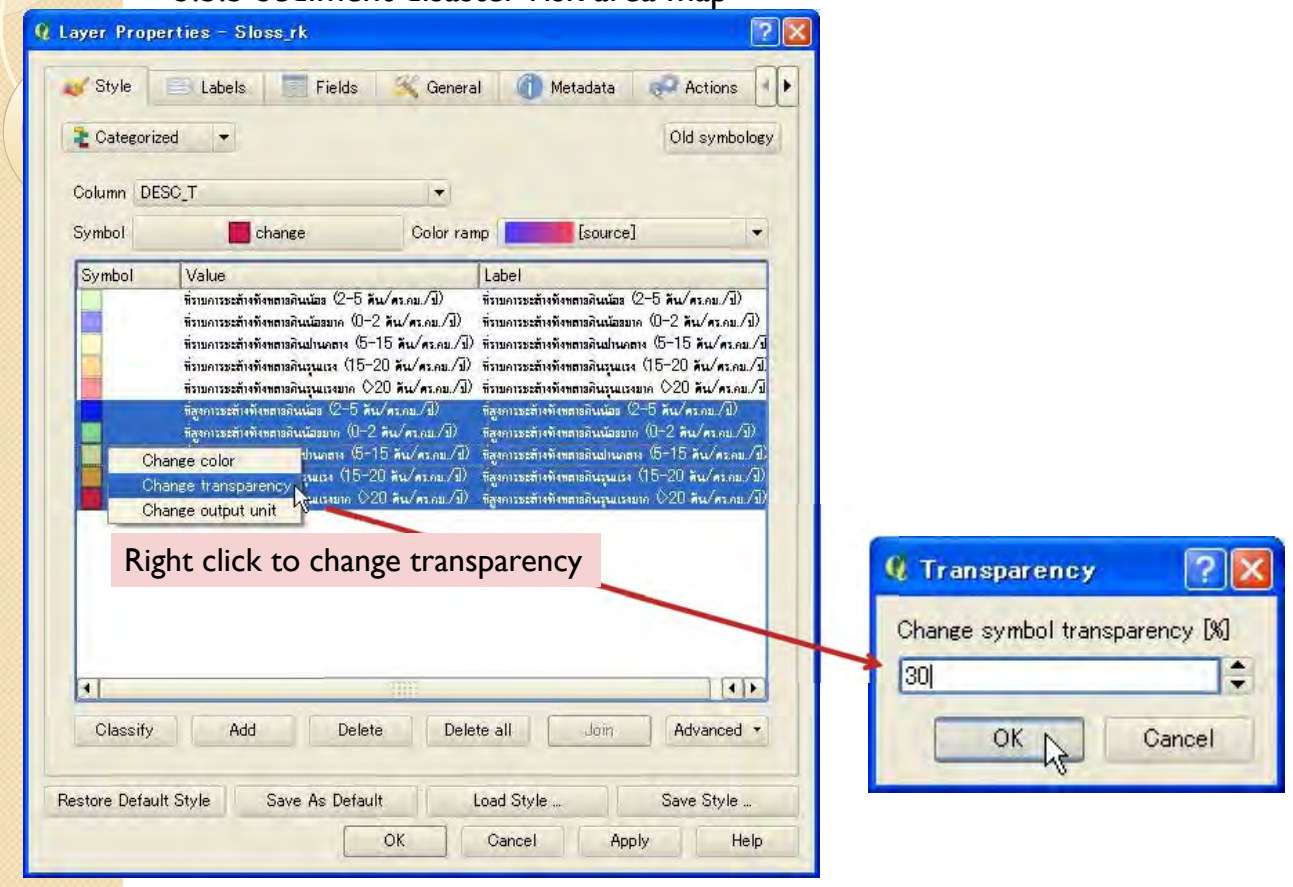


3.5.5 Sediment disaster risk area map

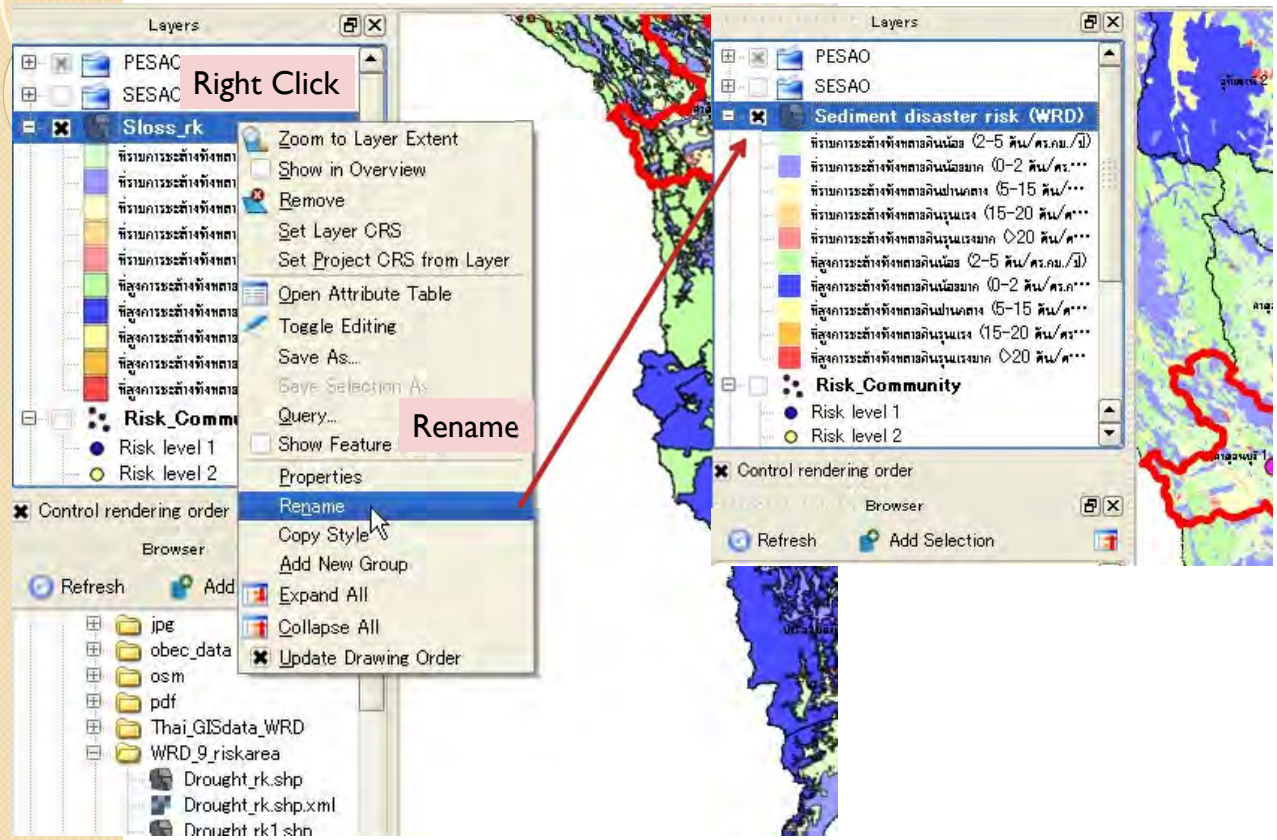


3. Making Inventory Maps

3.5.5 Sediment disaster risk area map

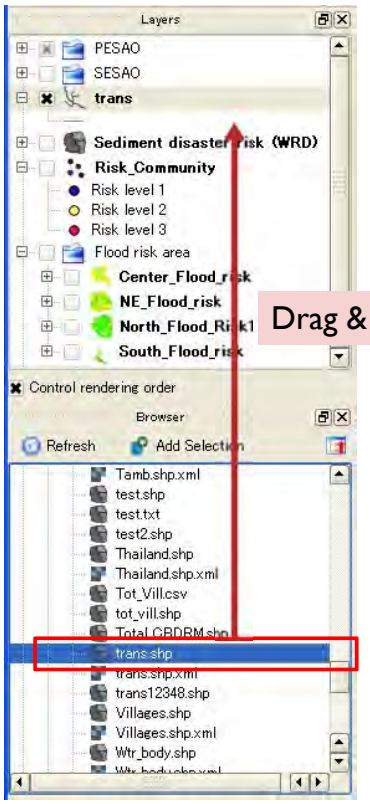


3.5.5 Sediment disaster risk area map



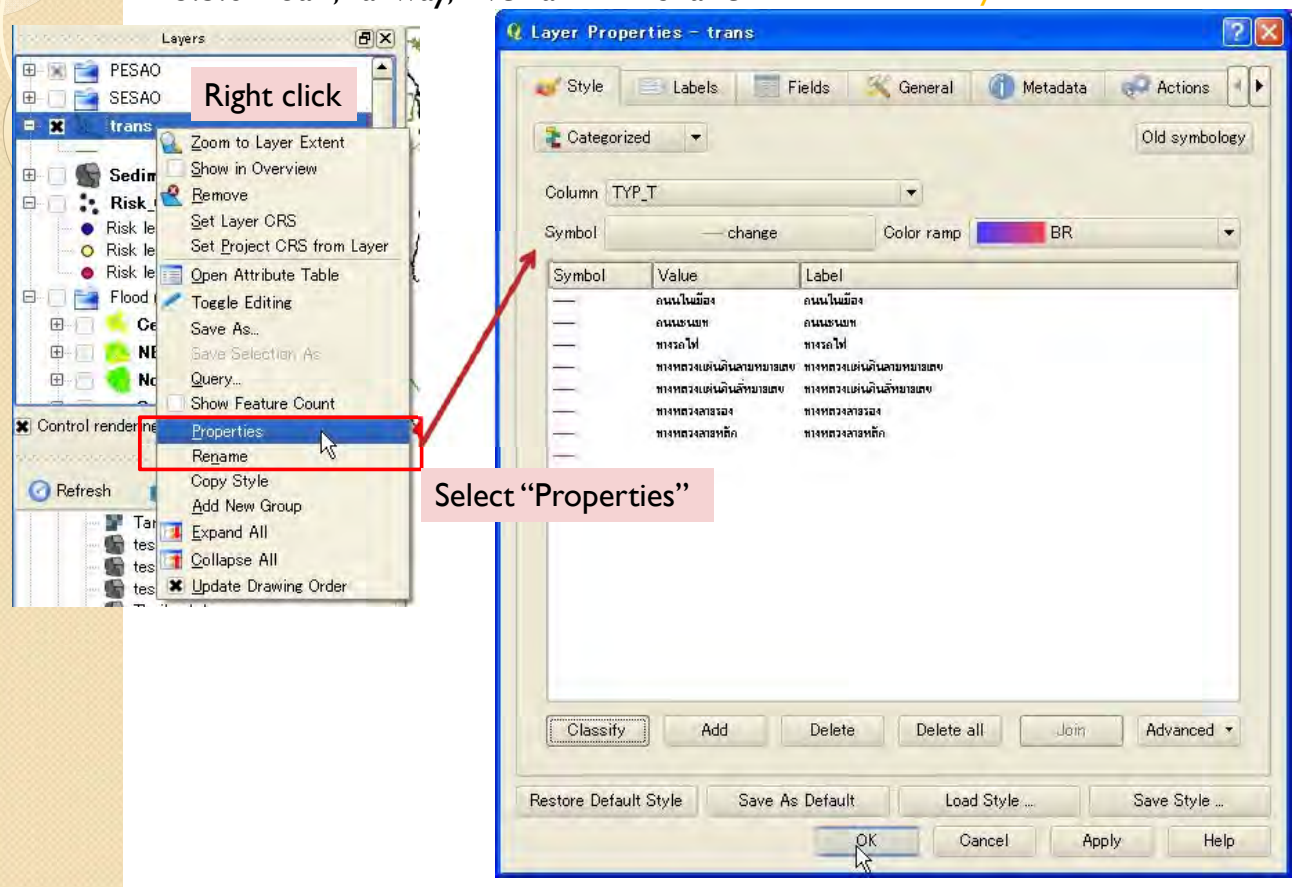
3.5.6 Road, railway, river and hill shade

Road and railway

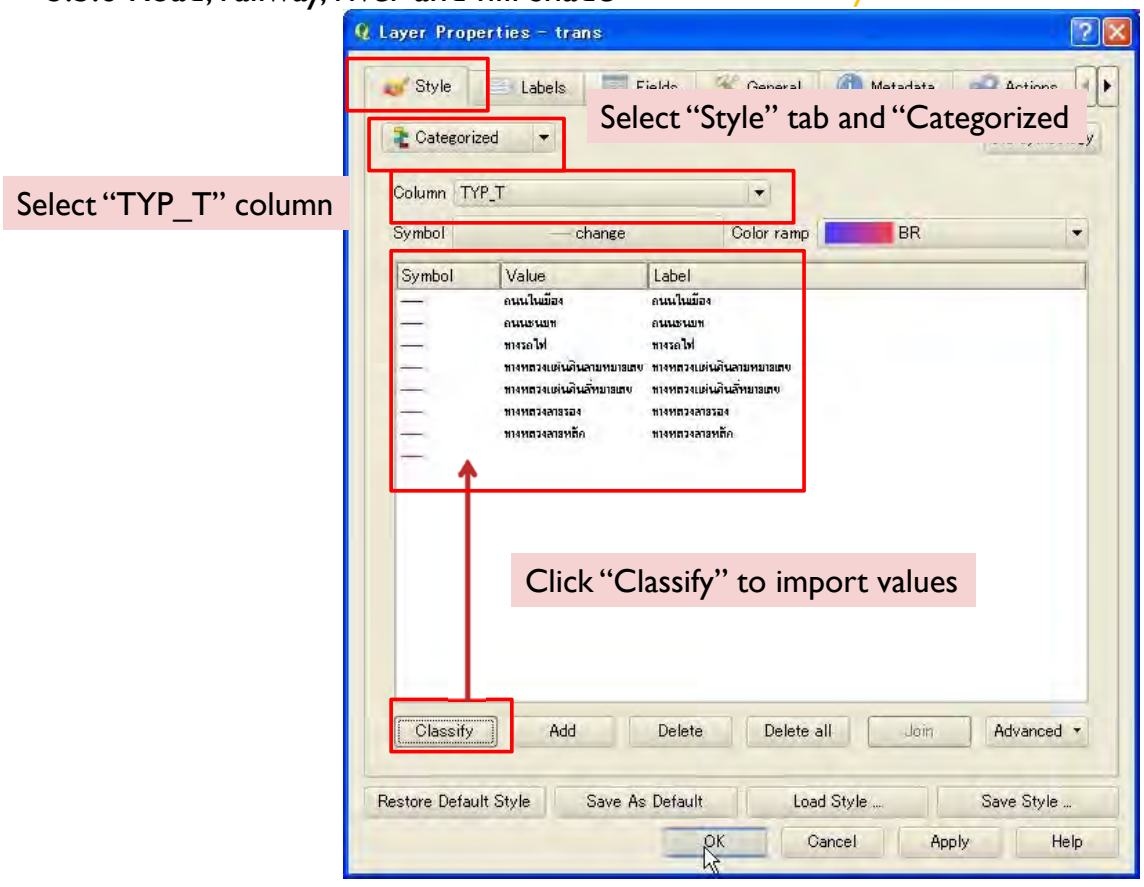


Import "trans.shp"

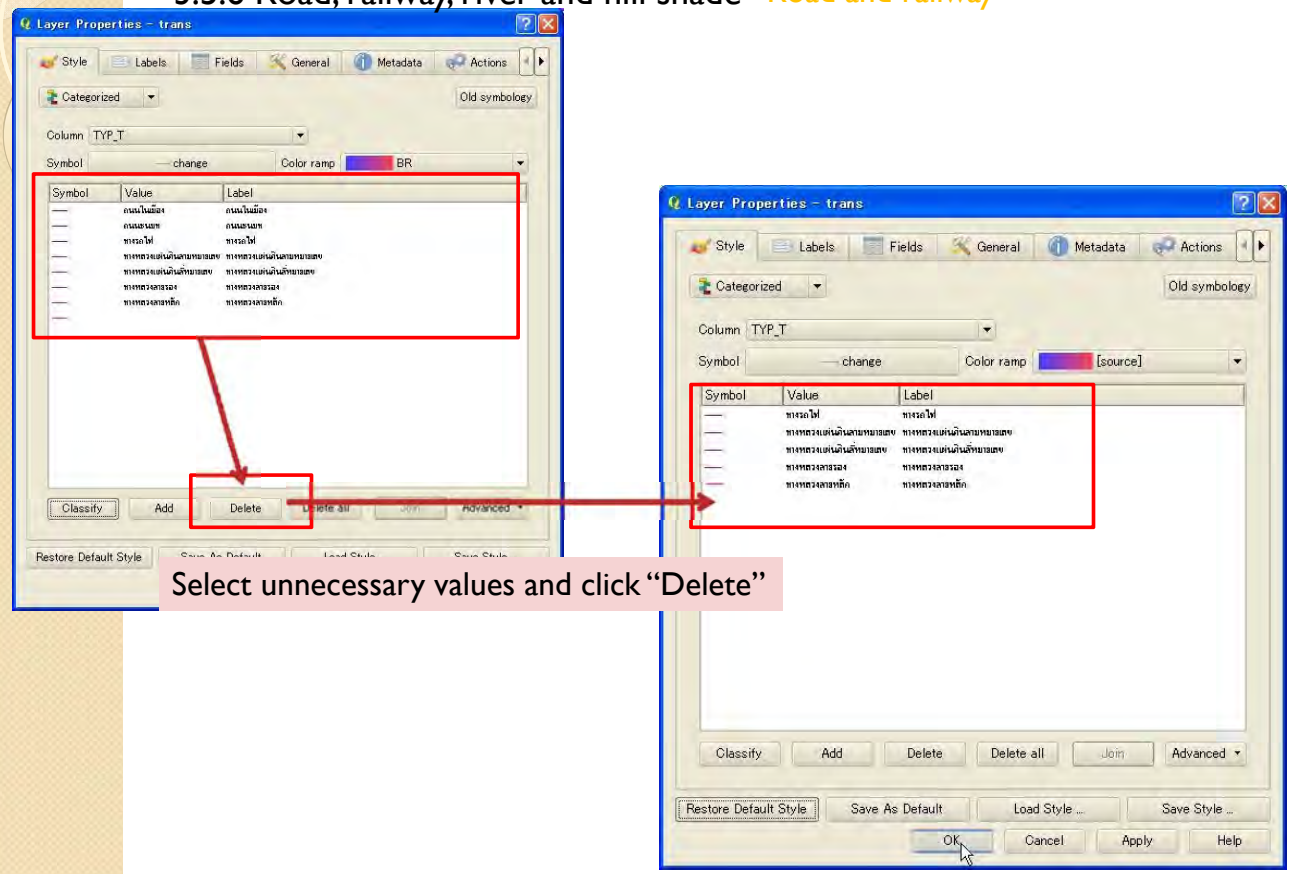
3.5.6 Road, railway, river and hill shade Road and railway



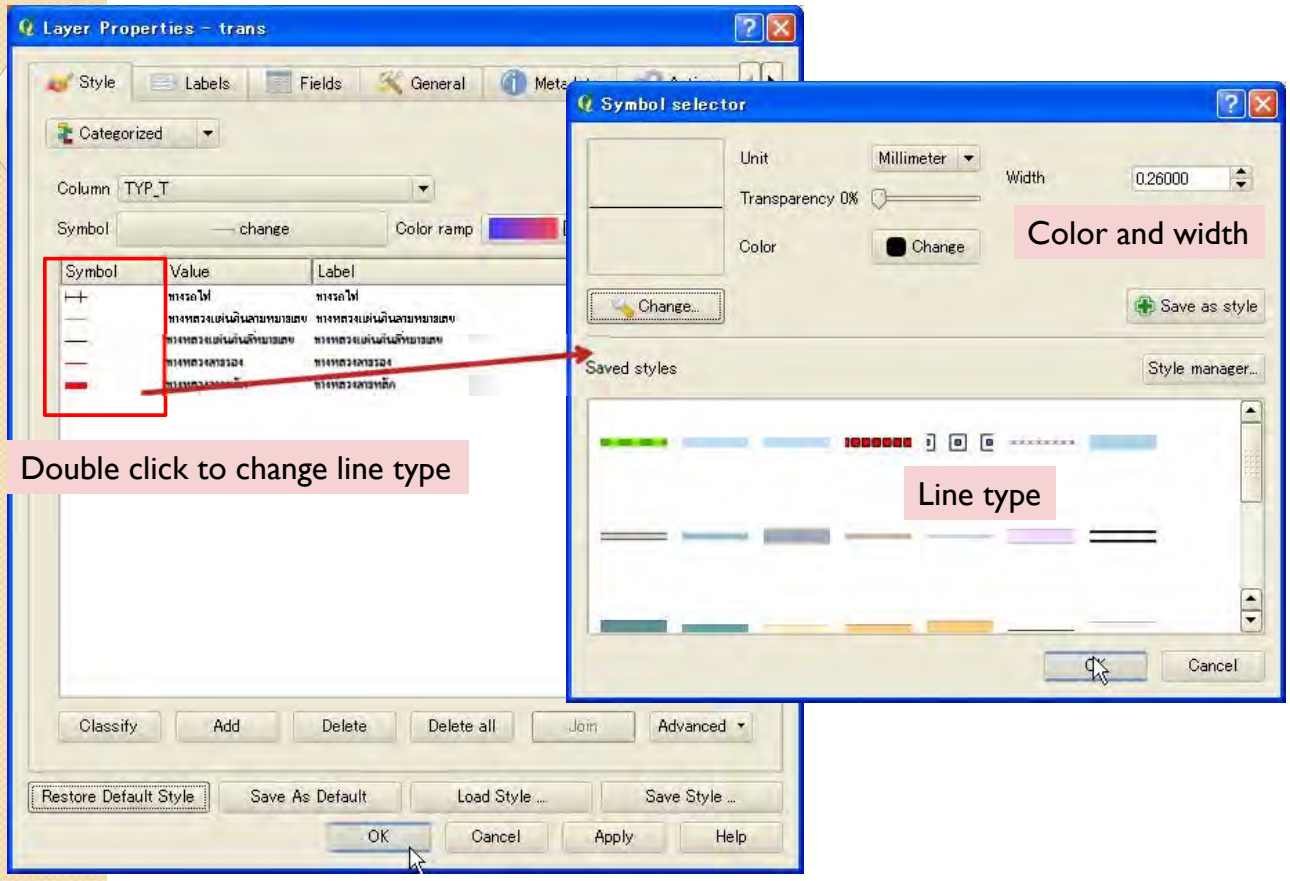
3.5.6 Road, railway, river and hill shade Road and railway



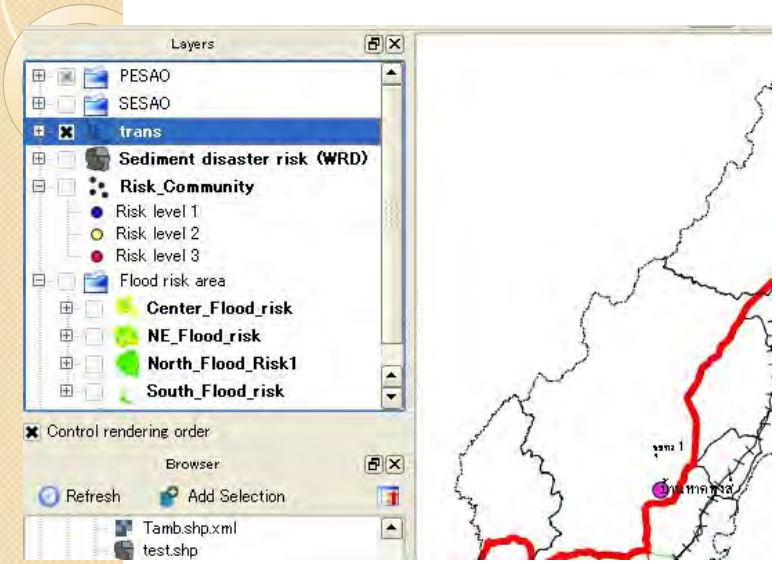
3.5.6 Road, railway, river and hill shade Road and railway



3.5.6 Road, railway, river and hill shade Road and railway

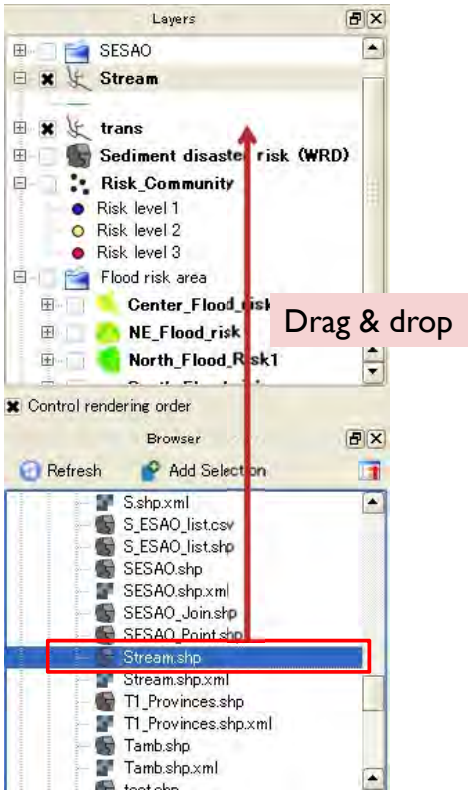


3.5.6 Road, railway, river and hill shade Road and railway



Then, you can see transportation map

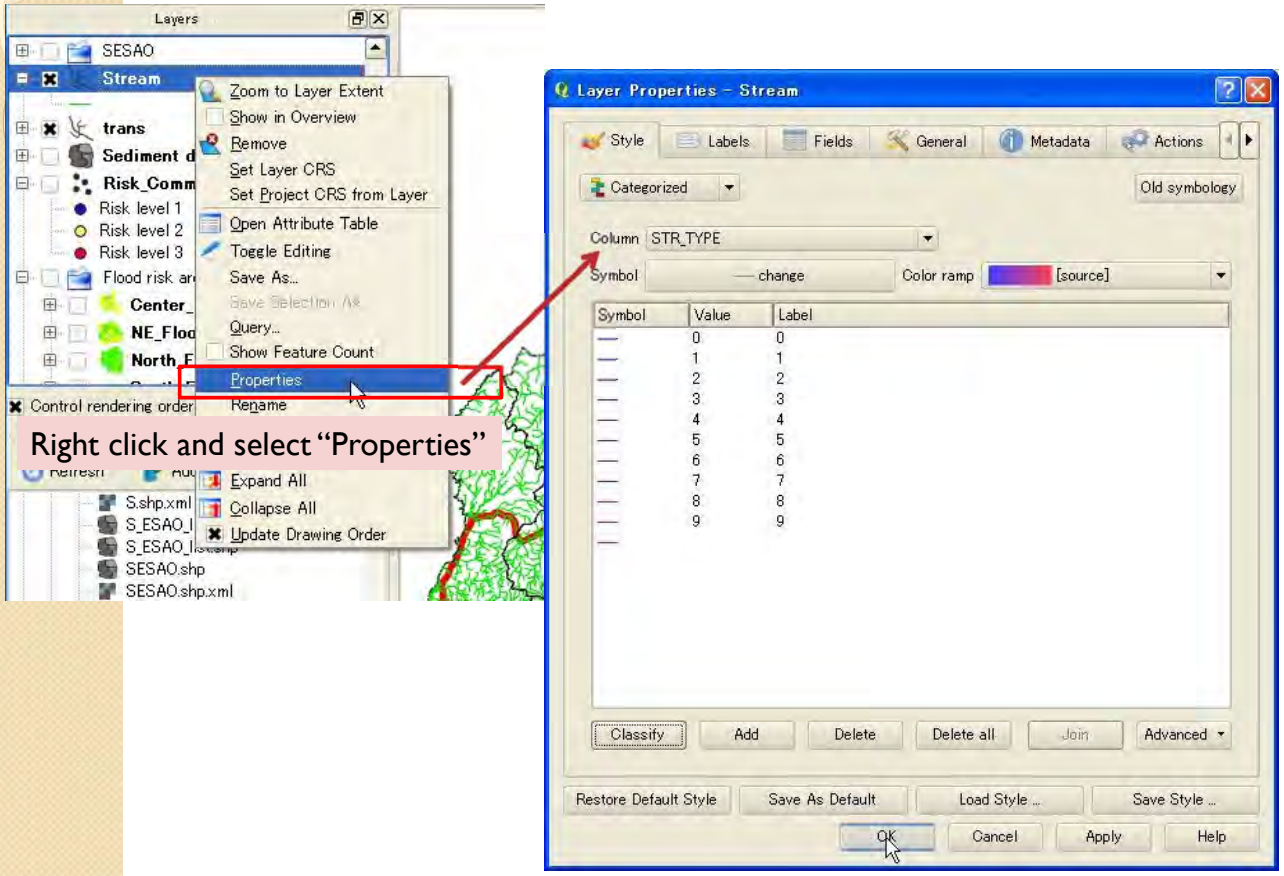
3.5.6 Road, railway, river and hill shade River



Drag & drop

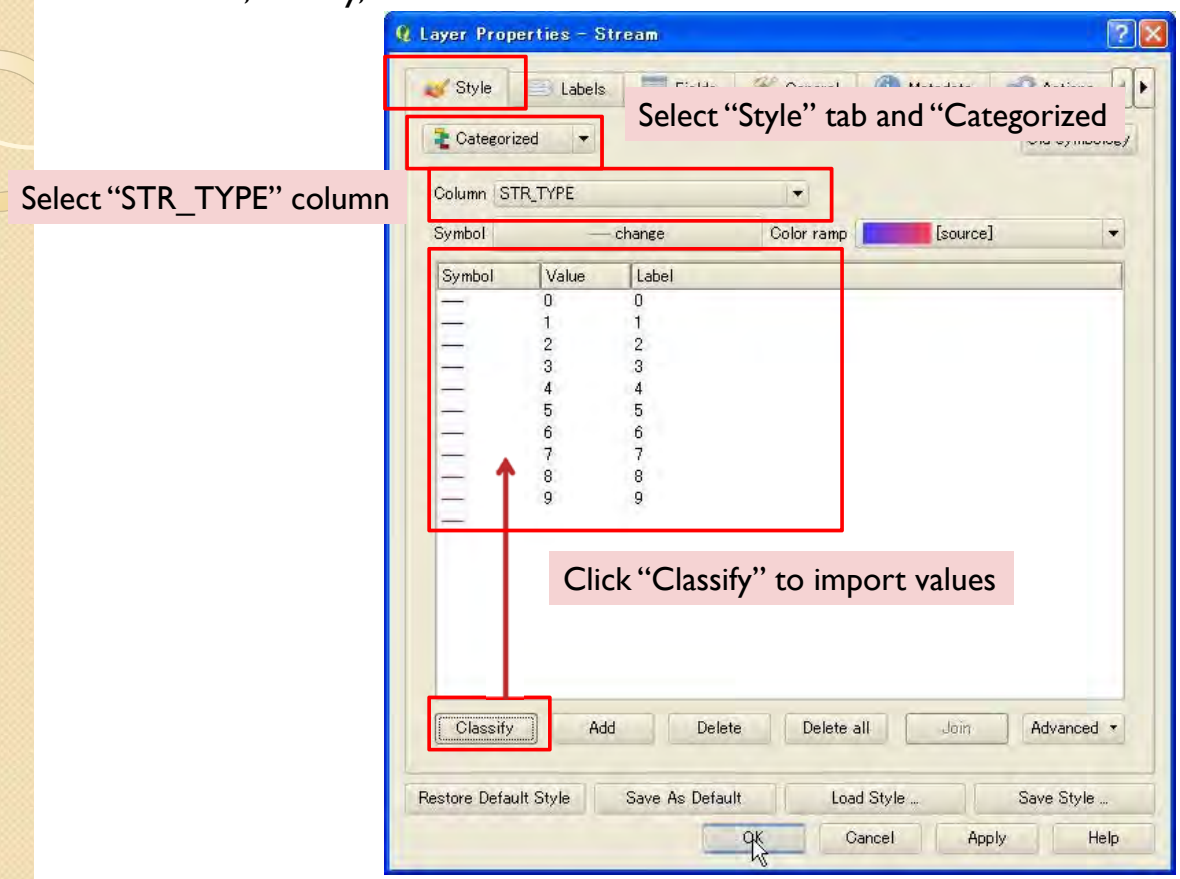
Import “Stream.shp”

3.5.6 Road, railway, river and hill shade River

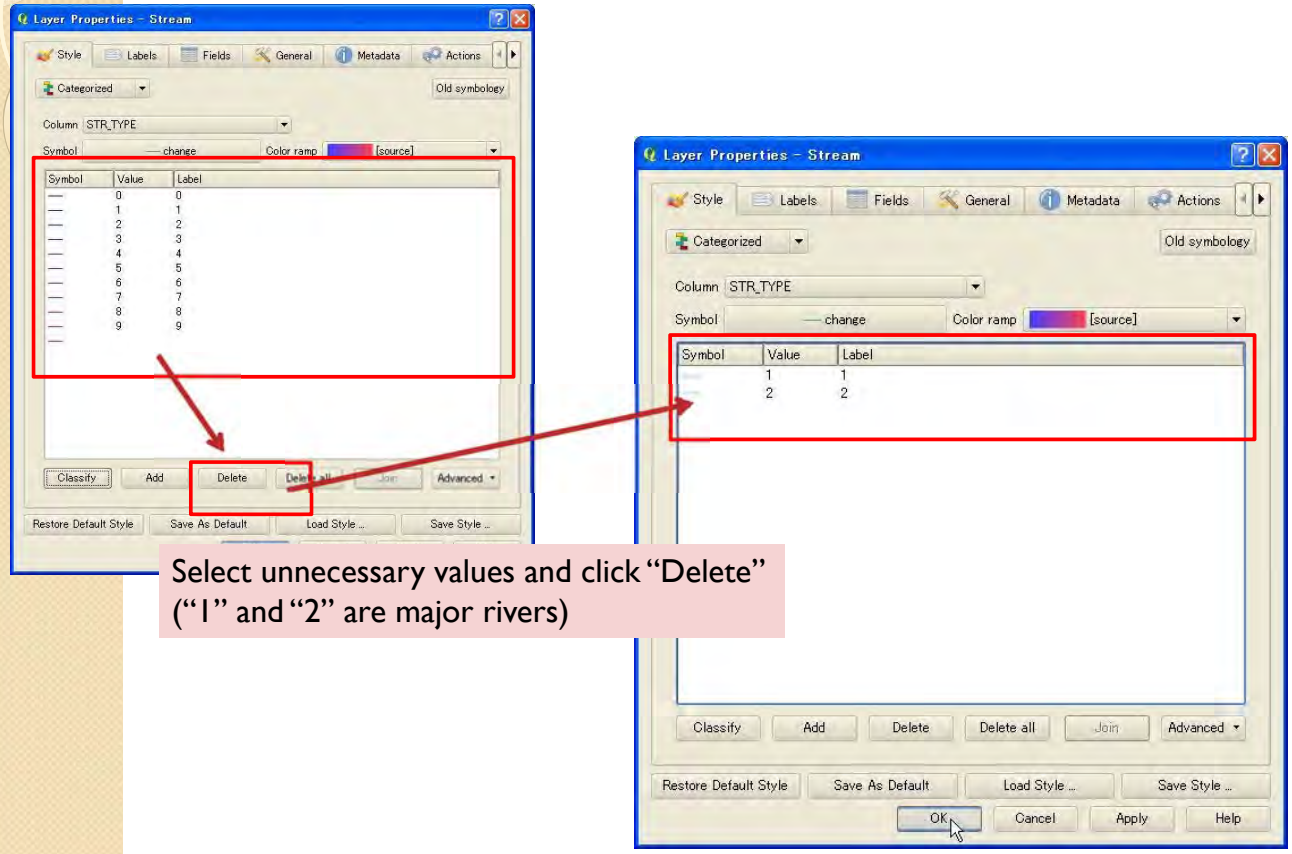


3. Making Inventory Maps

3.5.6 Road, railway, river and hill shade River



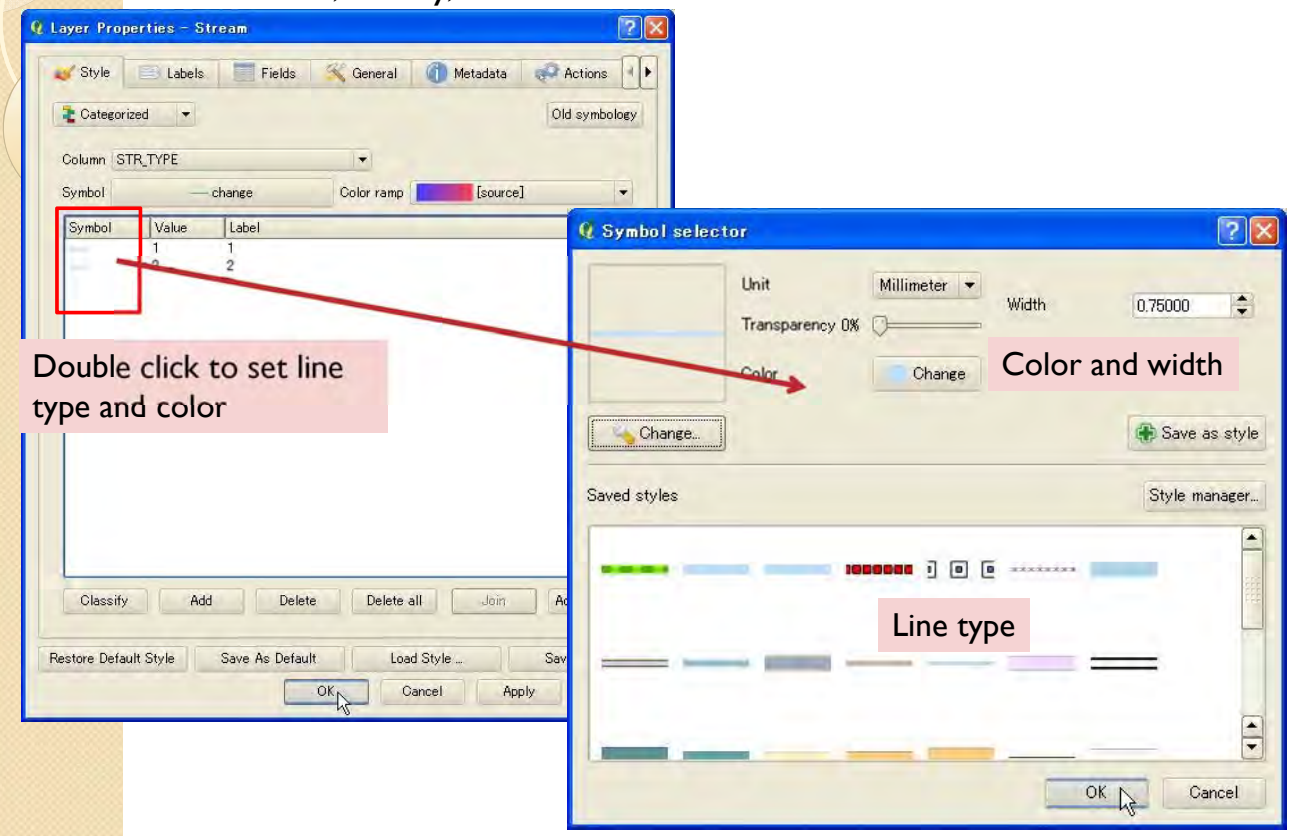
3.5.6 Road, railway, river and hill shade River



Select unnecessary values and click "Delete" ("1" and "2" are major rivers)

3. Making Inventory Maps

3.5.6 Road, railway, river and hill shade River

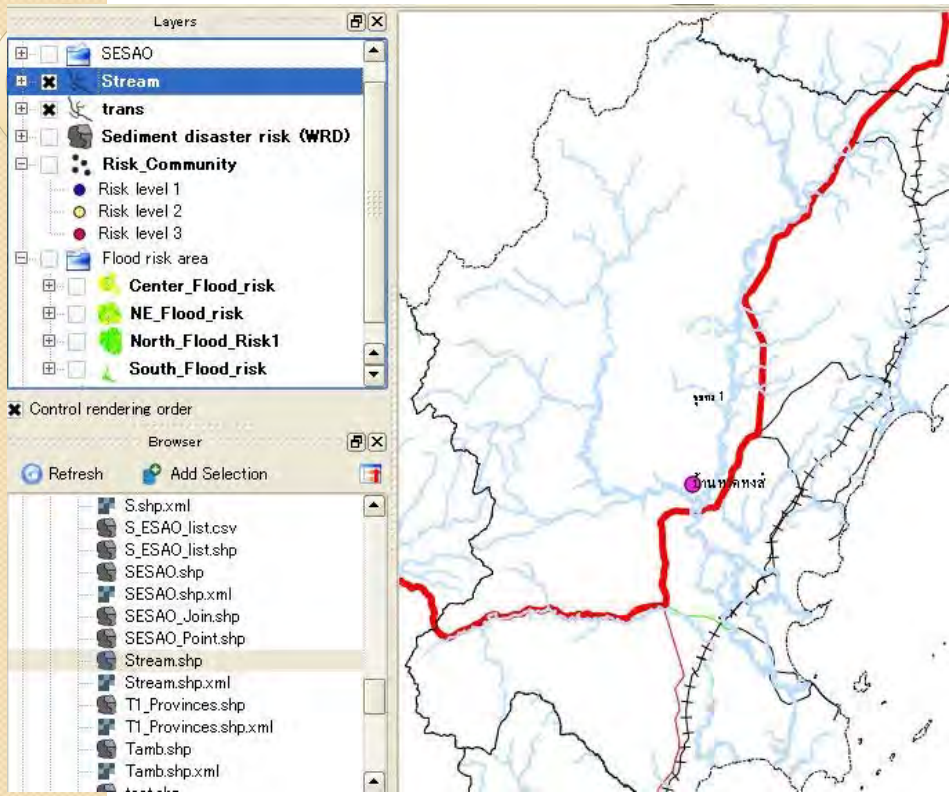


Double click to set line type and color

Color and width

3. Making Inventory Maps

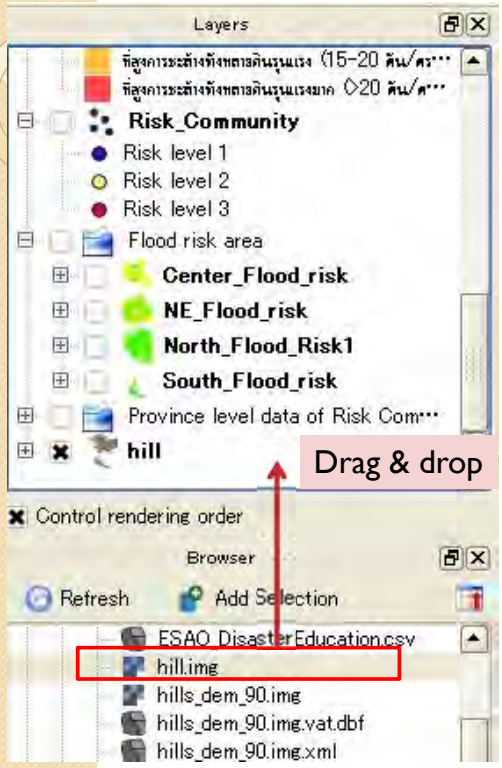
3.5.6 Road, railway, river and hill shade River



Then, river map is displayed.

3. Making Inventory Maps

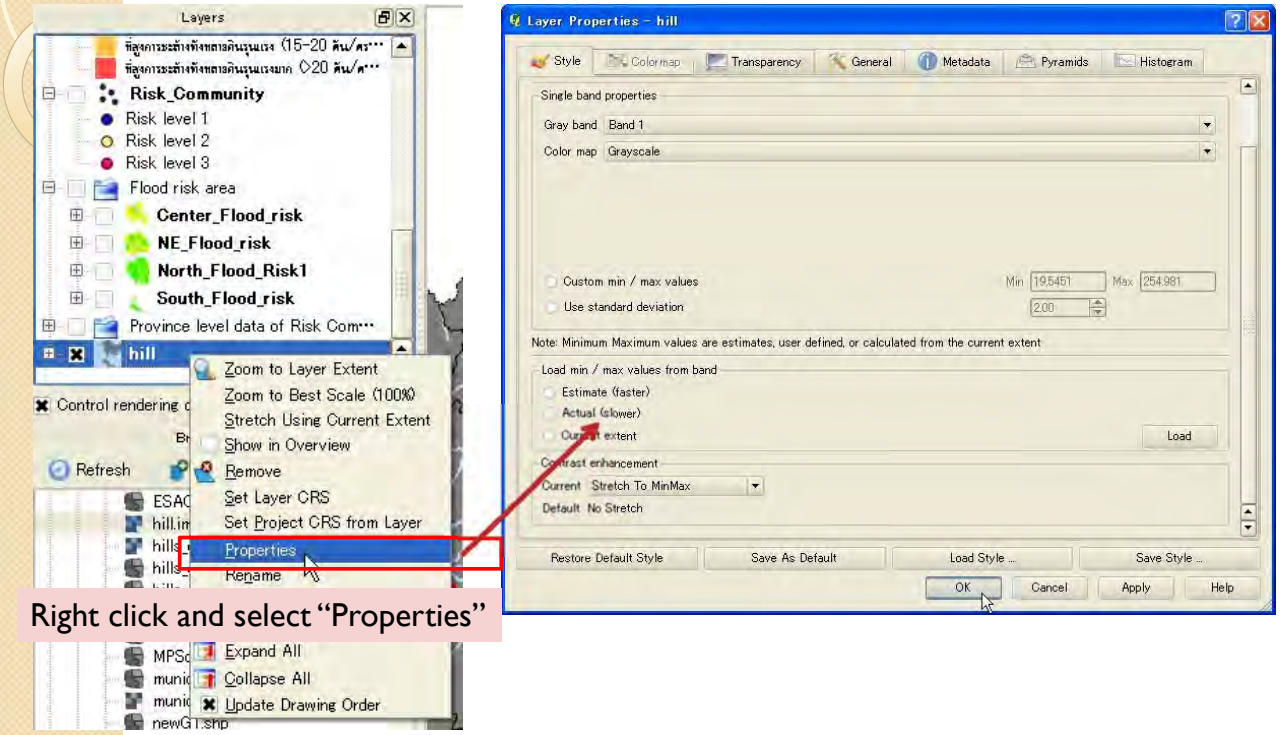
3.5.6 Road, railway, river and hill shade Hill shade



Import “hill.img”

3. Making Inventory Maps

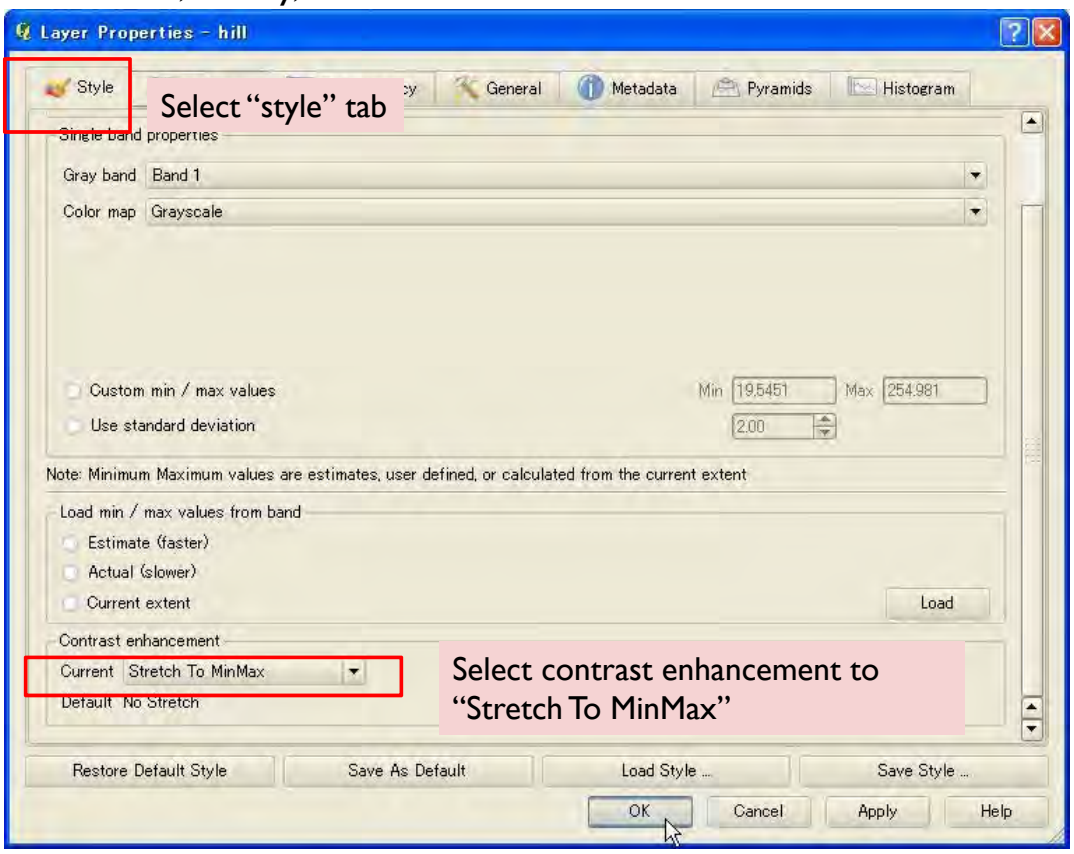
3.5.6 Road, railway, river and hill shade Hill shade



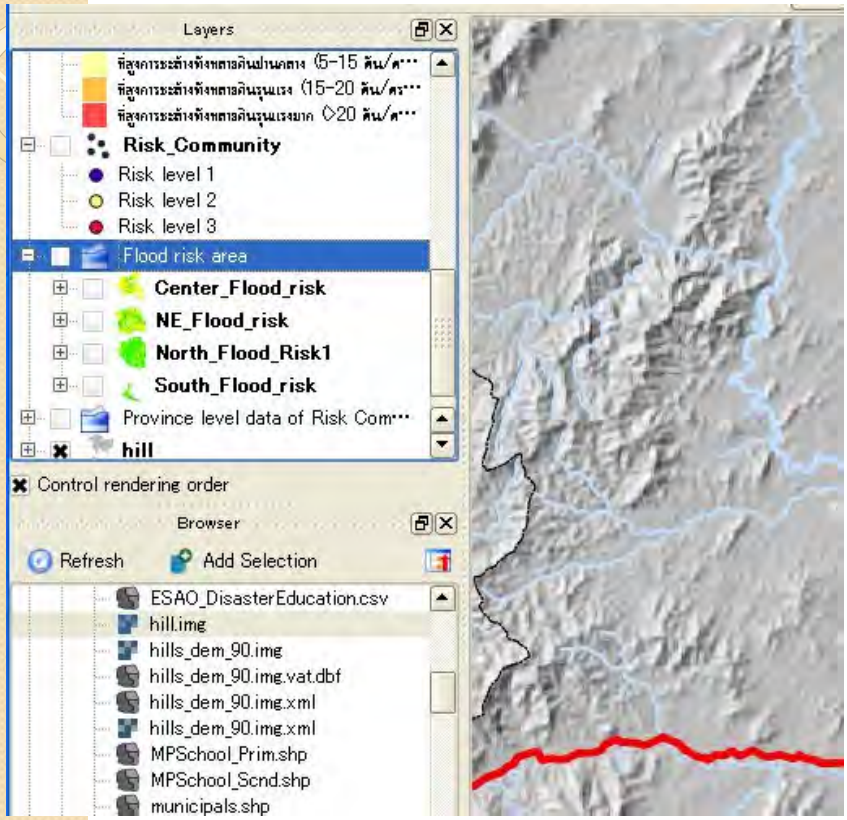
Right click and select "Properties"

3. Making Inventory Maps

3.5.6 Road, railway, river and hill shade Hill shade

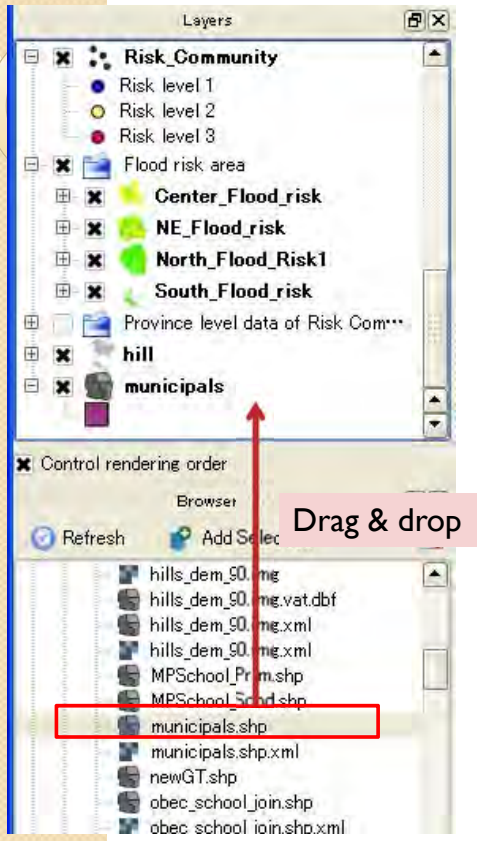


3.5.6 Road, railway, river and hill shade Hill shade



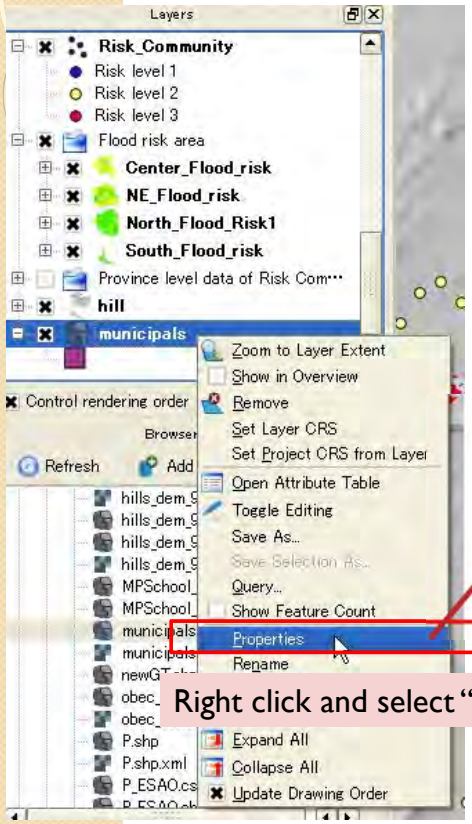
Then, you can display hill shade.

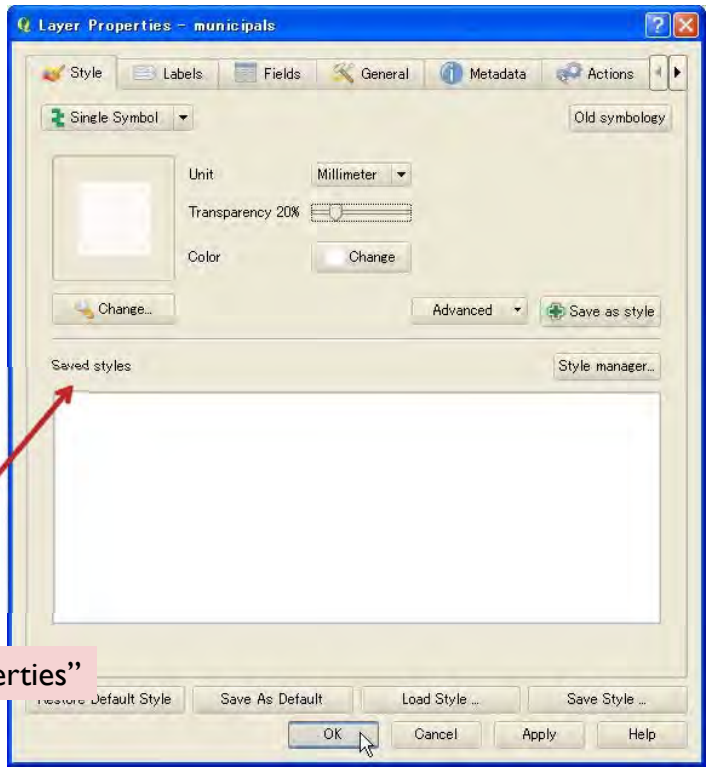
3.5.6 Road, railway, river and hill shade City labels



Import “municipals.shp”

3.5.6 Road, railway, river and hill shade City labels

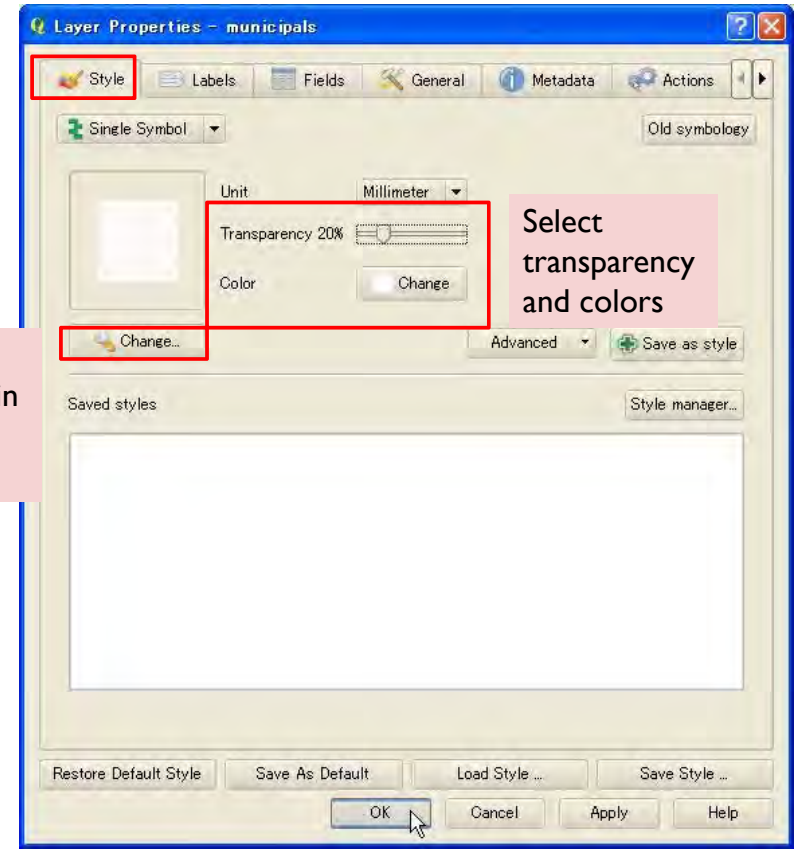




3. Making Inventory Maps

3.5.6 Road, railway, river and hill shade City labels

Select "Style" tab



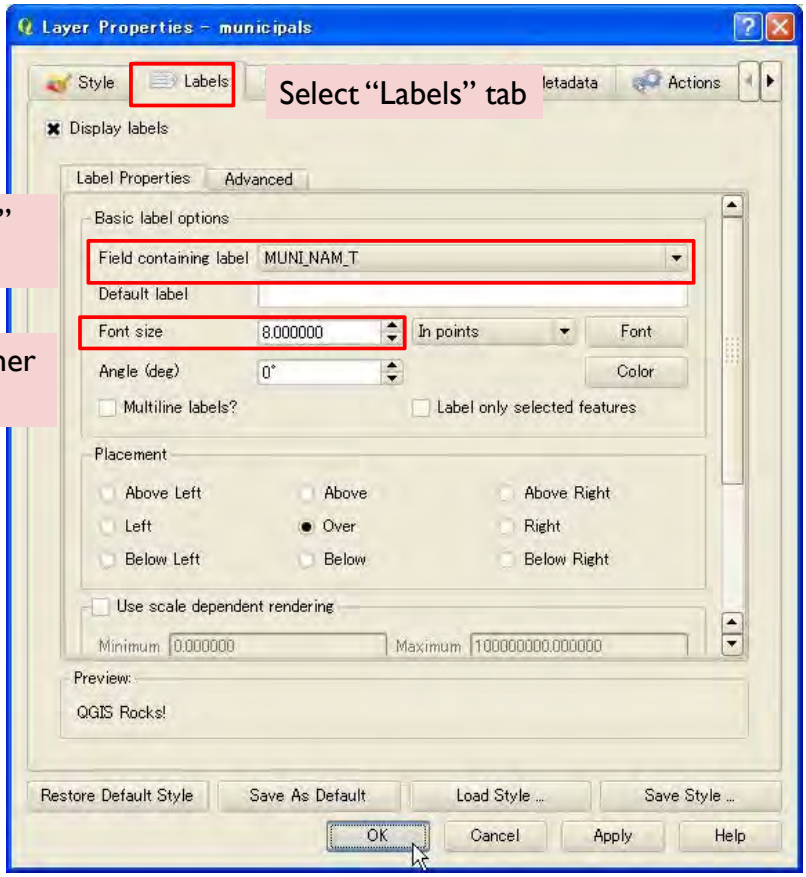
Select transparency and colors

If you want to change the color in detail, please click "Change" button.

3.5.6 Road, railway, river and hill shade City labels

Select "MUNI_NAM_T" column to display

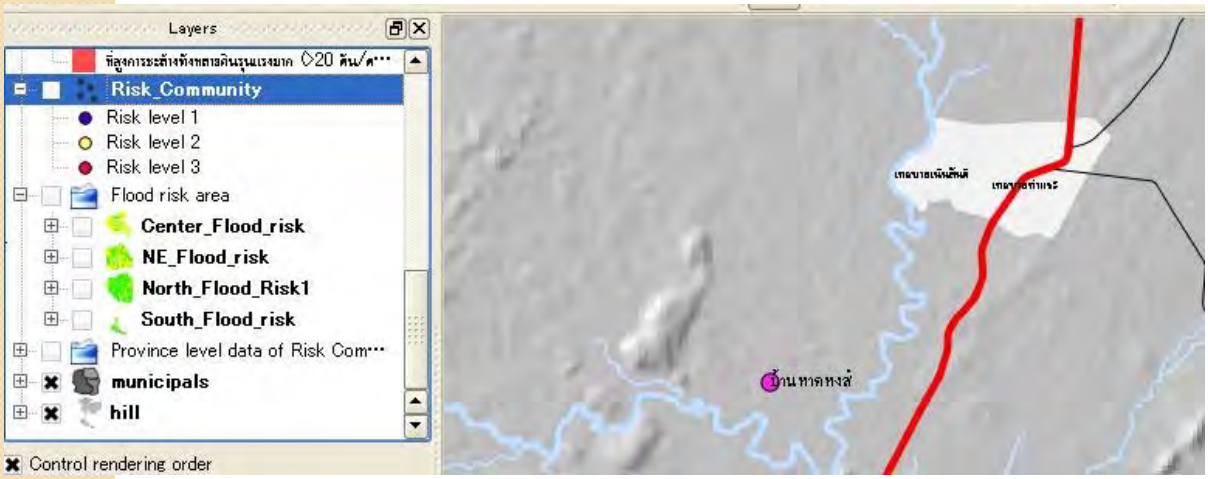
Font size and other settings here



3. Making Inventory Maps

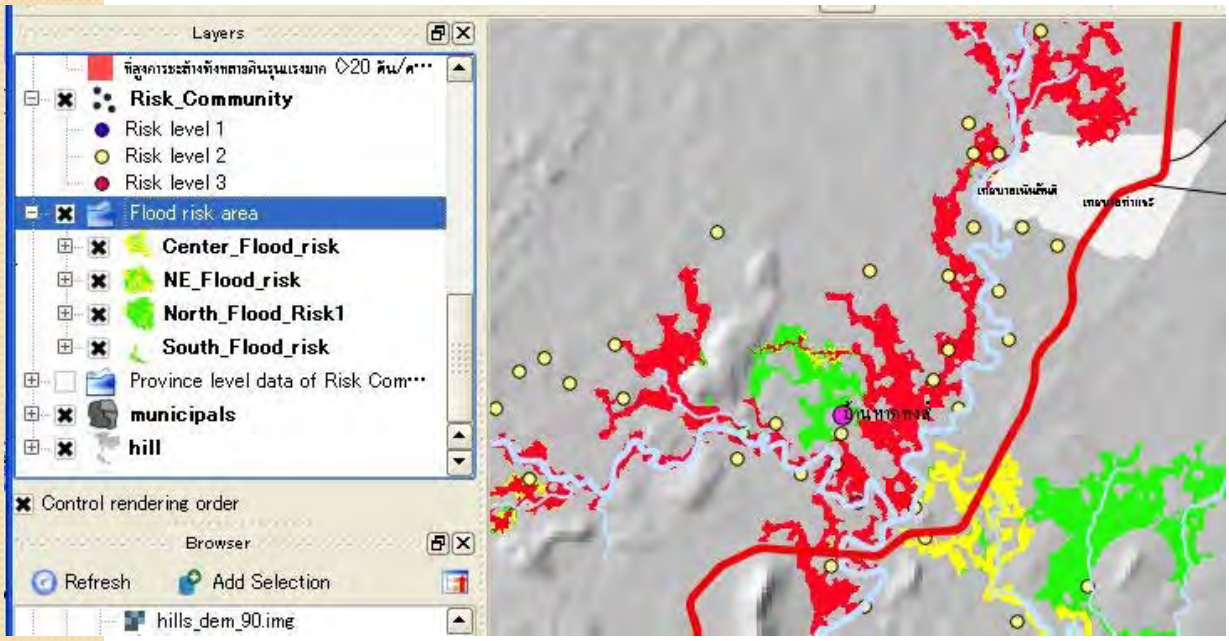
3.5.6 Road, railway, river and hill shade City labels

Then you can see cities.



3.5.7 Change order and display

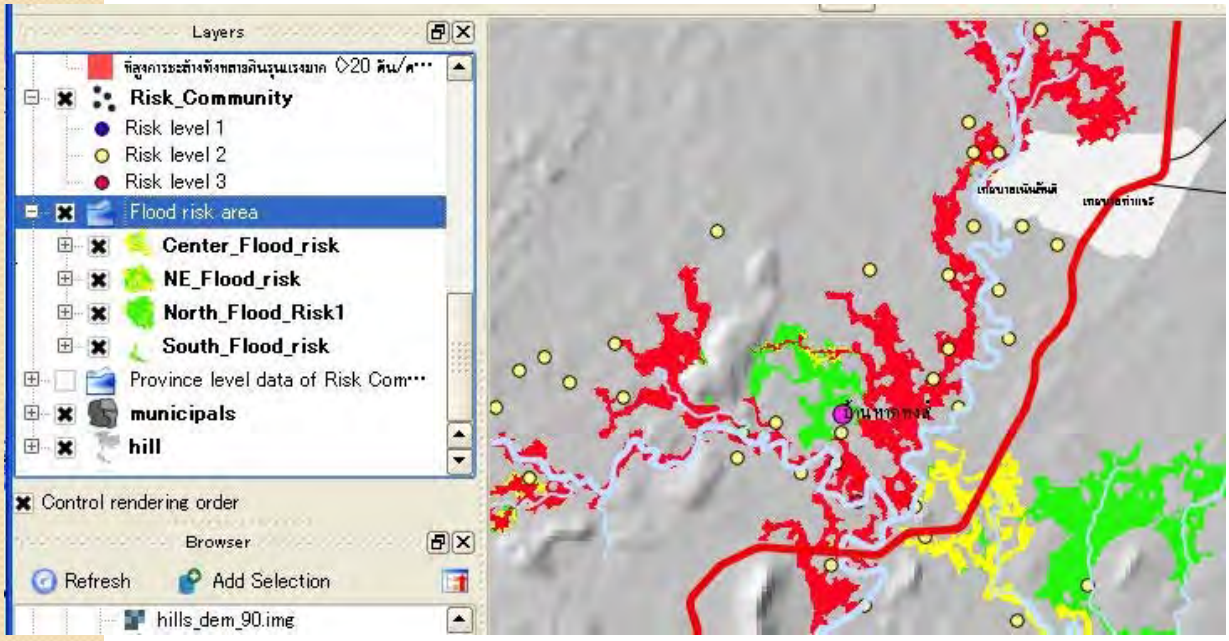
You can change display order and layers.
The following example shows risk communities and flood risk area with pilot school. Such information is useful to understand risk area distribution and to make decision about disaster education action plan and pilot/model site.



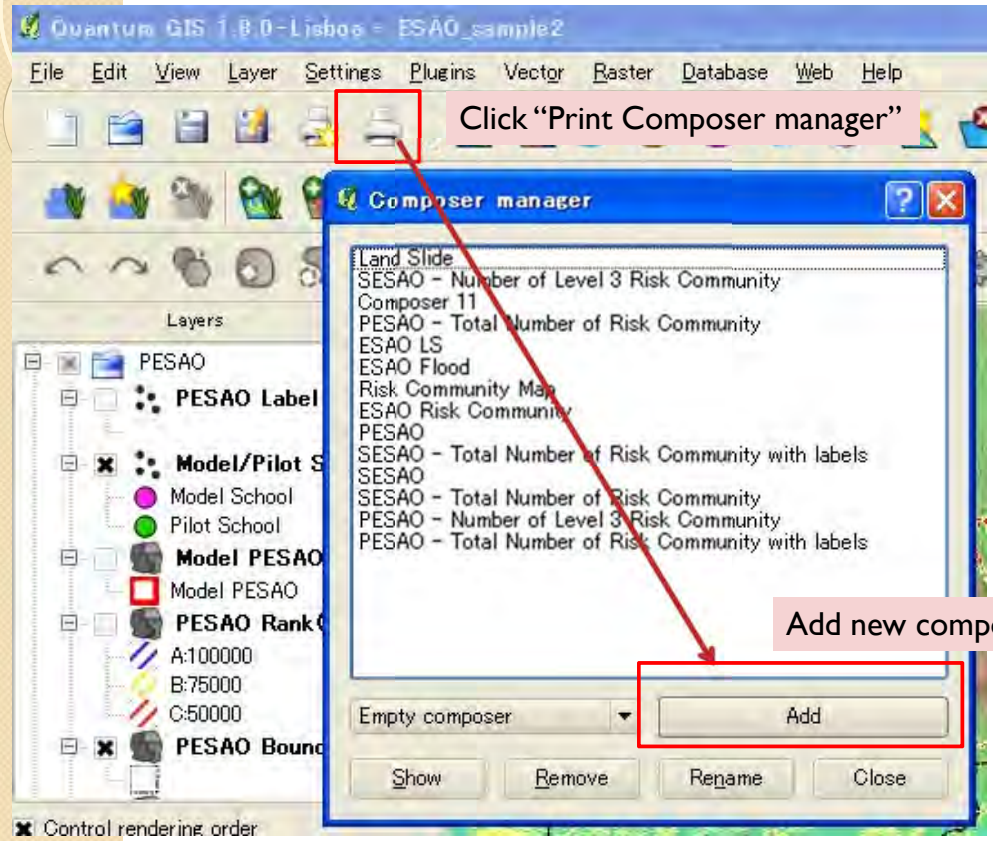
3. Making Inventory Maps

3.5.7 Change order and display

Note: These information is one of indicators for disaster risk. Out of the indicated risk area do not mean actual no risk area.
The data of risk community still contains any wrong and missing locations.

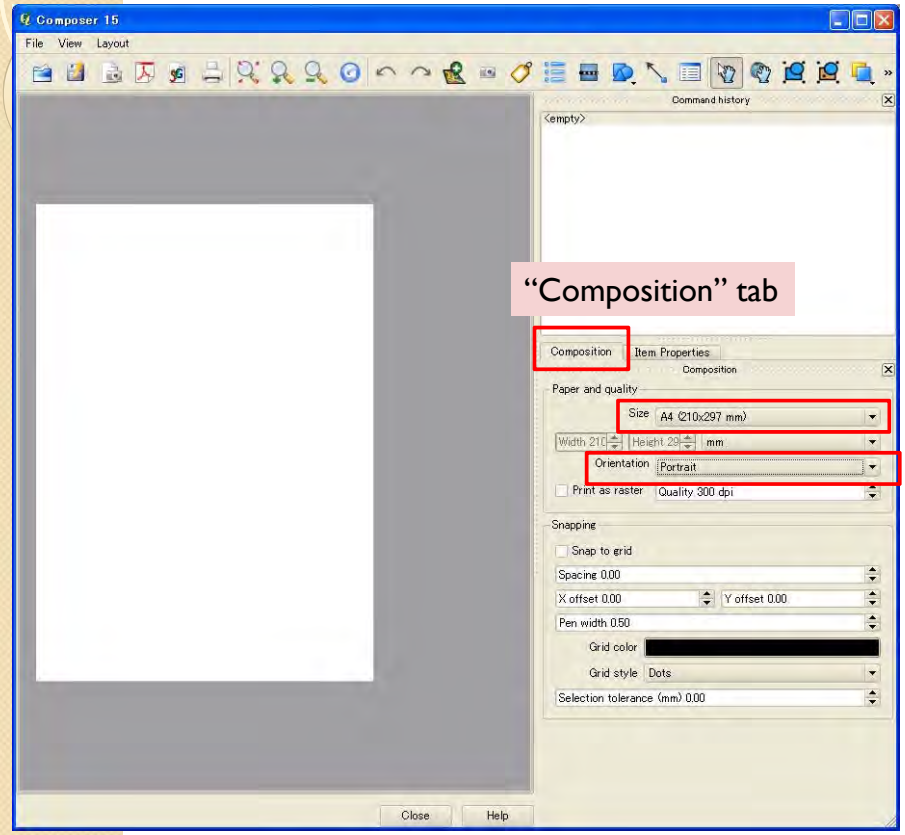


3.6 Print Composer



To make image file or print map, please make "print composer".

3.6 Print Composer



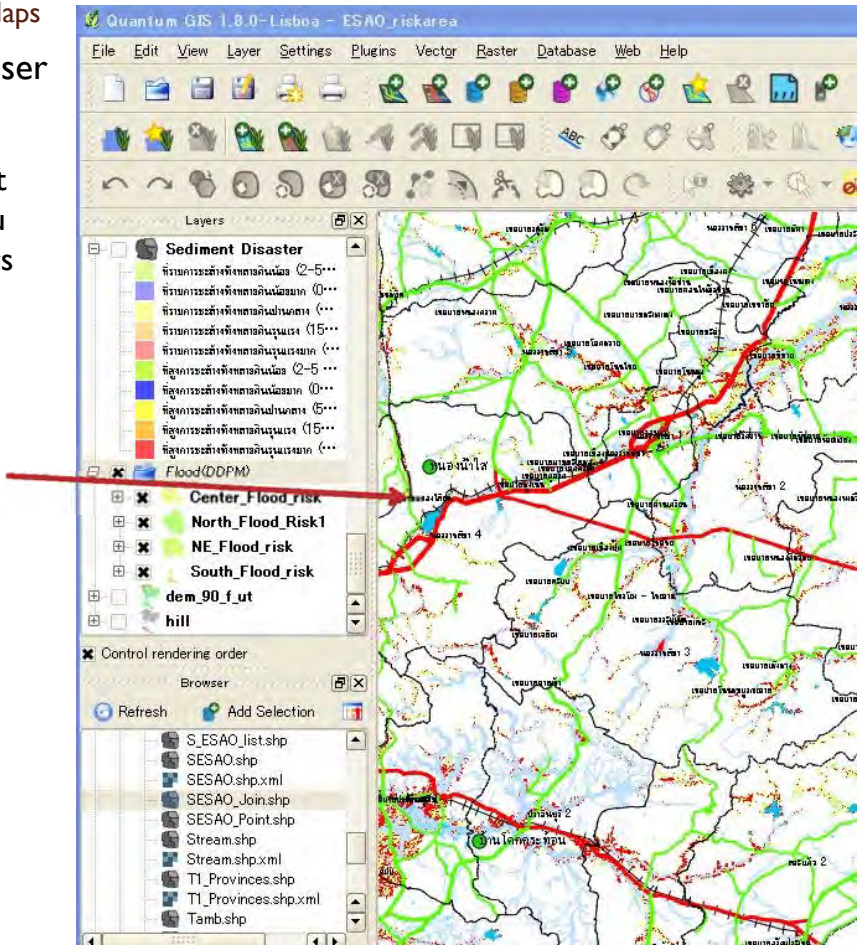
You can select size, orientation and other settings here.

3. Making Inventory Maps

3.6 Print Composer

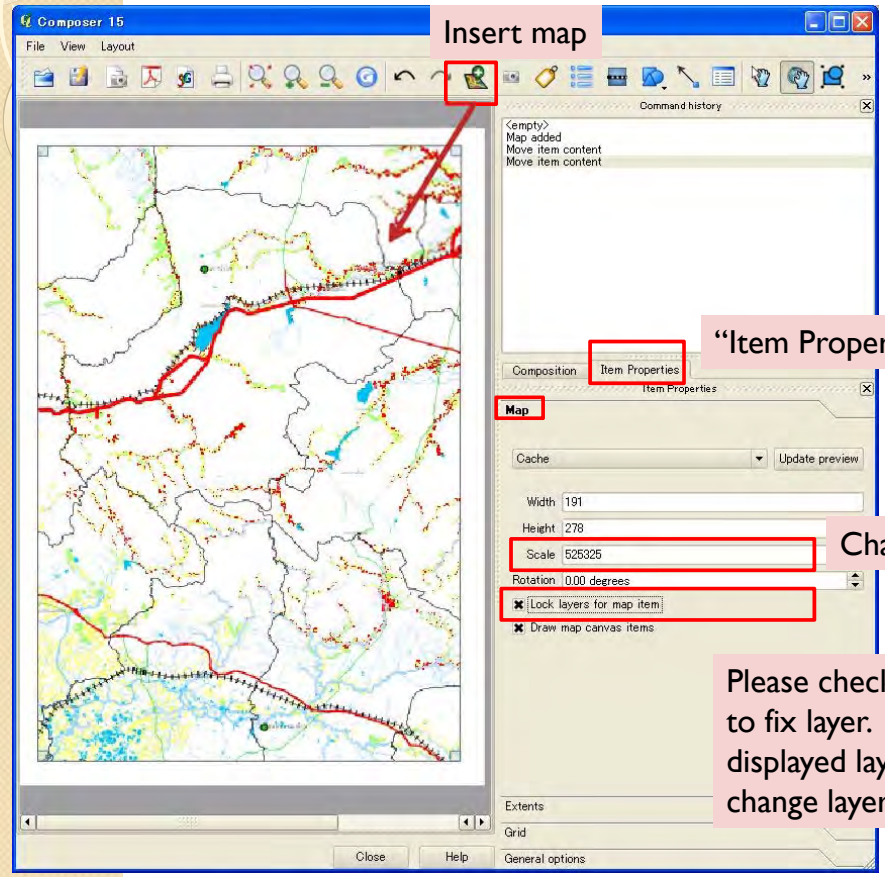
Before make map at print composer, you need to select layers to show in the map at mail window.

This is layer selection example for flood risk area map.



3. Making Inventory Maps

3.6 Print Composer



After you display layers for map at main window, insert map at the print composer.

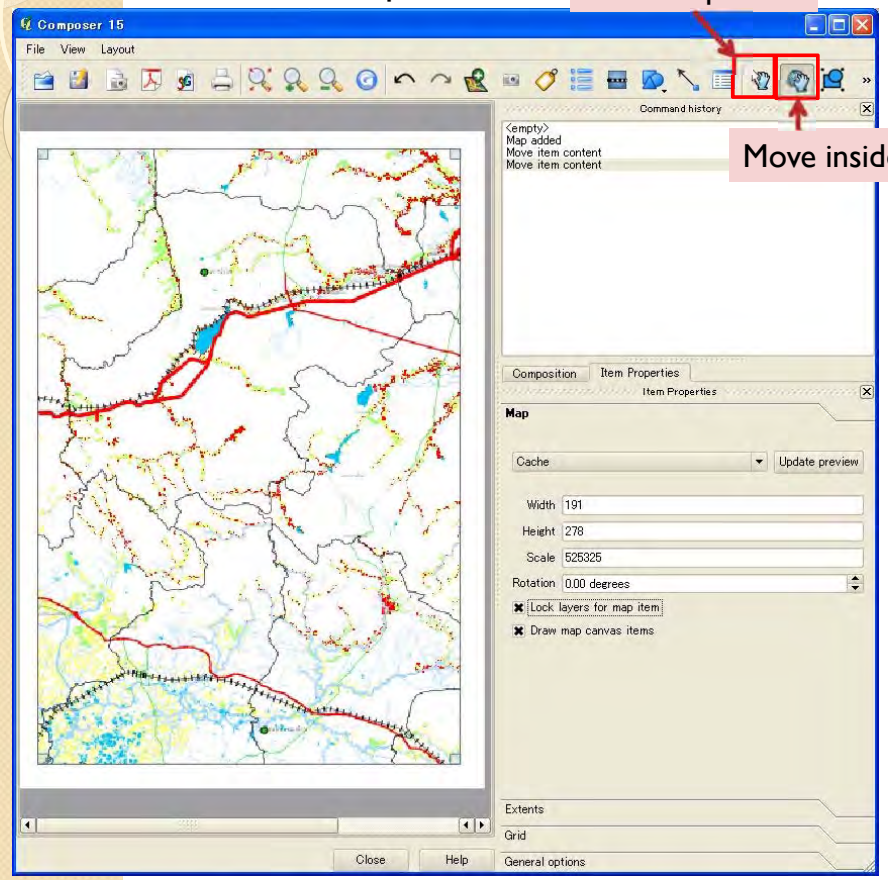
"Item Properties" and "Map" tab

Change "scale" here

Please check "Lock layers for map item" to fix layer. If you uncheck here, the displayed layer would change when you change layers in original map window.

3. Making Inventory Maps

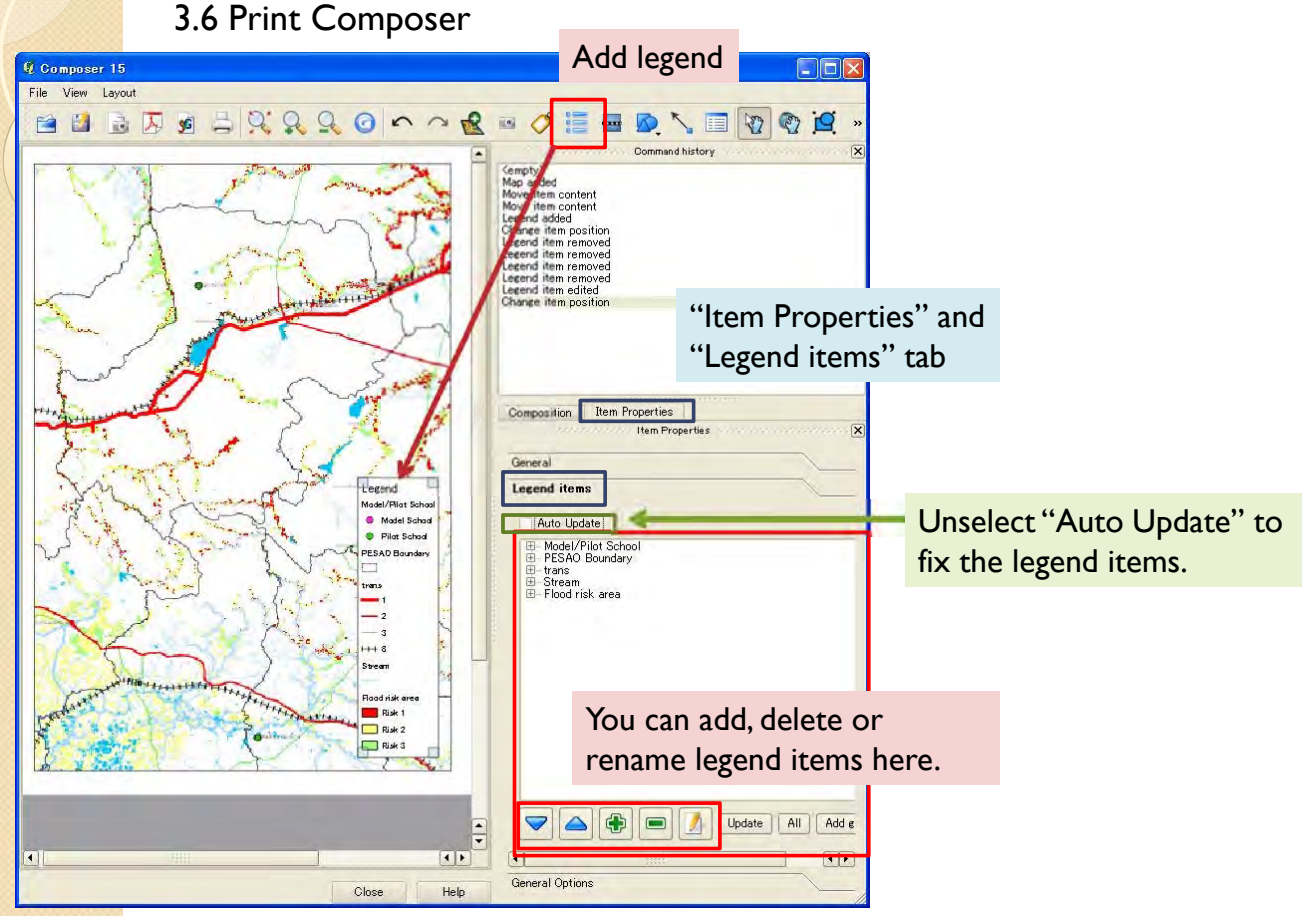
3.6 Print Composer



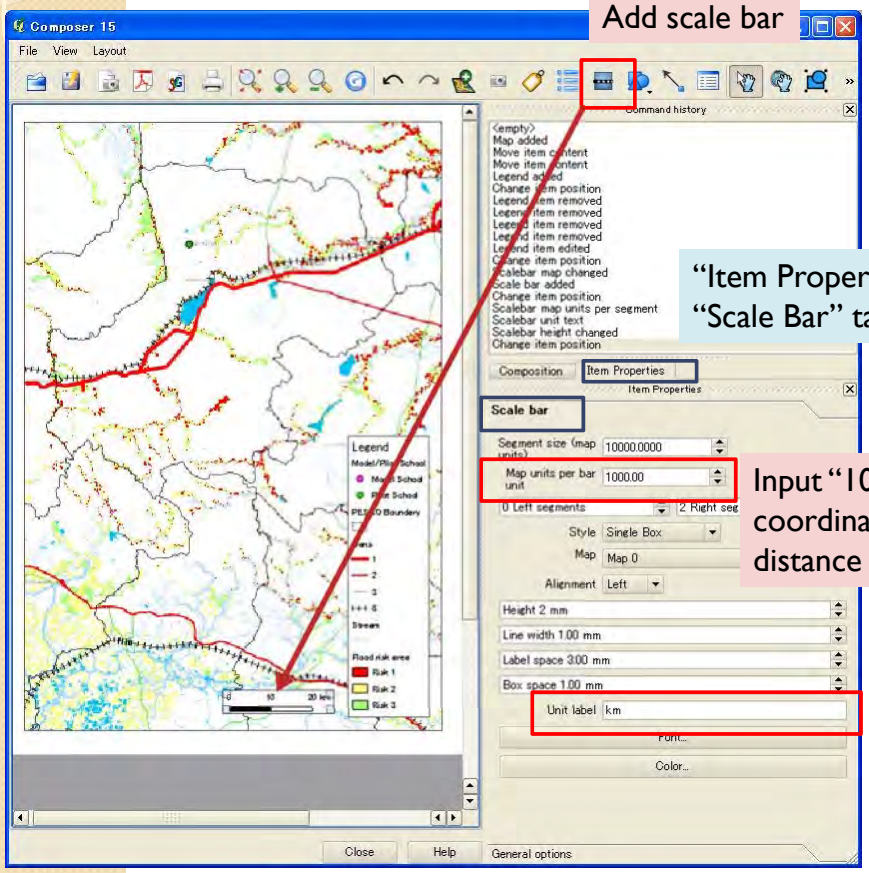
You can move and rescale map, so it is able to make risk area map for each ESAO by moving the inside map.

3. Making Inventory Maps

3.6 Print Composer



3.6 Print Composer

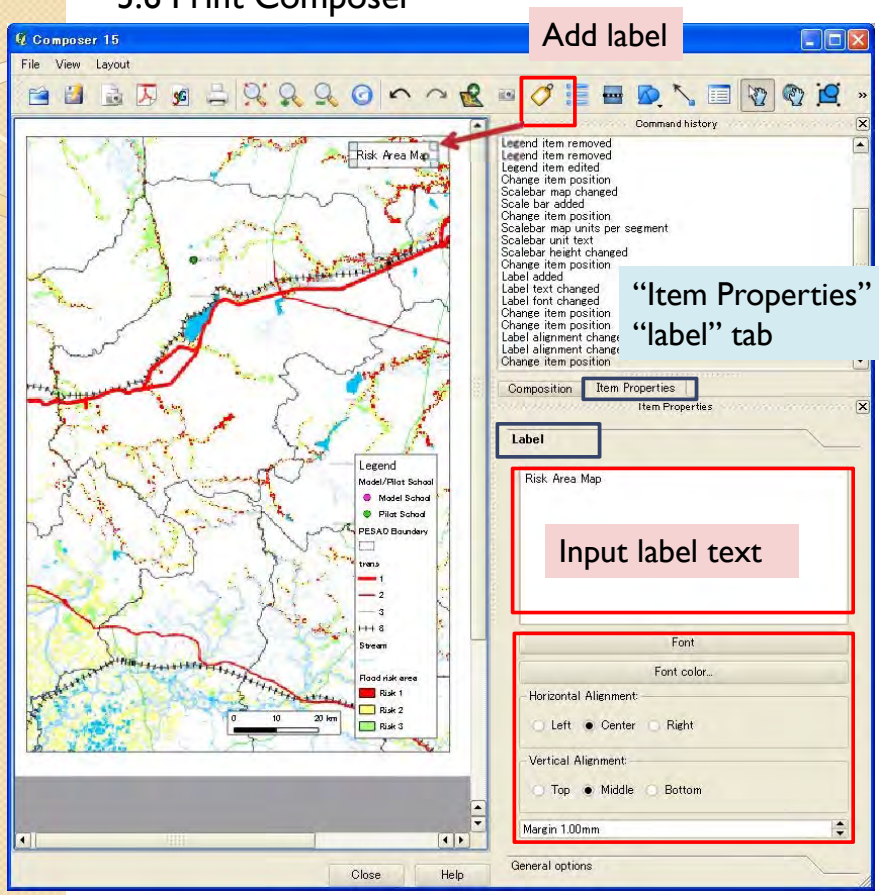


"Item Properties" and "Scale Bar" tab

Input "1000",because the map coordination "UTM" uses meter as distance unit.

Unit label is "km"

3.6 Print Composer



"Item Properties" and "label" tab

You can change font settings here.

3.6 Print Composer

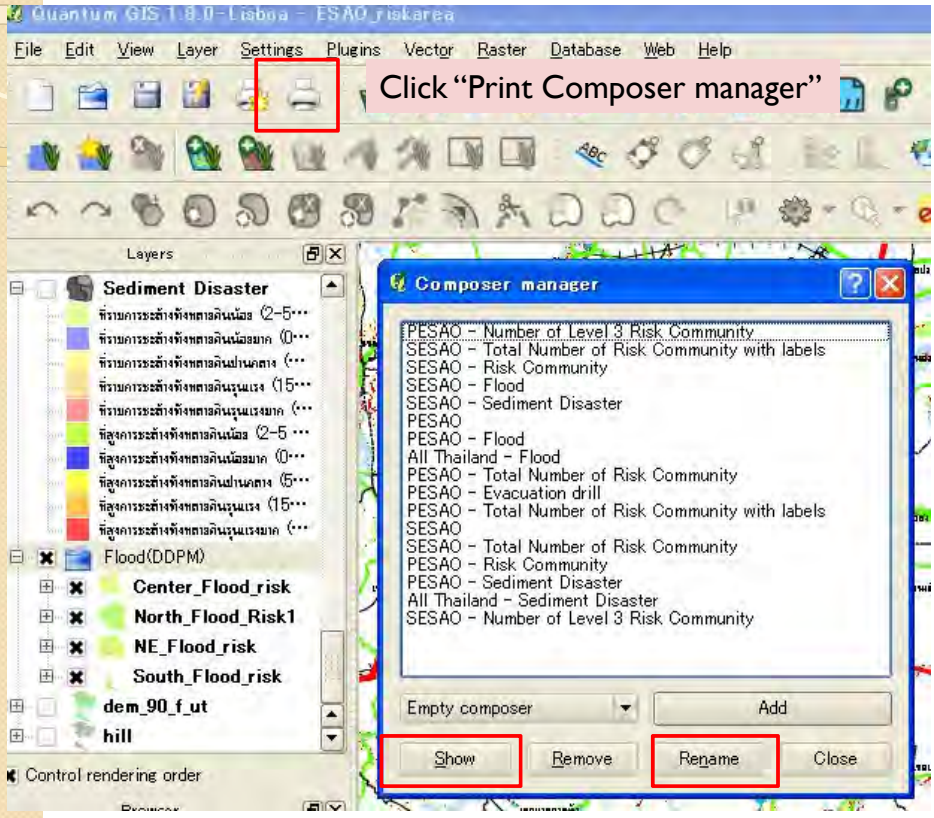
Export as image file

Export as pdf file

Print

3. Making Inventory Maps

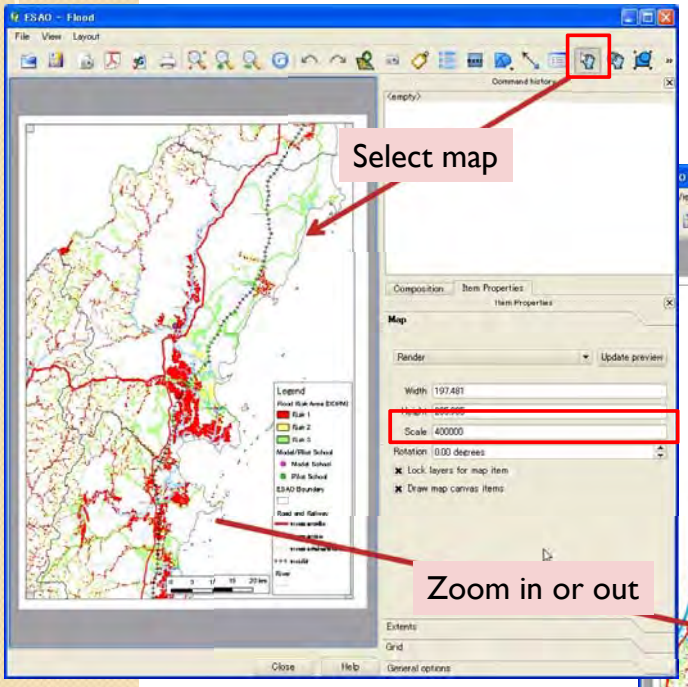
3.6 Print Composer



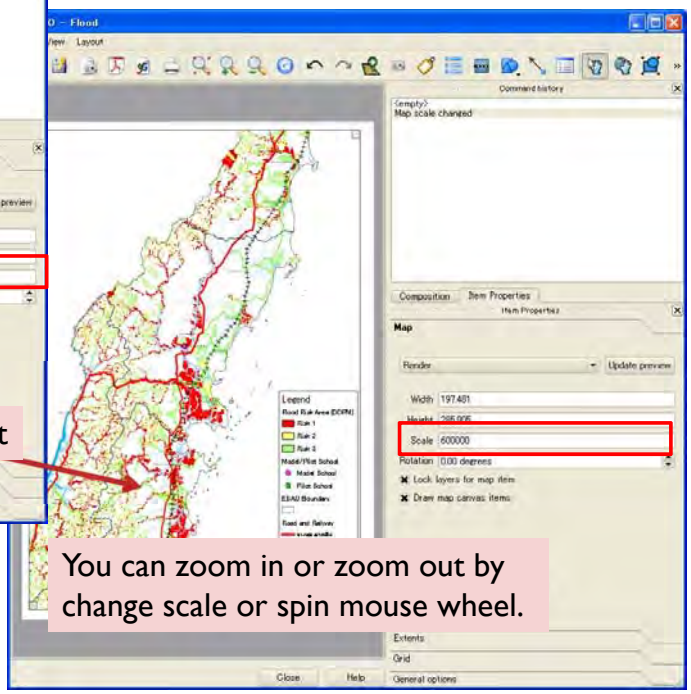
After you have made composer once, you can recall the composer by "show" button and rename.

3. Making Inventory Maps

3.7 Make inventory map in other region

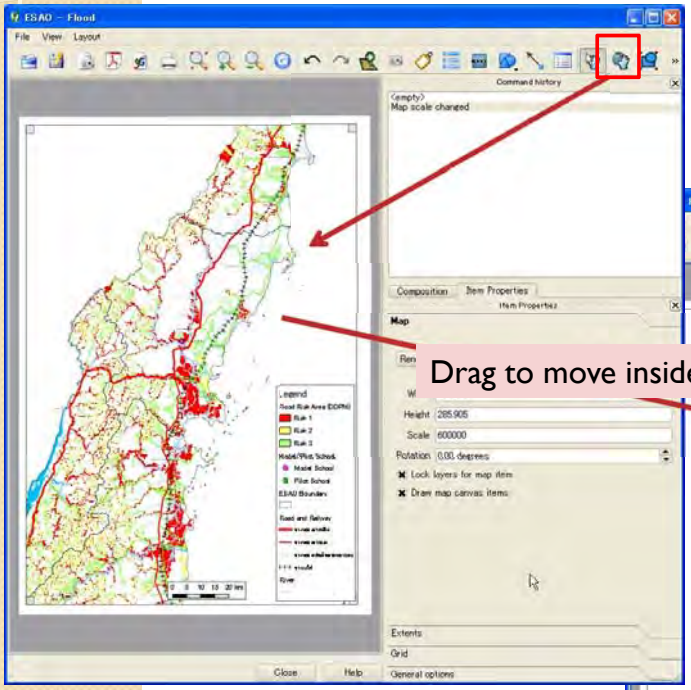


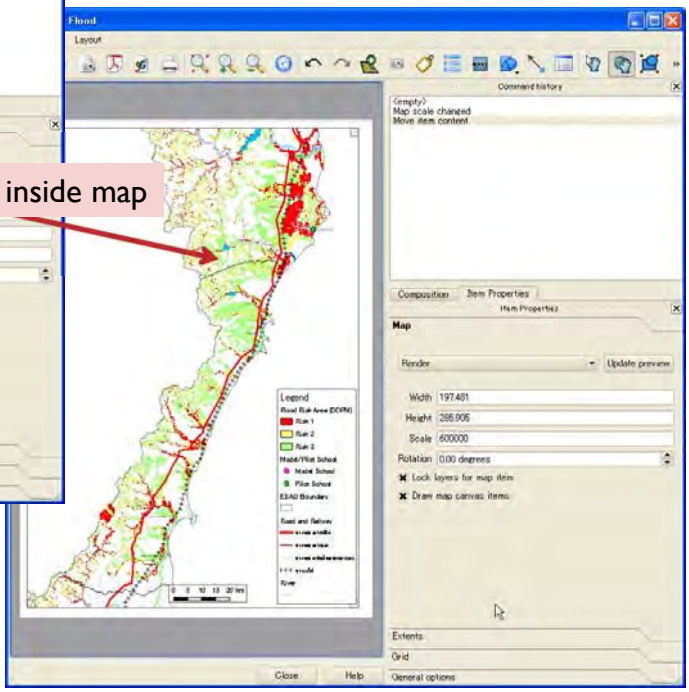
You can zoom in, zoom out or move inside map to other region to make other ESAO map.



3. Making Inventory Maps

3.7 Make inventory map in other region



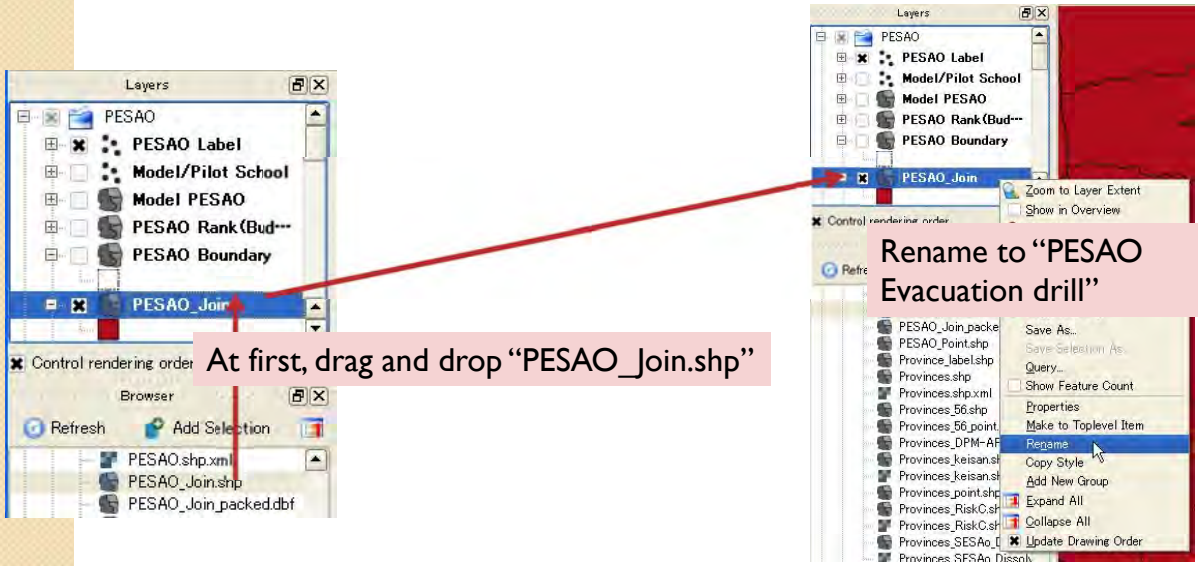


3.8 Add new data (evacuation drill, etc…)

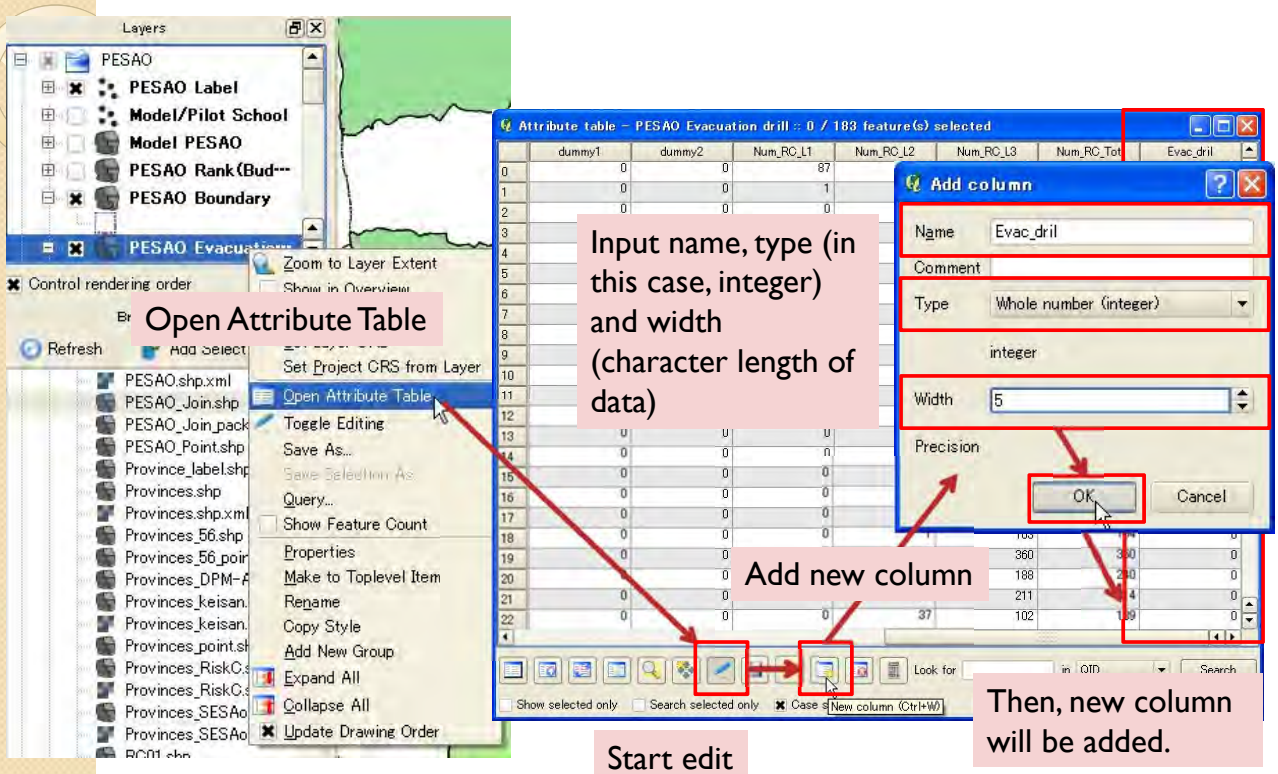
It is able to add new information to the ESAO shape file.

There are some method to add data.
One is make new excel file and import to GIS, please refer to 3.1.2.

In this section, numbers of schools in which ESAOs plan to conduct evacuation drill will be added to PESAO file by manually operation.

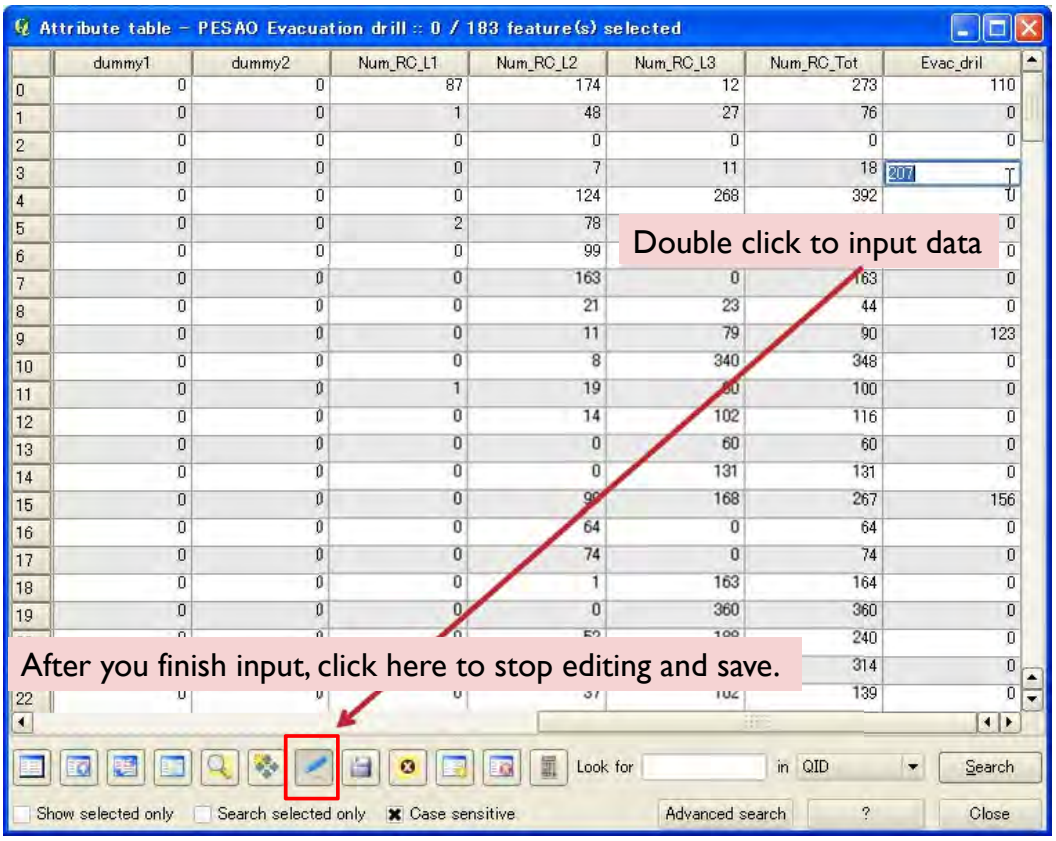


3.8 Add new data (evacuation drill, etc…)



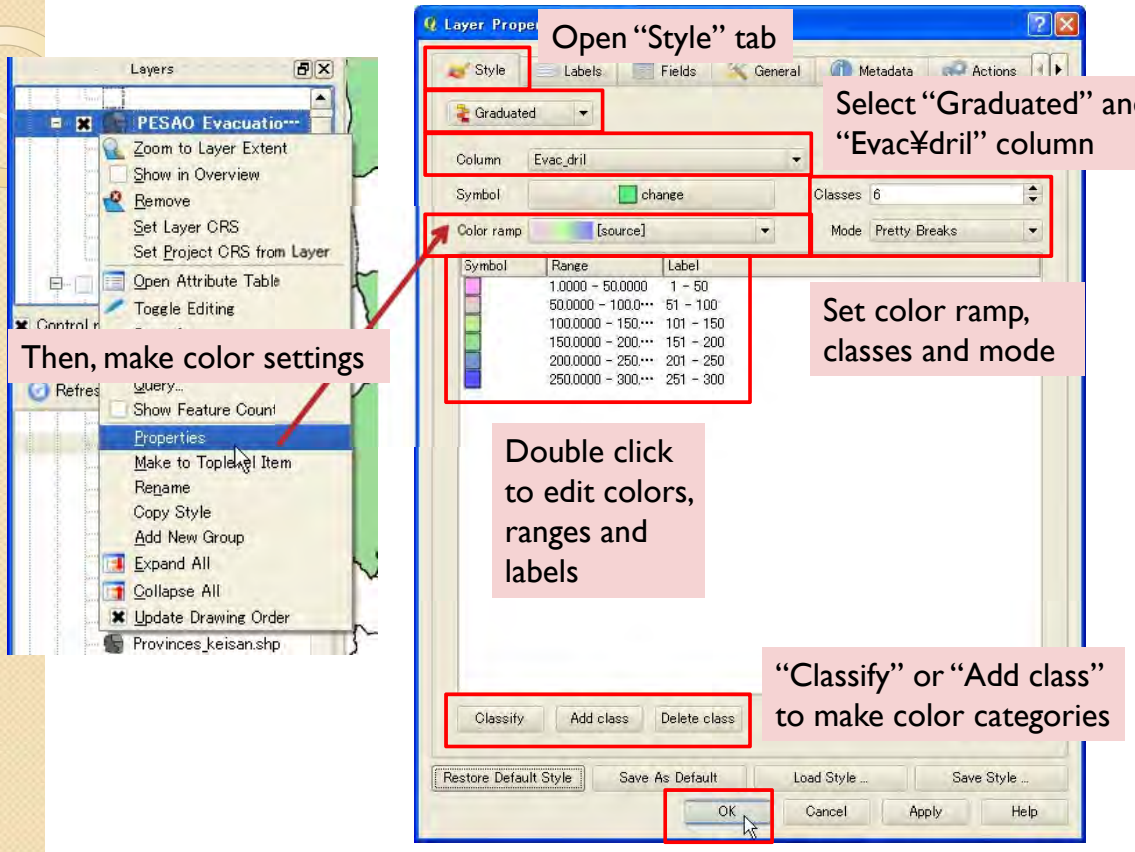
3. Making Inventory Maps

3.8 Add new data (evacuation drill, etc…)



3. Making Inventory Maps

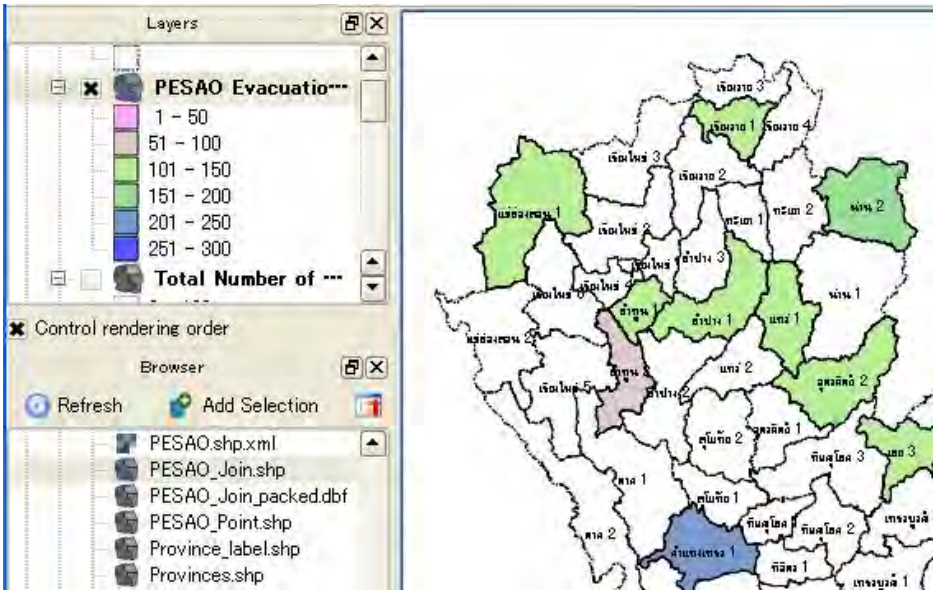
3.8 Add new data (evacuation drill, etc…)



3. Making Inventory Maps

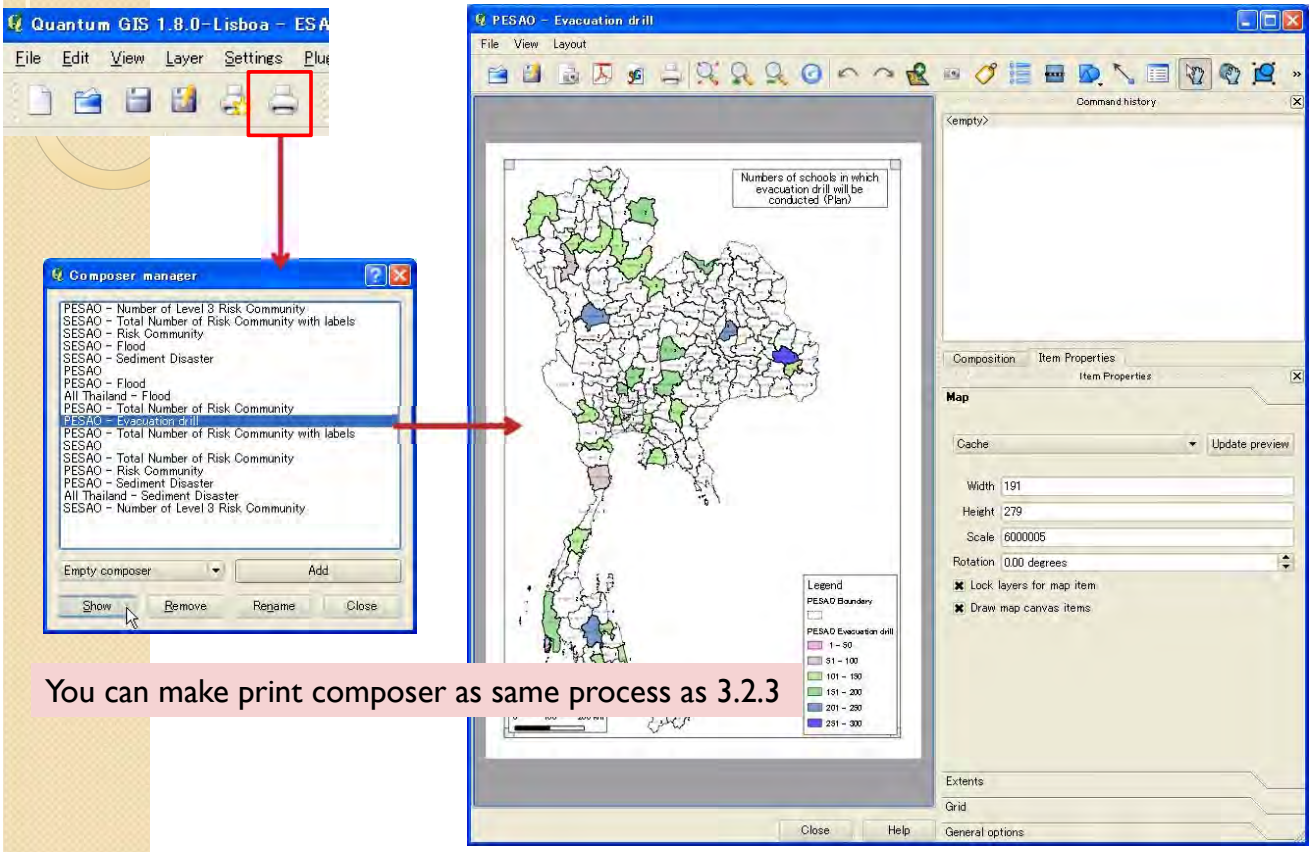
3.8 Add new data (evacuation drill, etc…)

Then, the new map will apper.



3. Making Inventory Maps

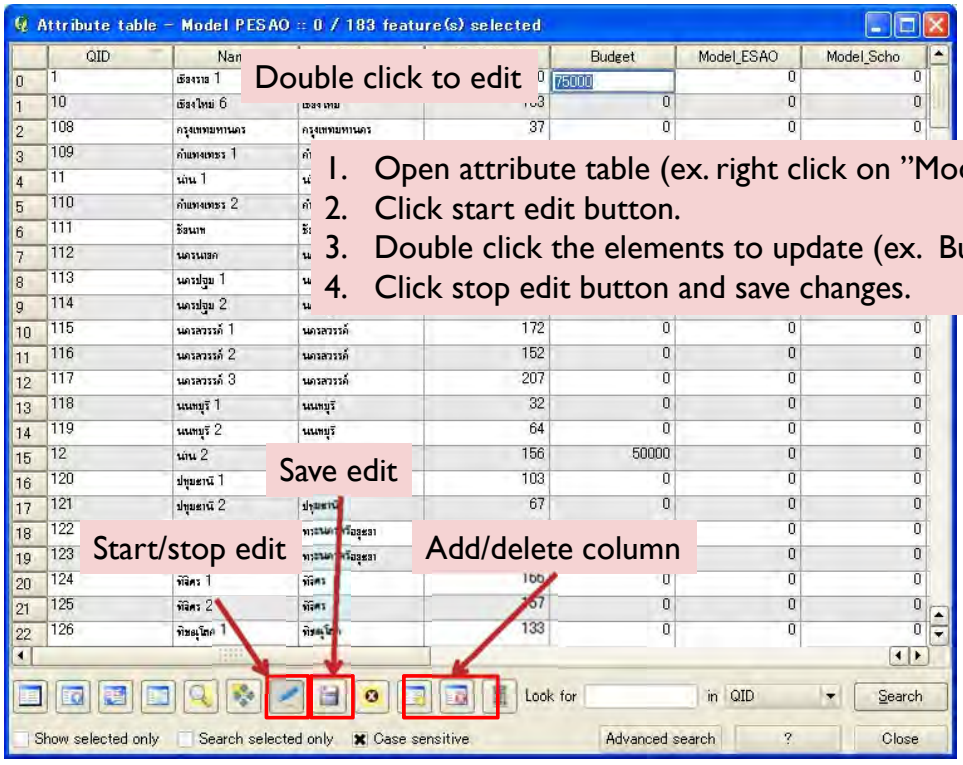
3.8 Add new data (evacuation drill, etc…)



You can make print composer as same process as 3.2.3

3.9 Update data

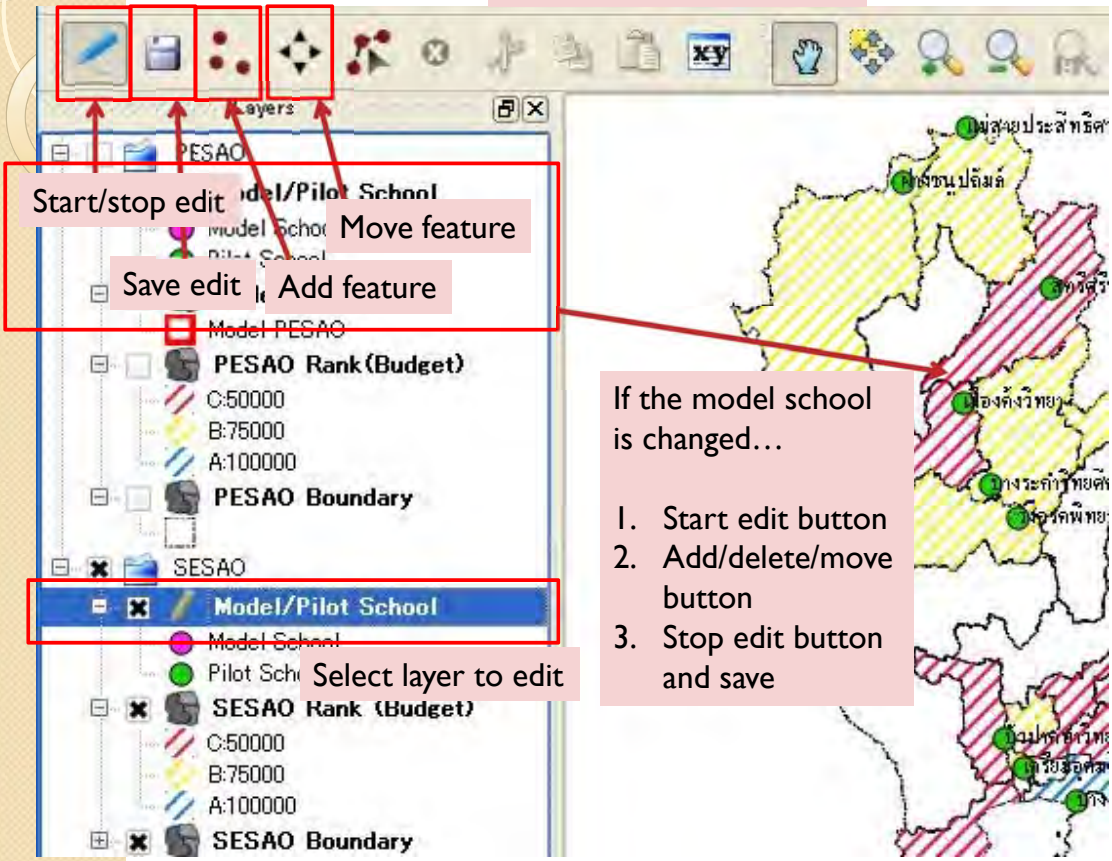
If you want to change/update attribute table, you can edit by following function. (Partly same to 3.7.)



1. Open attribute table (ex. right click on "Model PESAO")
2. Click start edit button.
3. Double click the elements to update (ex. Budget cell)
4. Click stop edit button and save changes.

3.9 Update data

You can edit features also.

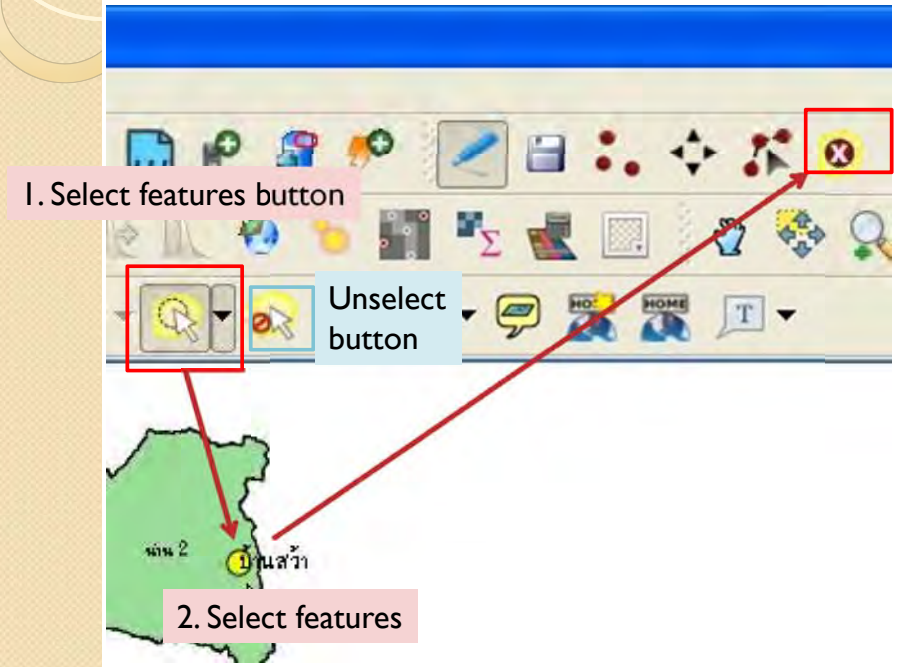


If the model school is changed…

1. Start edit button
2. Add/delete/move button
3. Stop edit button and save

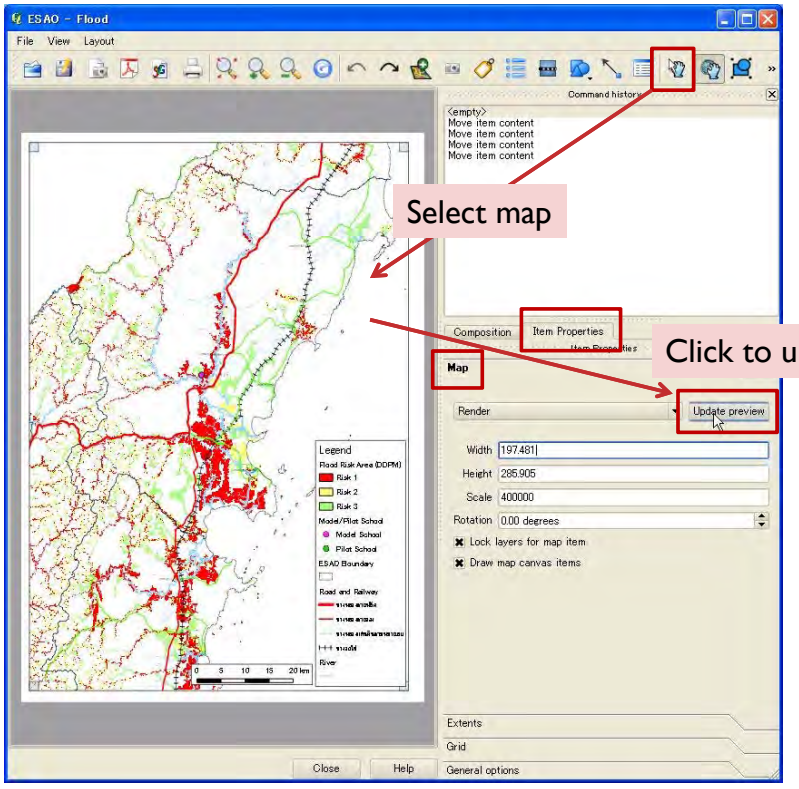
3.9 Update data

Operation to delete features is little deferent.



3.9 Update data

After you update data, you reopen or click update button to reflect changes.

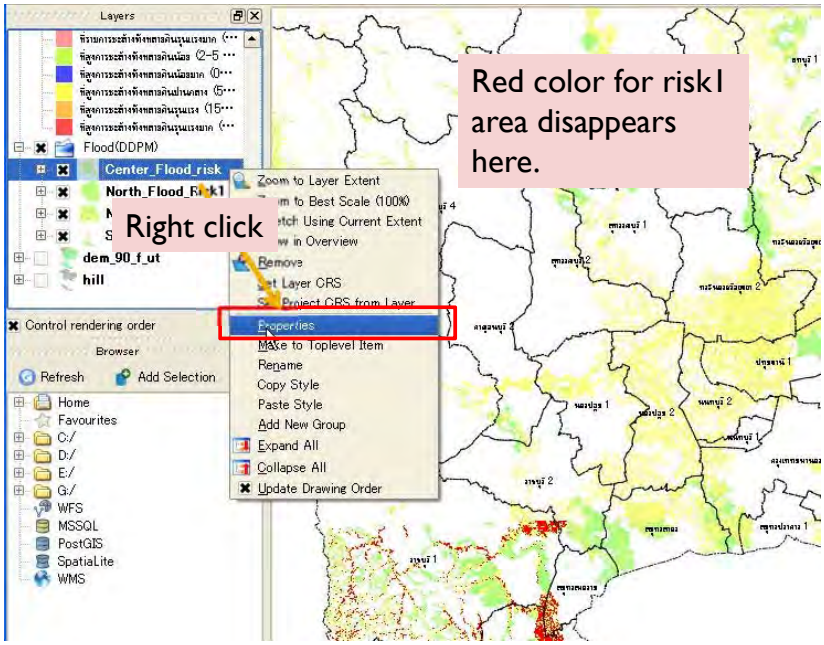


3.10 Notes

- Name of model/pilot schools at SESAO 3, 17, 38, 41 and PESAO Ubon Ratchathani 4 are uncertain. Please confirm.
- Locations of the model/pilot schools are also uncertain. (look up by google)
- CBDRM data is now under updating.
- Risk community data contains some error.
- Risk area information is one of indicators for disaster risk. Out of the indicated risk area do not mean actual no risk area.
- If it is possible, it is better to integrate information of disaster education into the all school list and shape file you are making.

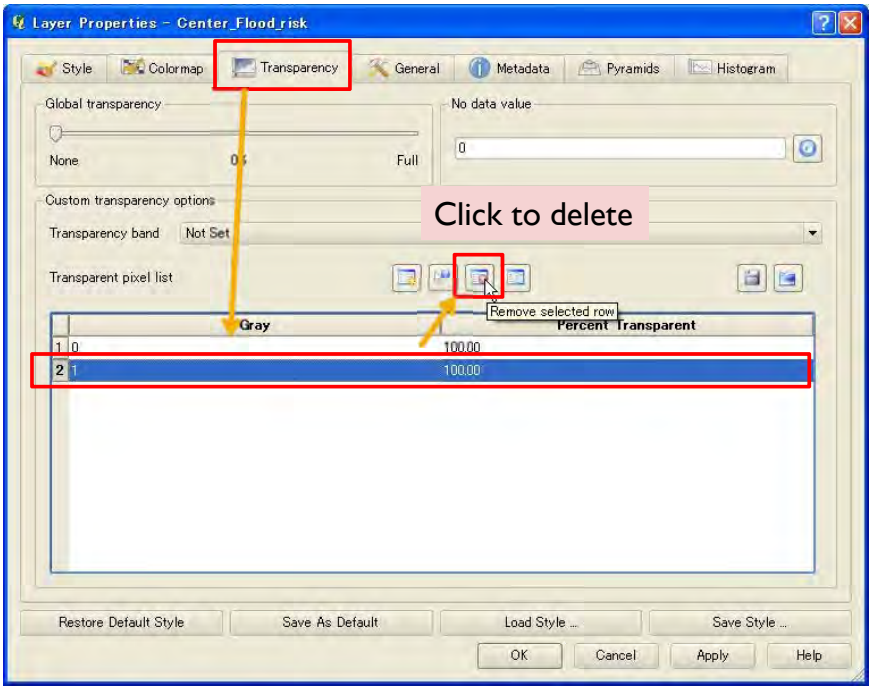
3.11 Bugs for flood risk area map

When you open flood risk area file, the color of risk1 in "Flood (DDPM)" should disappear because of program problem. So, please fix the settings as follows. Please right click on the layer in which the color of risk1 disappears and select "Properties"



3.11 Bugs for flood risk area map

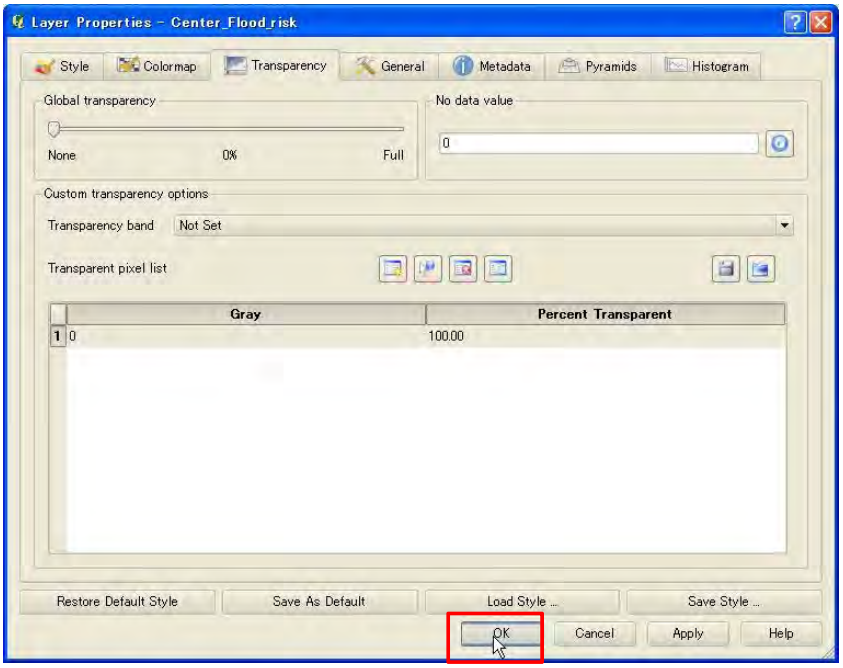
Select "Transparency" tab and remove "1" in the below field.



3. Making Inventory Maps

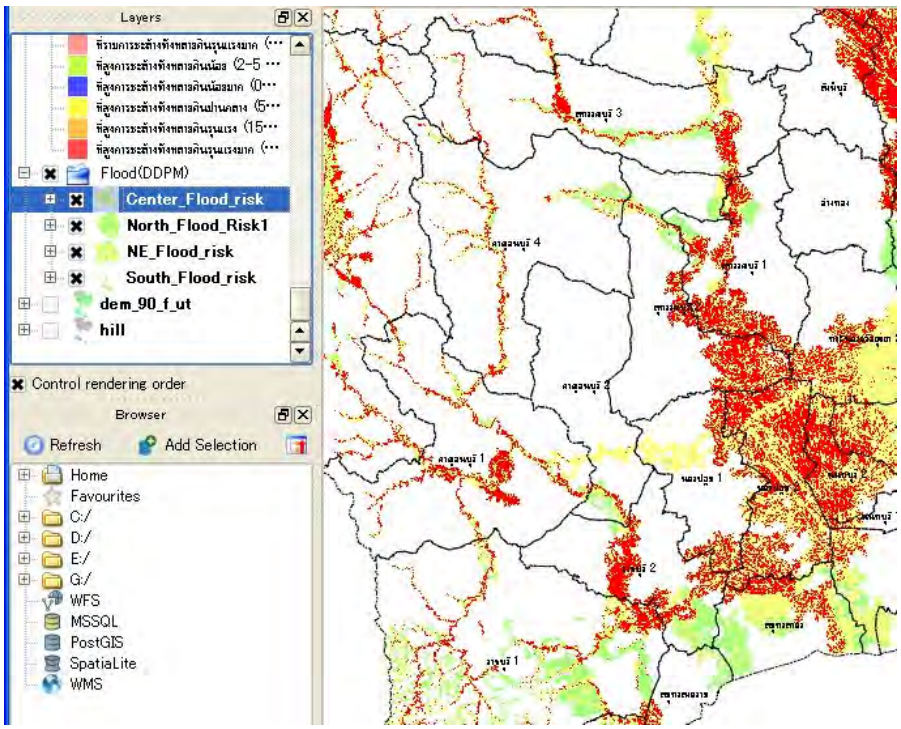
3.11 Bugs for flood risk area map

Then, the "1" should be deleted. Please click "OK" to return map.



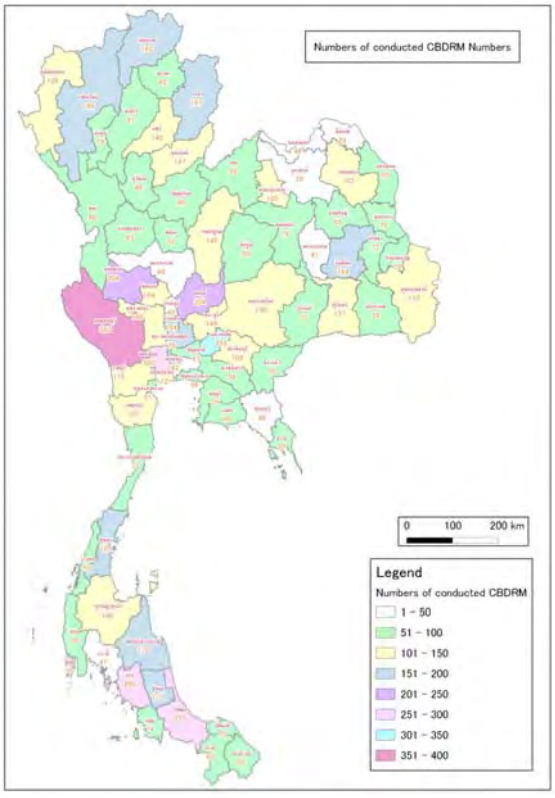
3.11 Bugs for flood risk area map

The color for risk1 should be redrawn. Please do these operation each time you open the file.



4. Making Inventory Maps (CBDRM)

4.1 Import CBDRM data

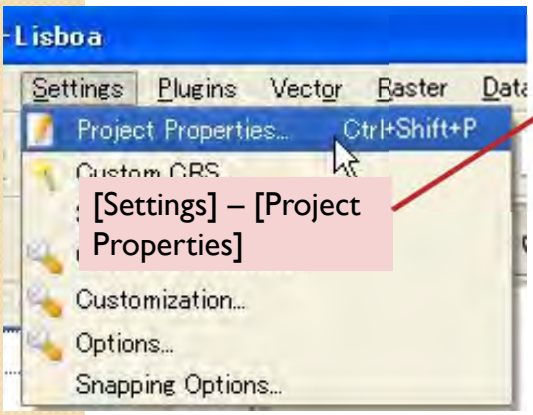


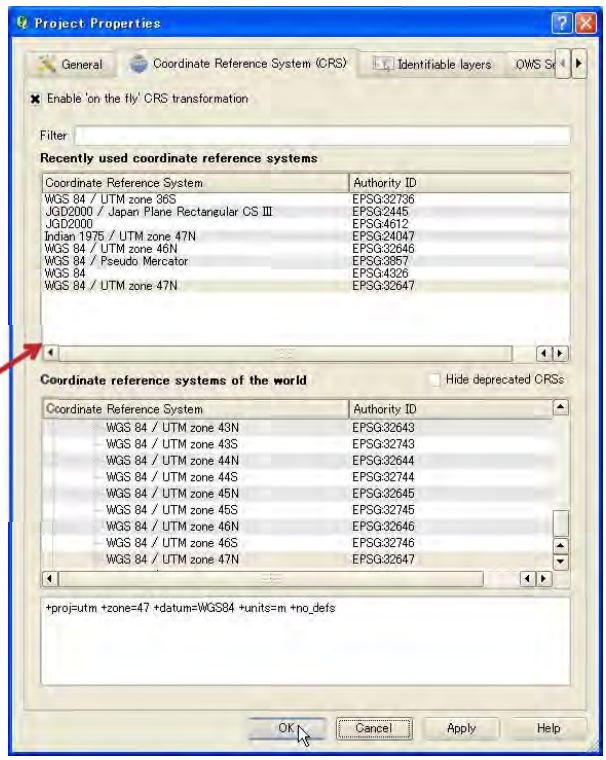
In this chapter, we make CBDRM Map by using QGIS and Excel.

1.Import shape file (geographical data) and Excel file (CBDRM information)
2.Integrate the Excel file to shape file
3.Make coloring and print composer

4.1.1 Import provinces file

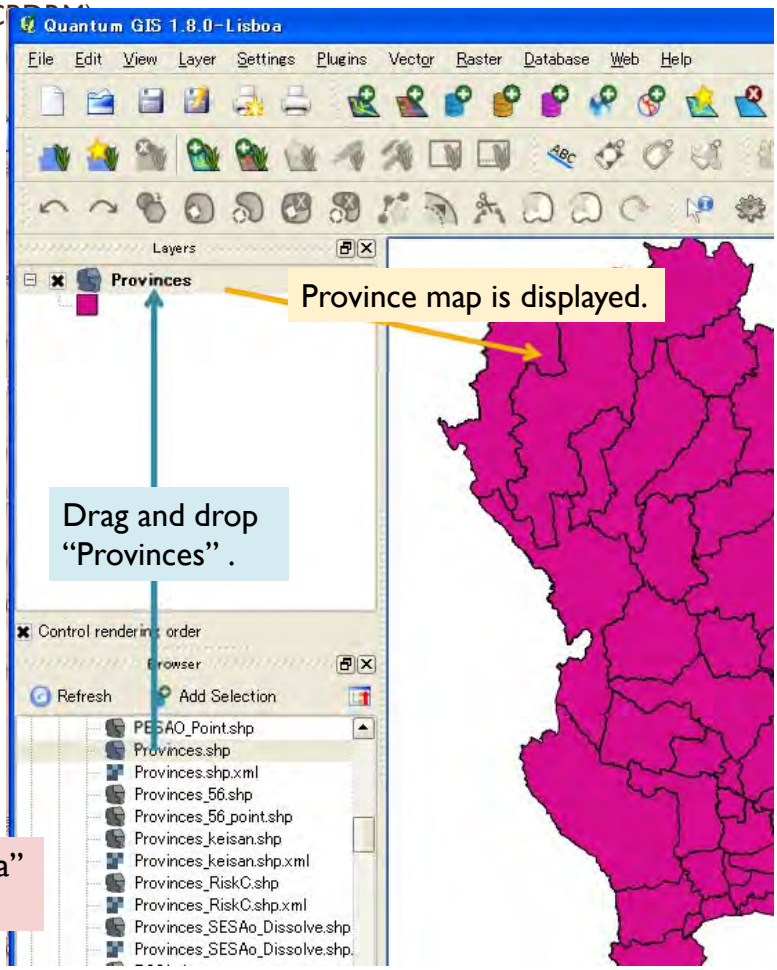
At first, make sure that Coordination Reference System (CRS) is set as WGS84 / UTM 47N and "Enable 'on the fly' CRS transformation" is checked.





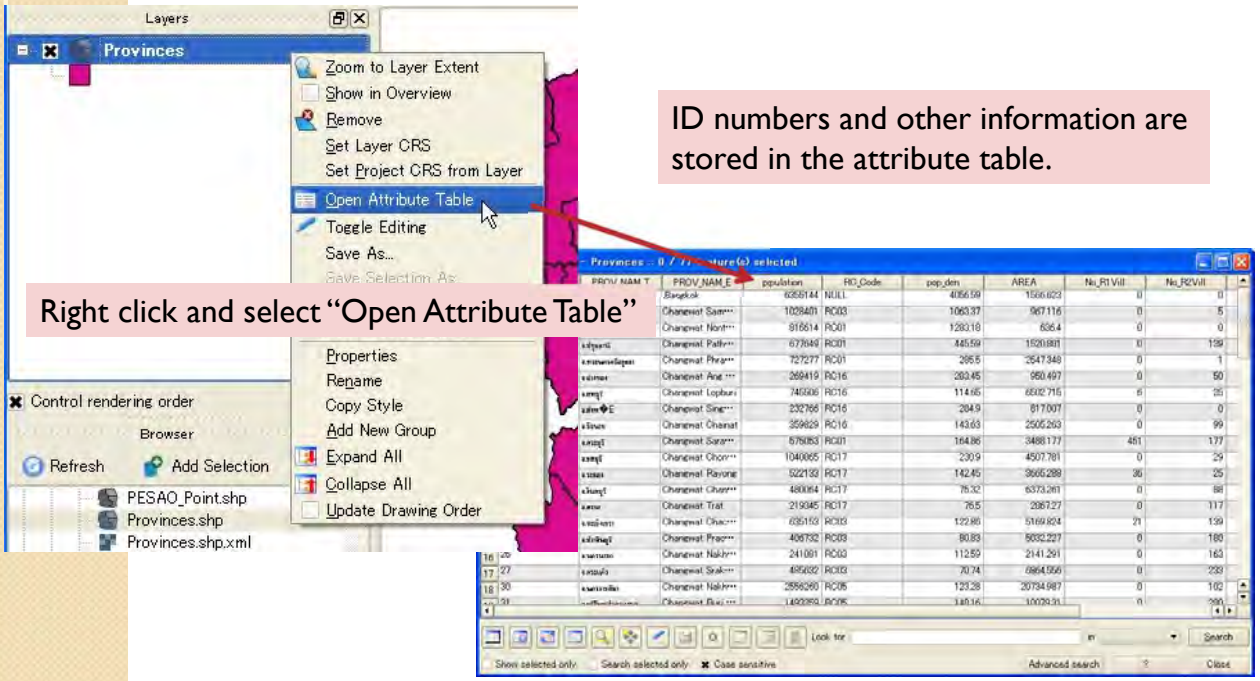
4.1.1 Import provinces file

Select "GIS_Data" folder in the "Browser" field and drag and drop "Provinces" file into "Layers" folder.



4. Making Inventory Maps (CBDRM)

4.1.1 Import provinces file



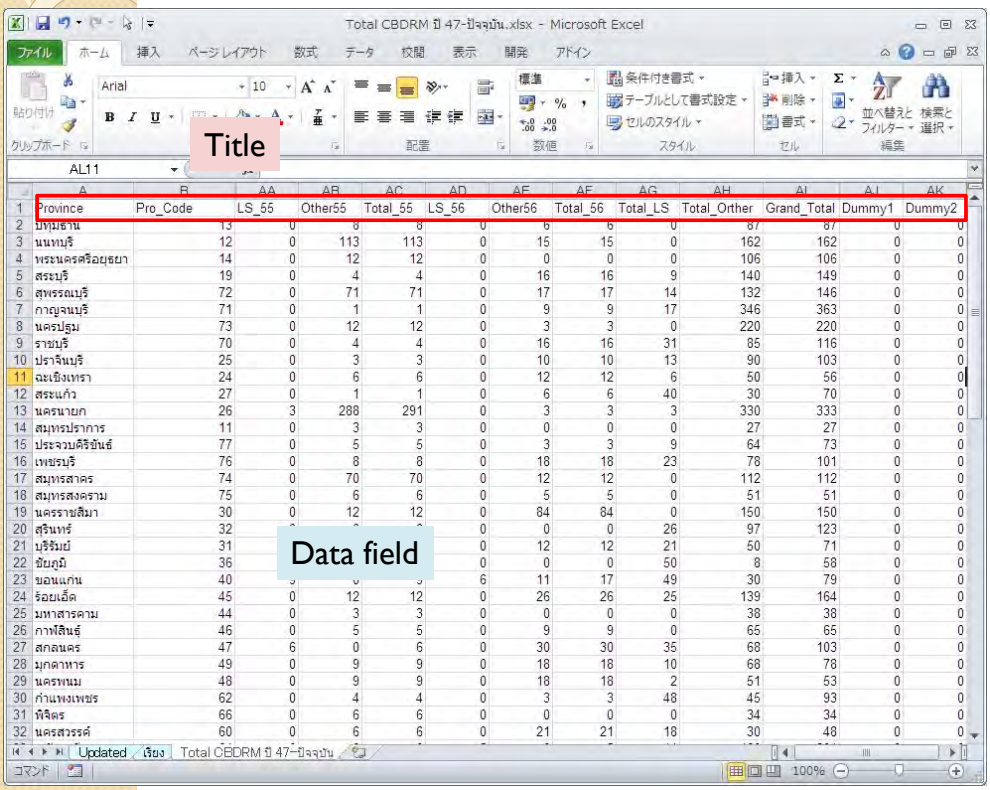
ID numbers and other information are stored in the attribute table.

Right click and select "Open Attribute Table"

We are going to import the CBDRM data into this attribute table.
In order to do that, it is necessary to import CBDRM data from Excel file.

4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excxel file



Open "Total CBDRM ปี 47-ปัจจุบัน.xlsx".

Table to import into GIS must be simple table like this figure.

The first row is title of the attribute column. Write only alphabet and "_". Do not use " "(space), "-", "," …

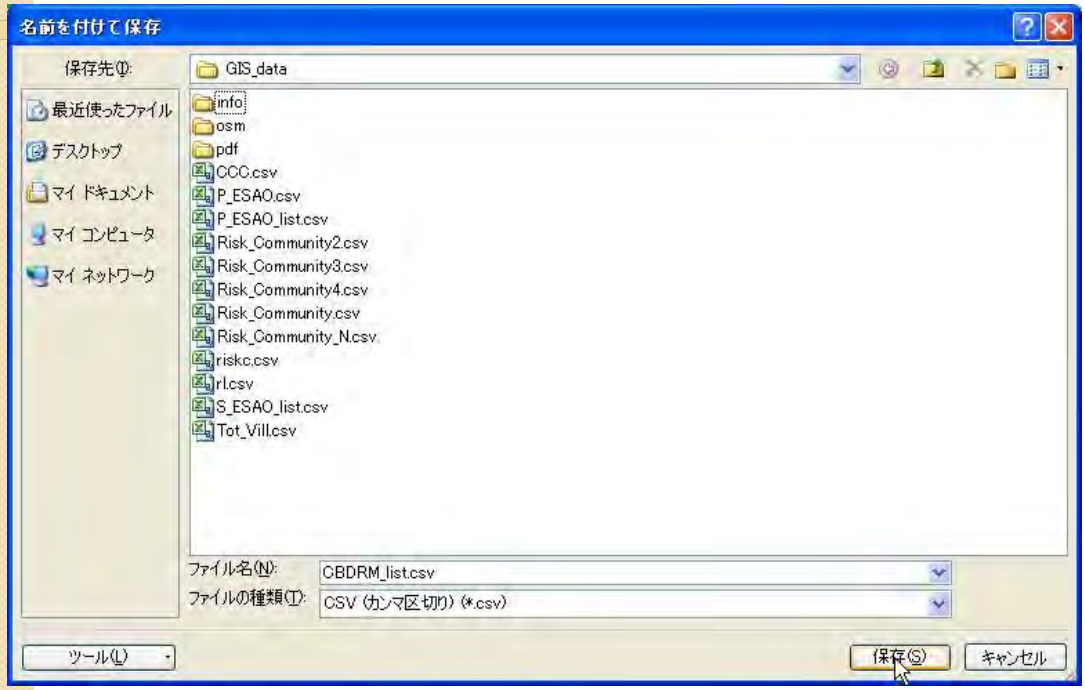
Data field is below. Do not use ",".

The last two columns are dummy column filled by "0".

4. Making Inventory Maps (CBDRM)

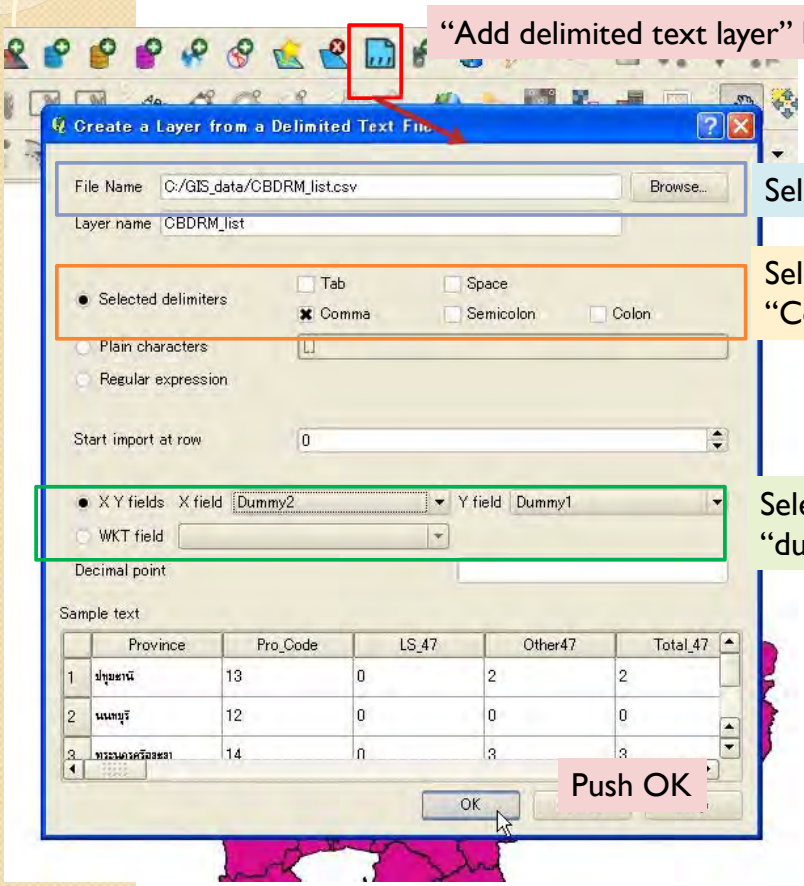
4.1.2 Import CBDRM data from Excxel file

Save the data sheet as "CBDRM_list.csv". Please use file format as "CSV (comma delimited)". In this format file, comma "," is used as separator. So please don't use comma "," in the data field and title row in the data sheets.



4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excxel file



Load the saved csv file by "Add delimited text layer" button.

Select file

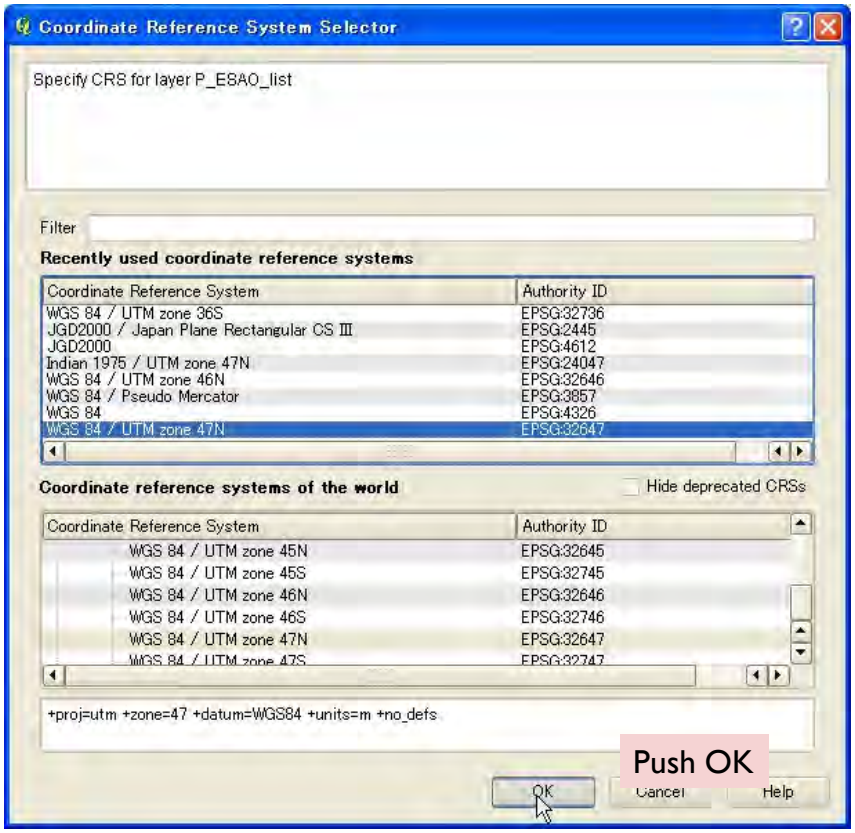
Select "Selected delimiters" and "Comma" only.

Select "X Y fields" and "dummy1" and "dummy2".

Push OK

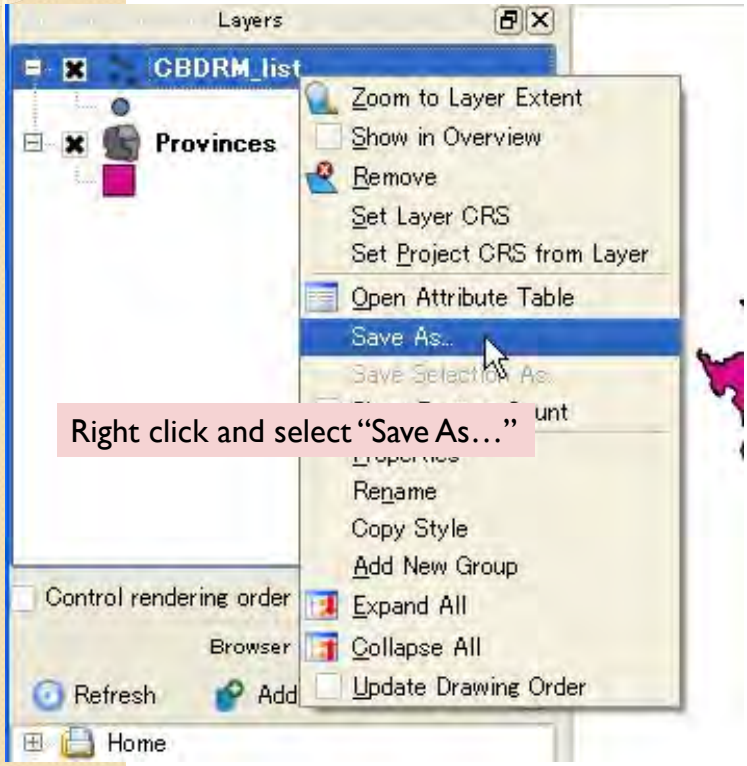
4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excxel file



4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excxel file



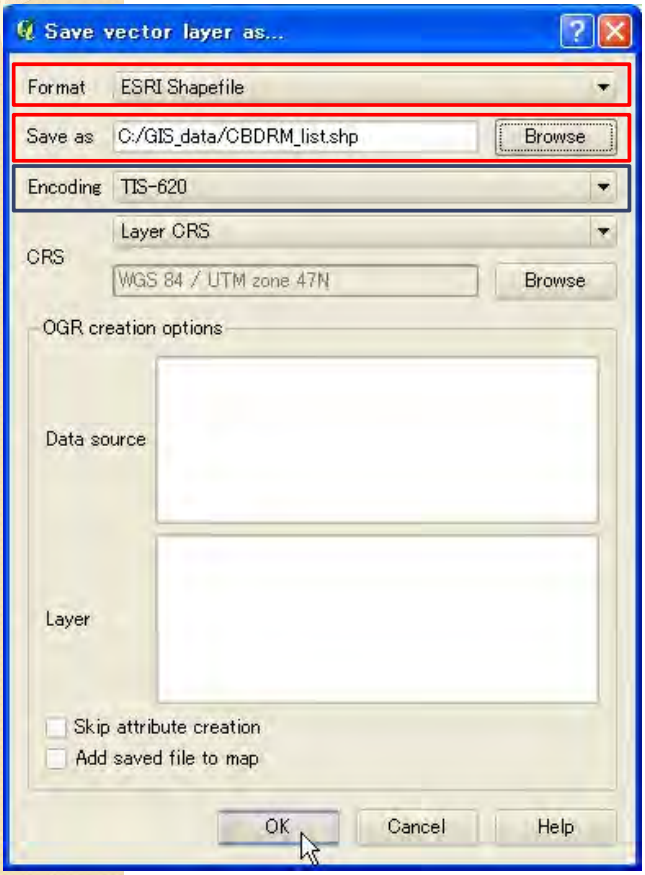
Right click and select "Save As…"

Then, the data will imported.

This is temporary layer, thus save this layer as new file.

4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excxel file



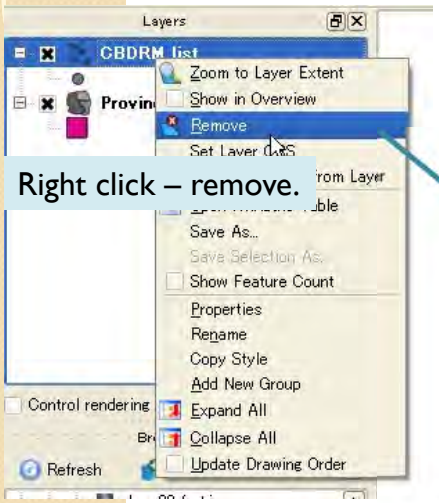
Select format and file name.

Select "Encoding" as "TIS-620" .

Push OK

4. Making Inventory Maps (CBDRM)

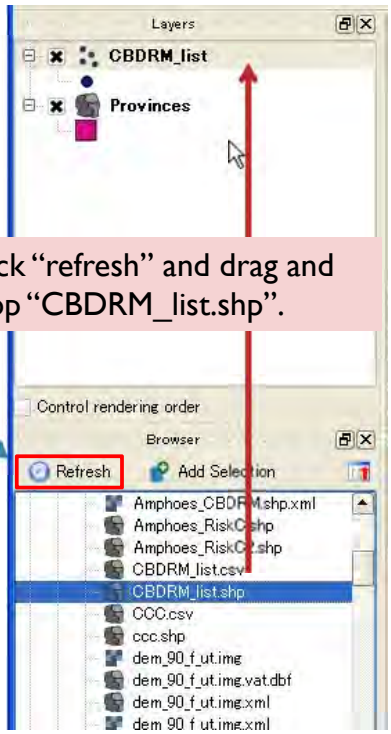
4.1.2 Import CBDRM data from Excxel file



Right click – remove.

Remove the temporary layer.

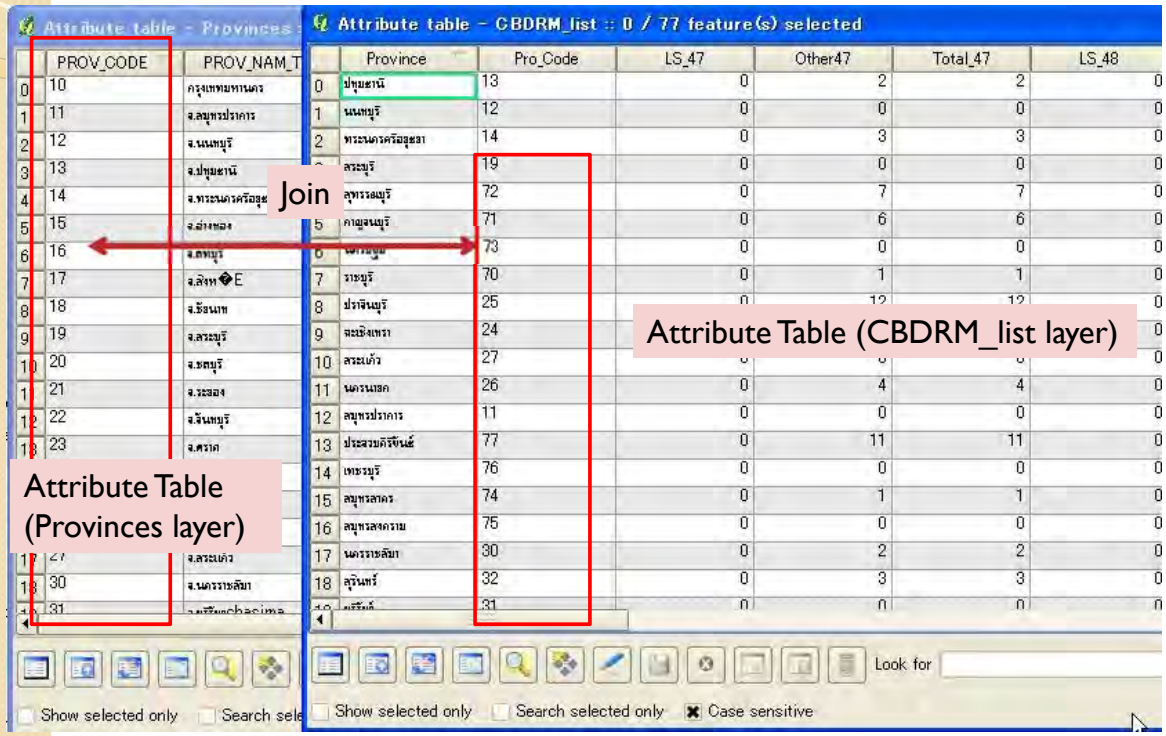
Click "Refresh" button of "Browser" field, and drag and drop "CBDRM_list.shp" into "Layer" field.



Click "refresh" and drag and drop "CBDRM_list.shp".

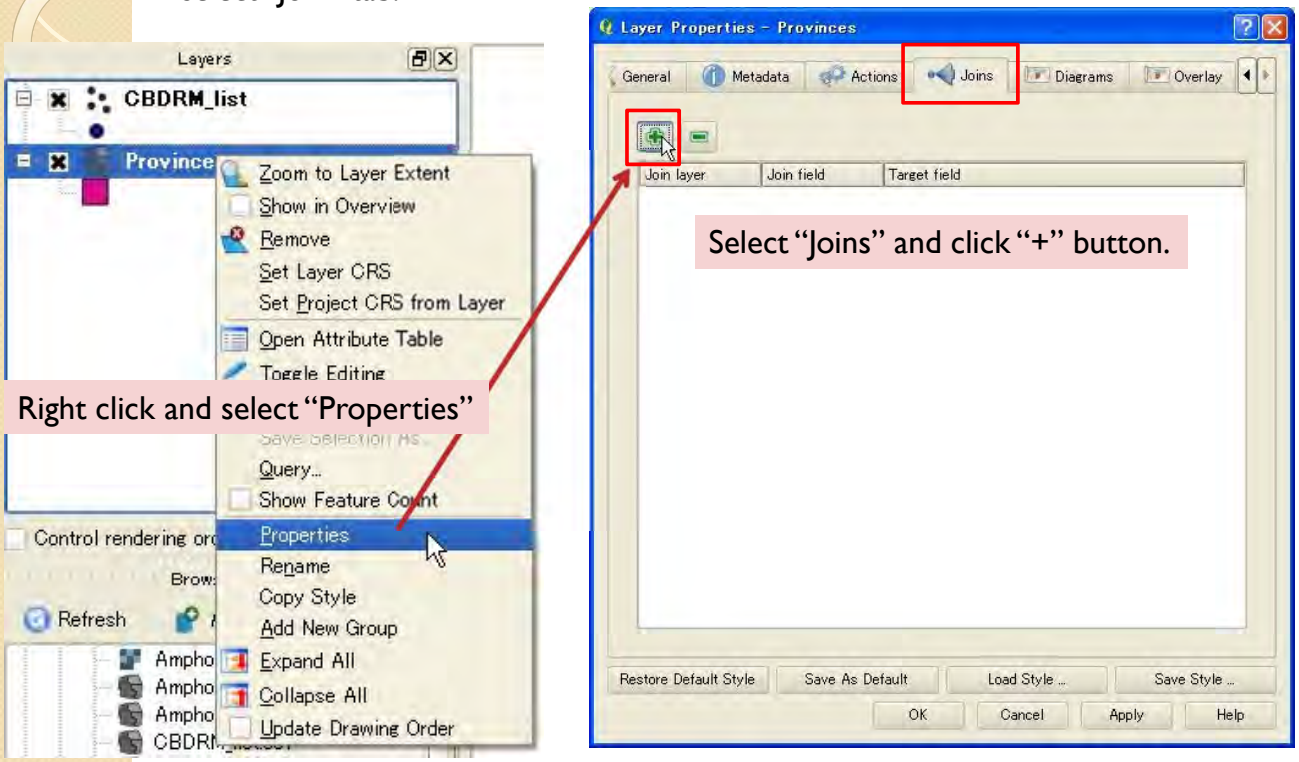
4.1.3 Join attribute table

In next step, attribute table of "CBDRM_list" will be joined into "Provinces" layers.



4.1.3 Join attribute table

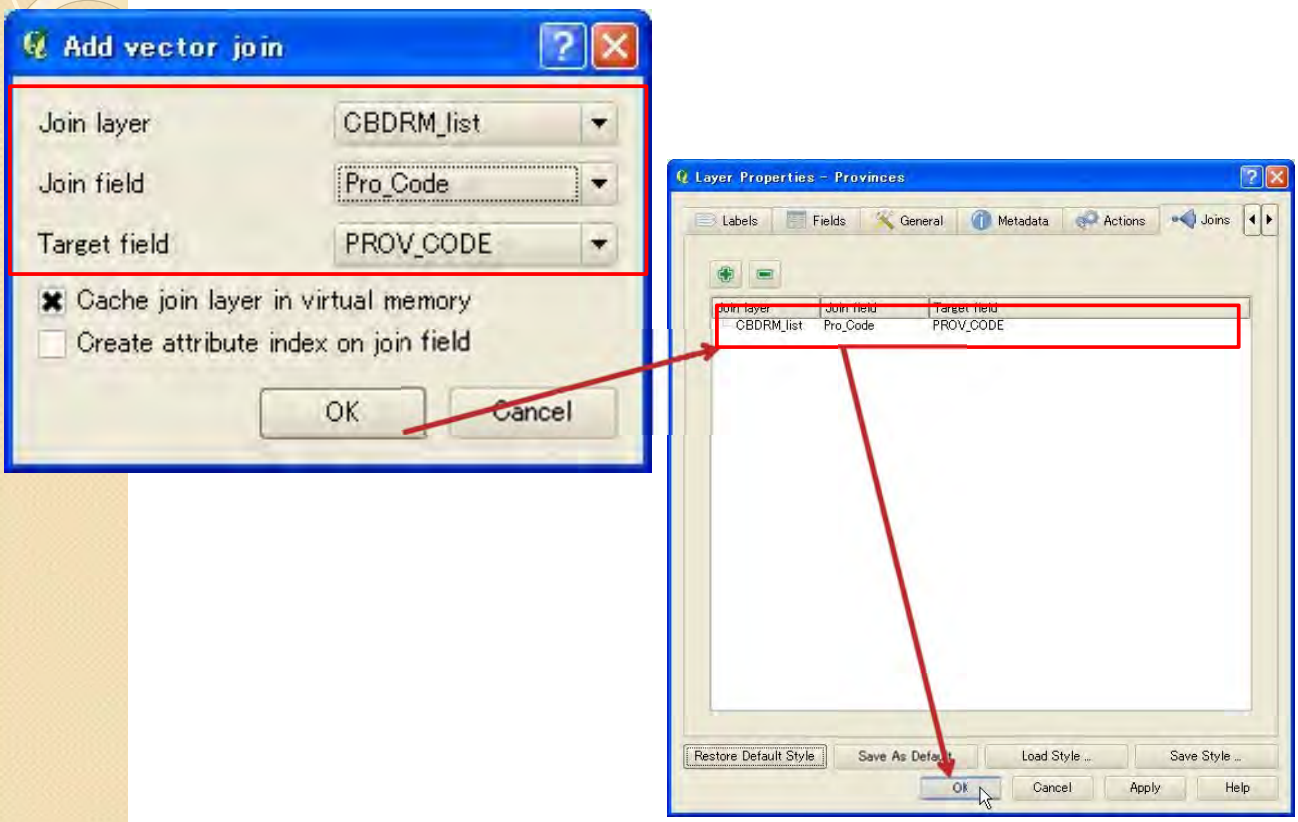
Open "Properties" window and select "Join" tab.



4. Making Inventory Maps (CBDRM)

4.1.3 Join attribute table

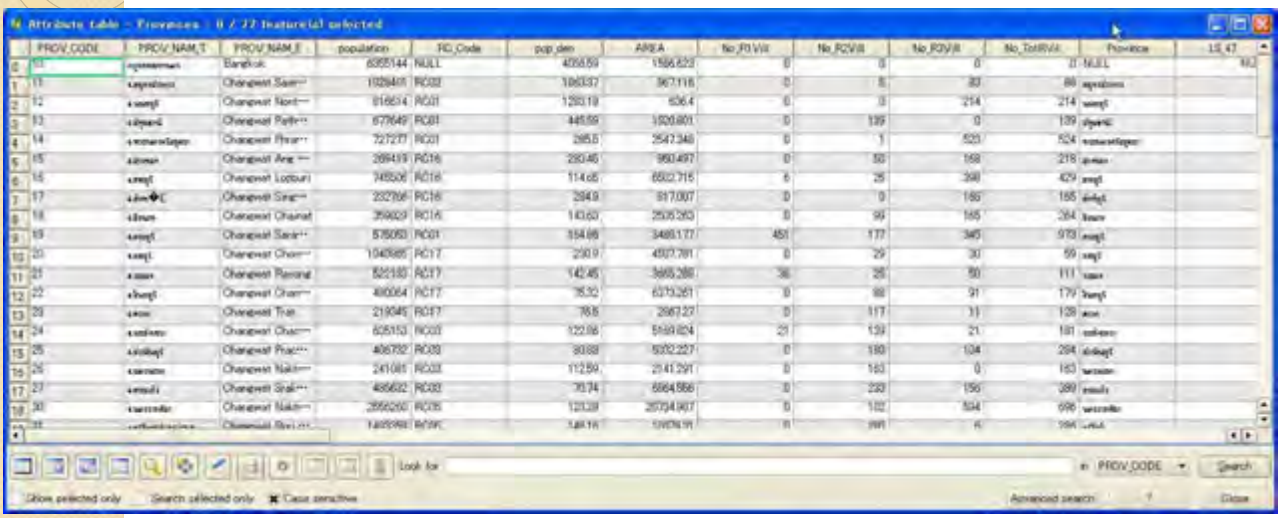
Select "Join layer", Join field" and "Target field".



4. Making Inventory Maps (CBDRM)

4.1.3 Join attribute table

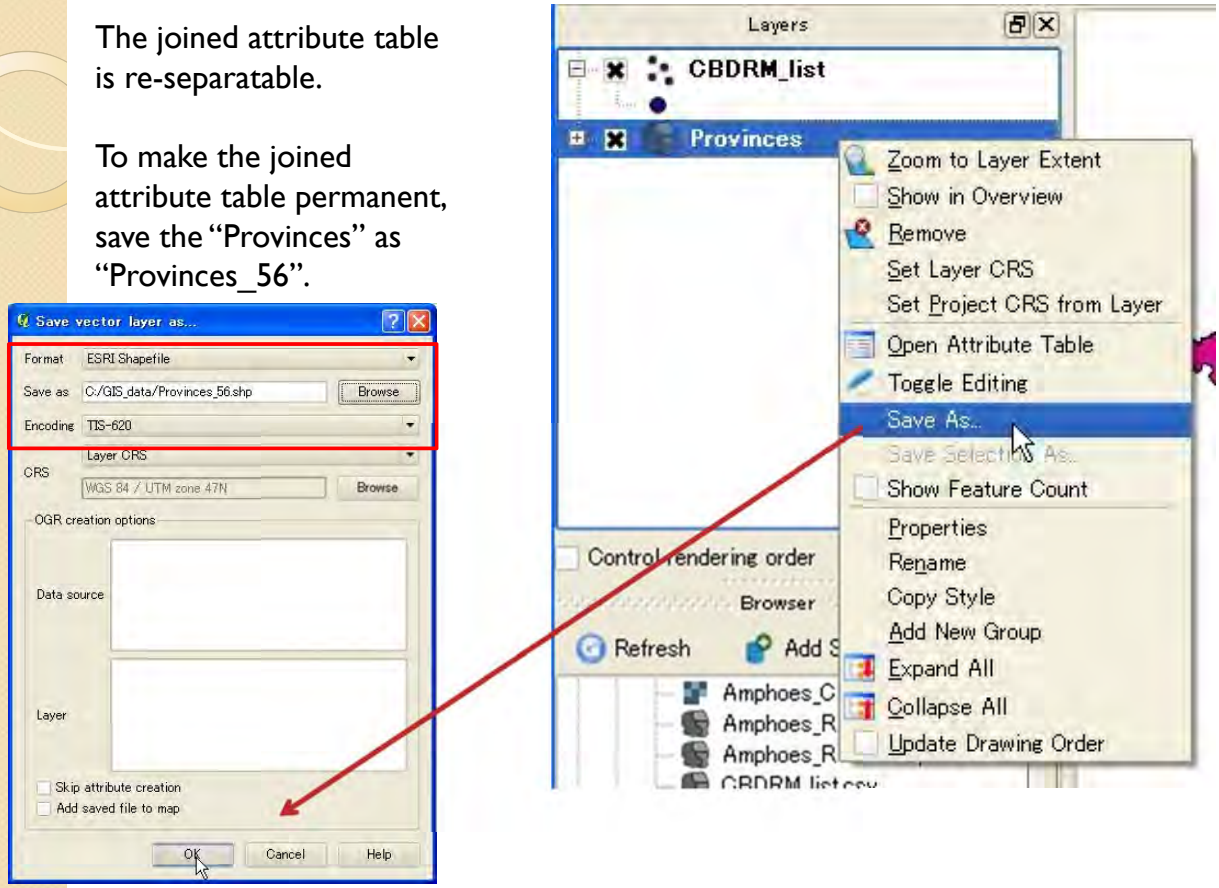
Then, attribute table should be joined.



4.1.3 Join attribute table

The joined attribute table is re-separatable.

To make the joined attribute table permanent, save the "Provinces" as "Provinces_56".

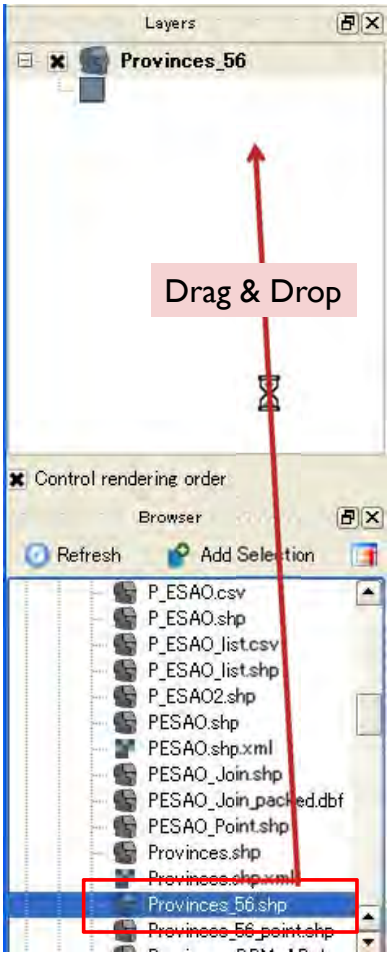


4.2 Making CBDRM map

4.2.1 Import data

Click "Refresh", and drag and drop "Provinces_56.shp" and "Provinces_point.shp".

"Provinces_point.shp" is for label indication.

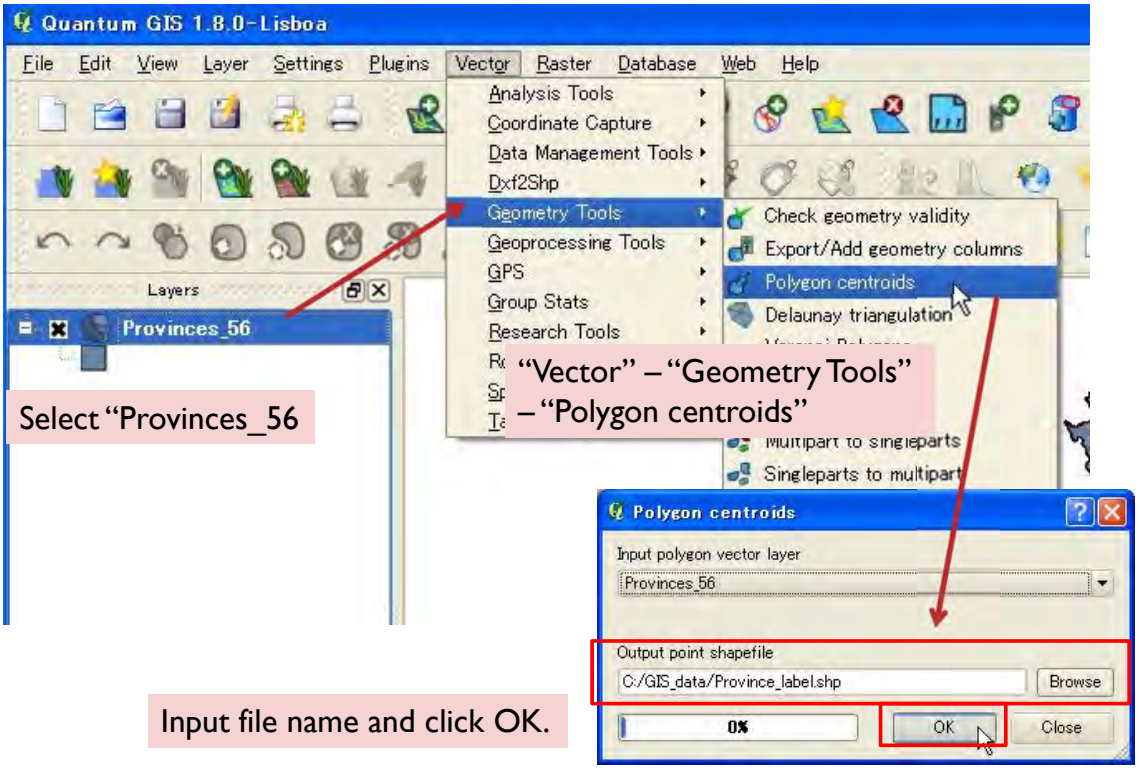


After you made joined shape files, "provinces_56.shp", once, it is not necessary to remake these shape file. You can use these file directly to make inventory maps.

In case you want to update the data, it is required to remake or edit these files.

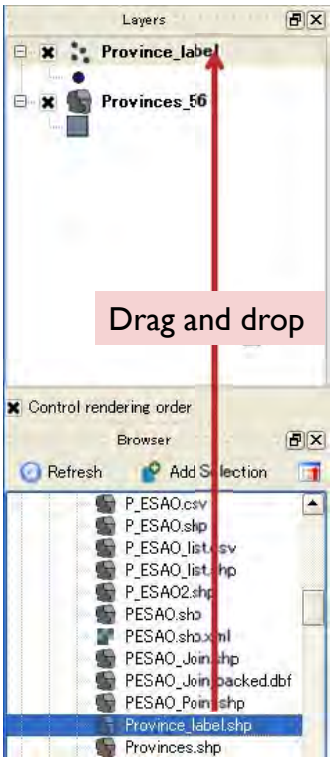
4.2.2 Make point data for labeling

To display labels in QGIS, it is better to make point shape file by following process.



4. Making Inventory Maps (CBDRM)

4.2.2 Make point data for labeling

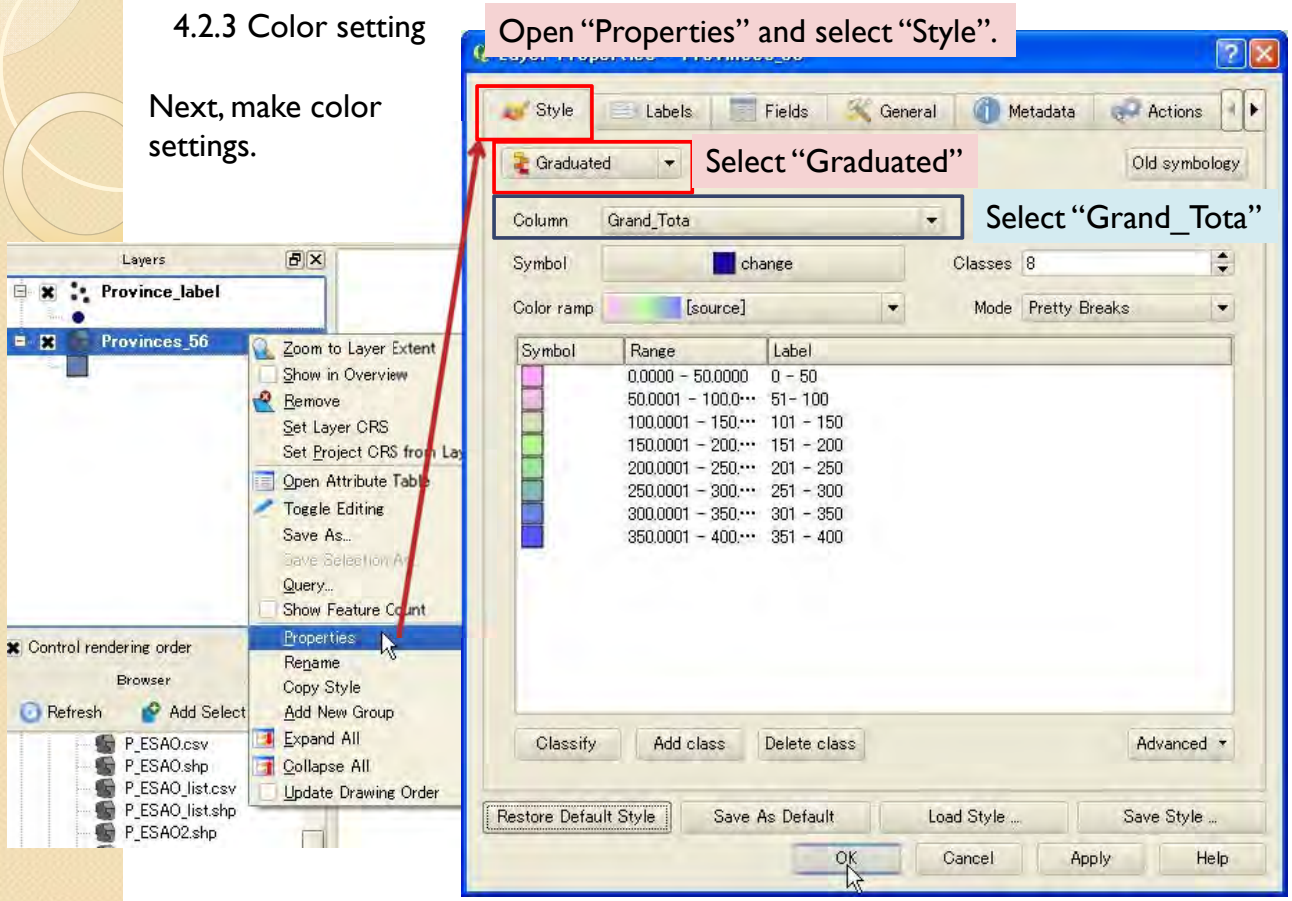


Import the file you made.

4. Making Inventory Maps (CBDRM)

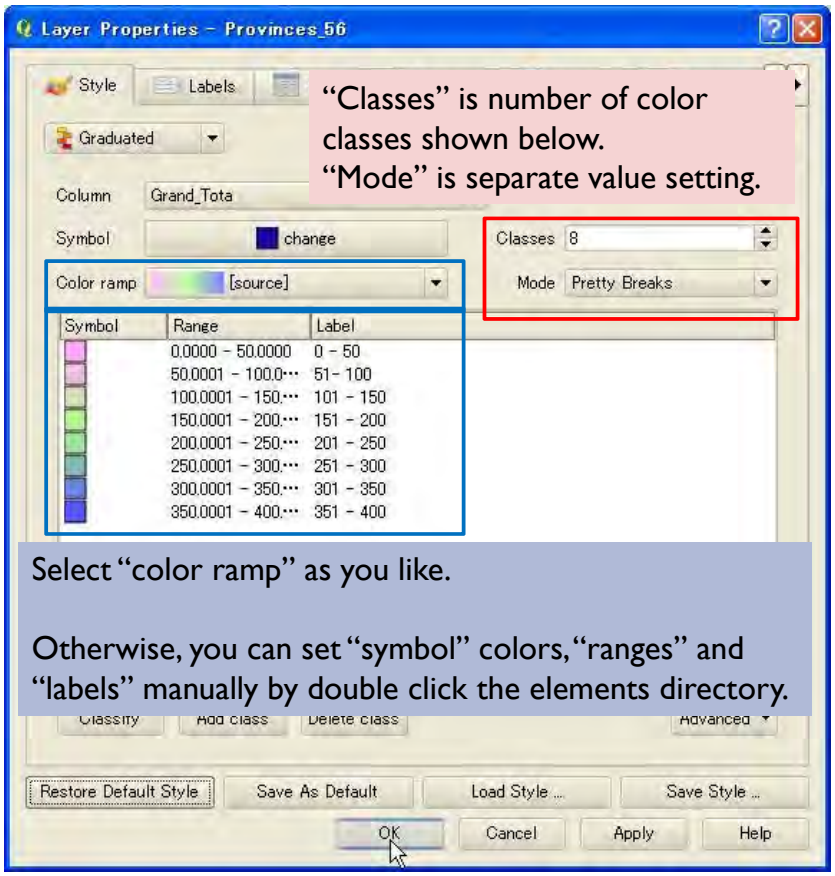
4.2.3 Color setting

Next, make color settings.



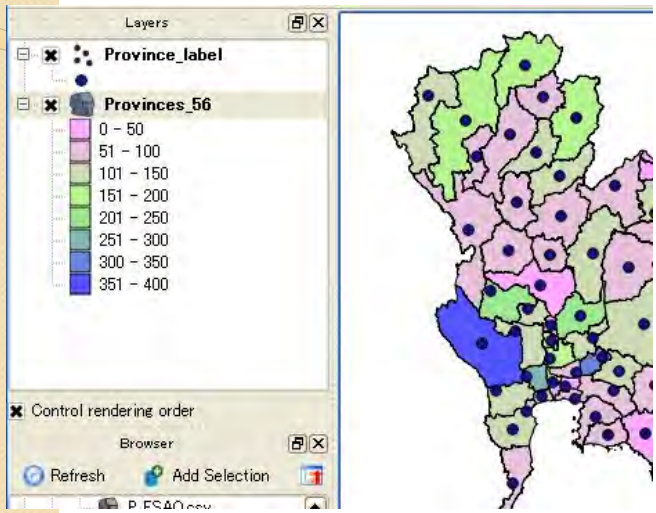
4. Making Inventory Maps (CBDRM)

4.2.3 Color setting



4. Making Inventory Maps (CBDRM)

4.2.3 Color setting



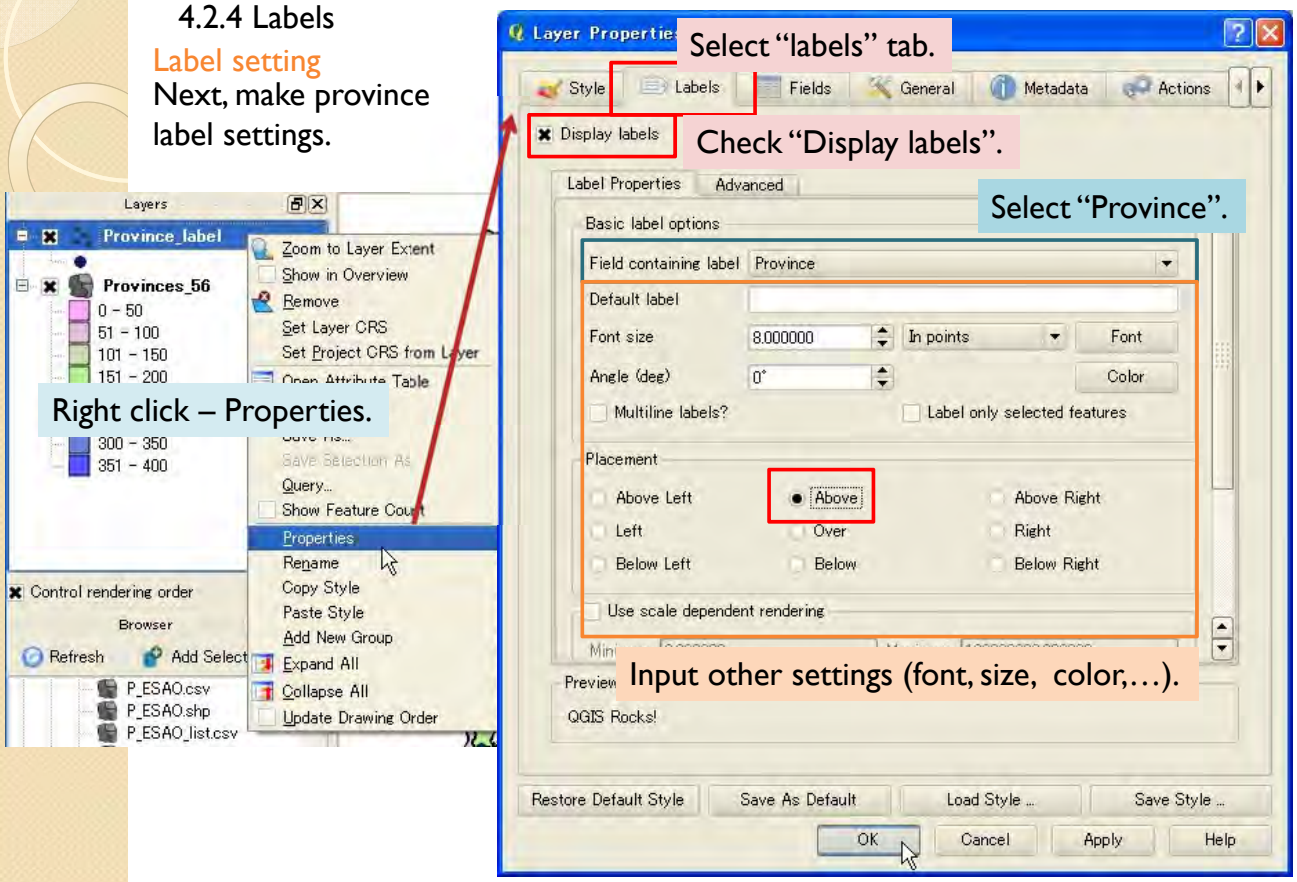
Then, you can see the colored map of total conducted numbers of CBDRM.

4. Making Inventory Maps (CBDRM)

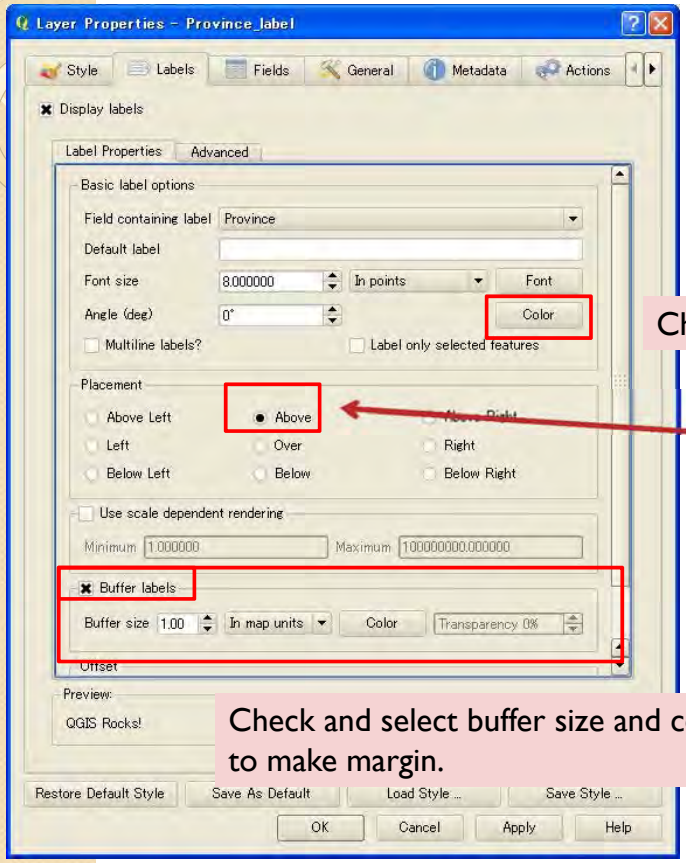
4.2.4 Labels

Label setting

Next, make province label settings.



4.2.4 Labels



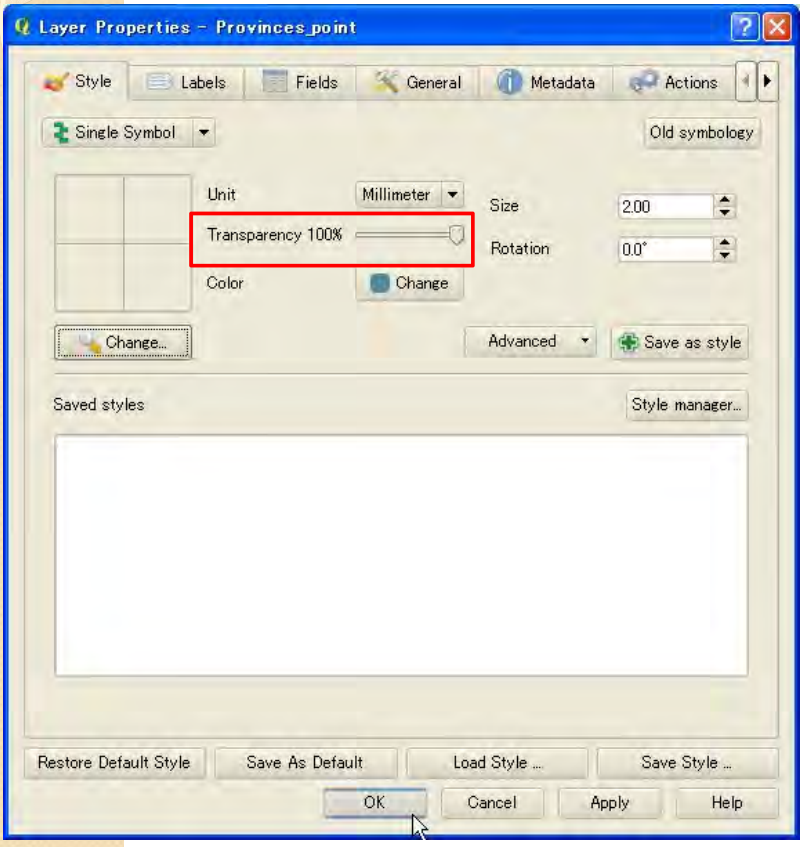
Change font color here

Select "Above" to display upper position.

Check and select buffer size and color to make margin.

4. Making Inventory Maps (CBDRM)

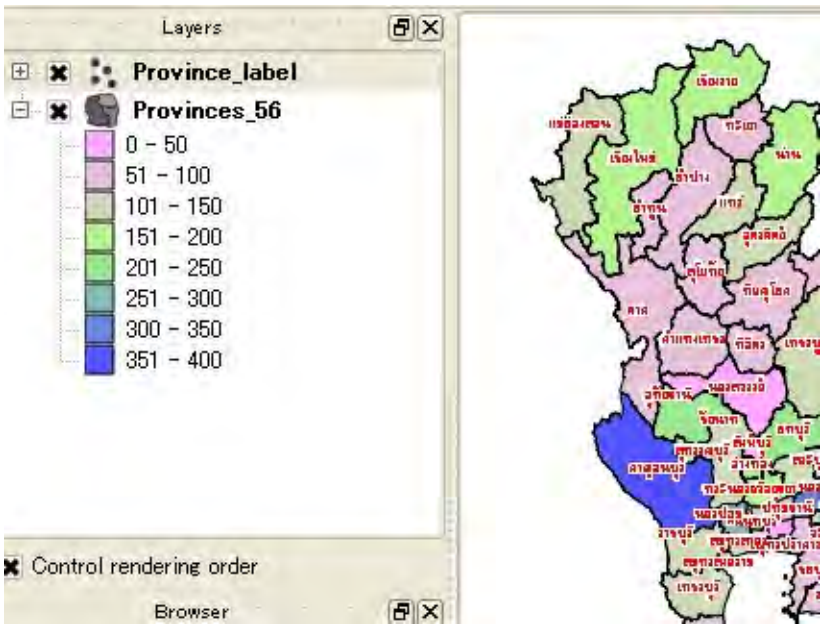
4.2.4 Labels



Set "Transparency" to 100 % to remove point symbols.

4.2.4 Labels

Then, the province names are displayed in the map.

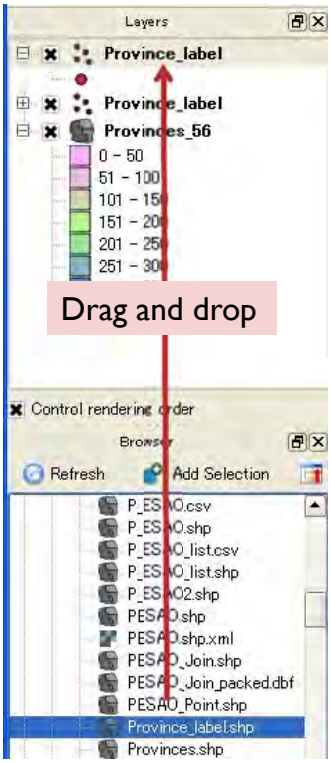


4. Making Inventory Maps (CBDRM)

4.2.4 Labels

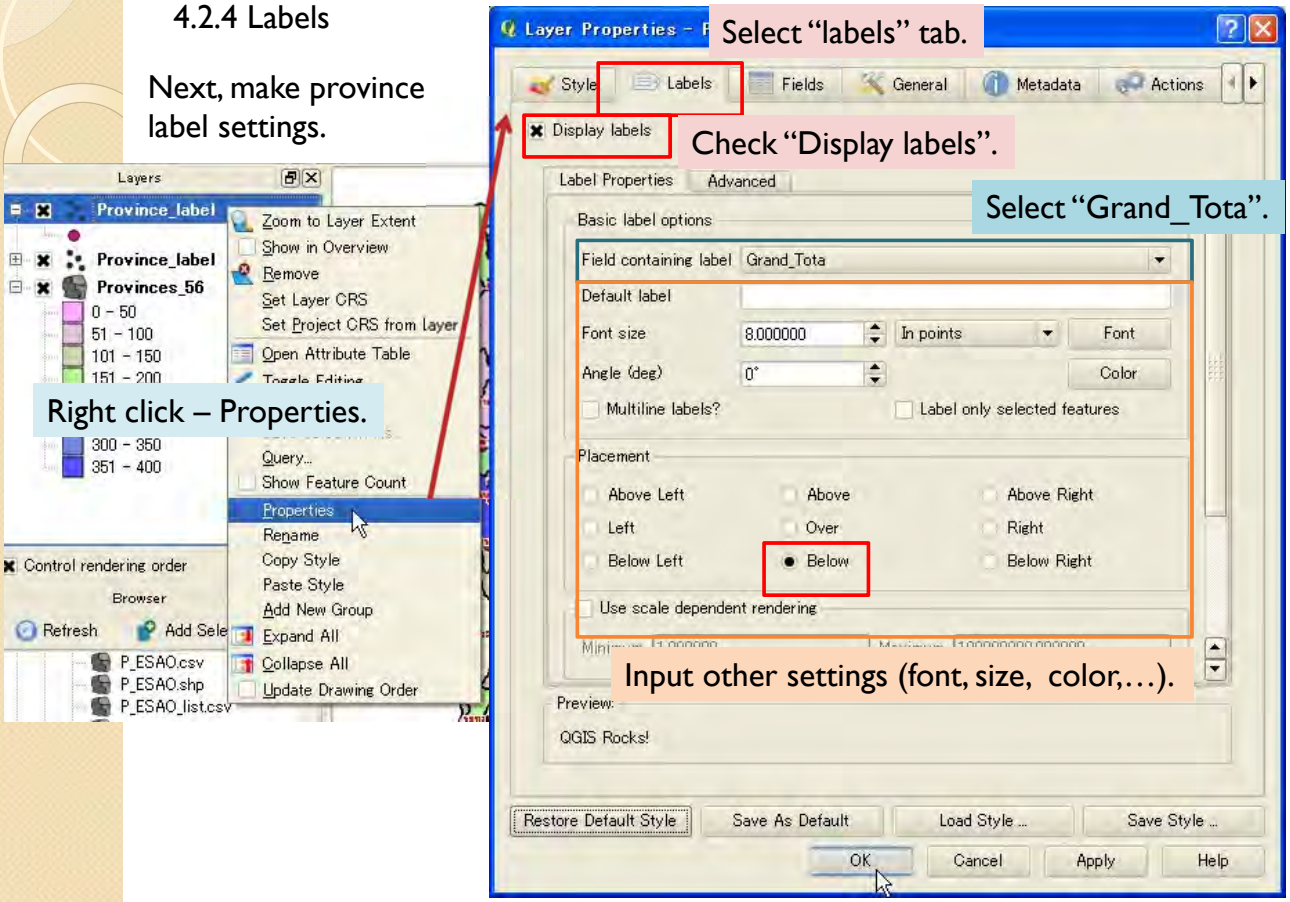
Next, make province label settings.

Import "Province_label" one more.



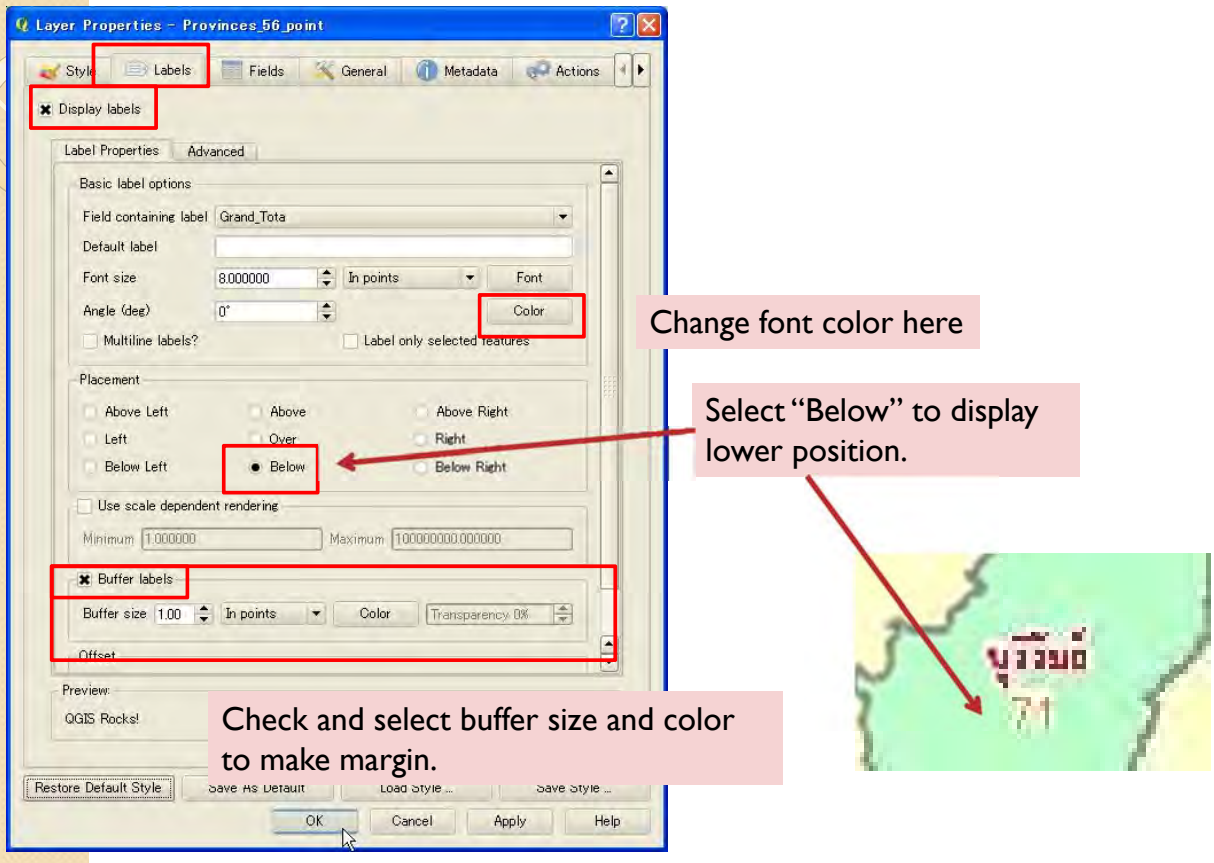
4.2.4 Labels

Next, make province label settings.



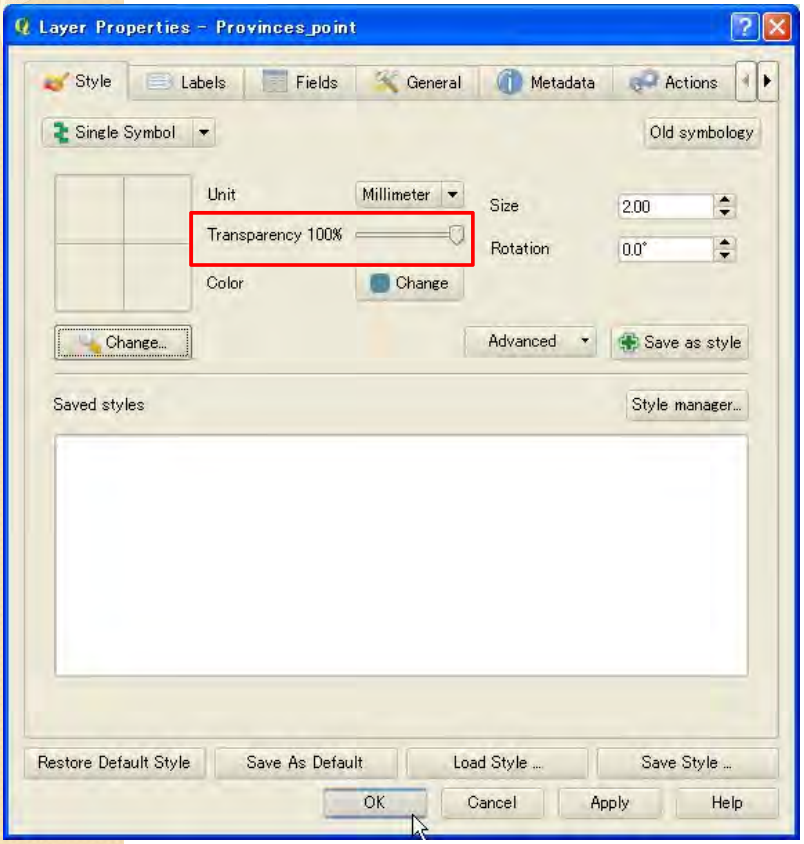
4. Making Inventory Maps (CBDRM)

4.2.4 Labels



4. Making Inventory Maps (CBDRM)

4.2.4 Labels

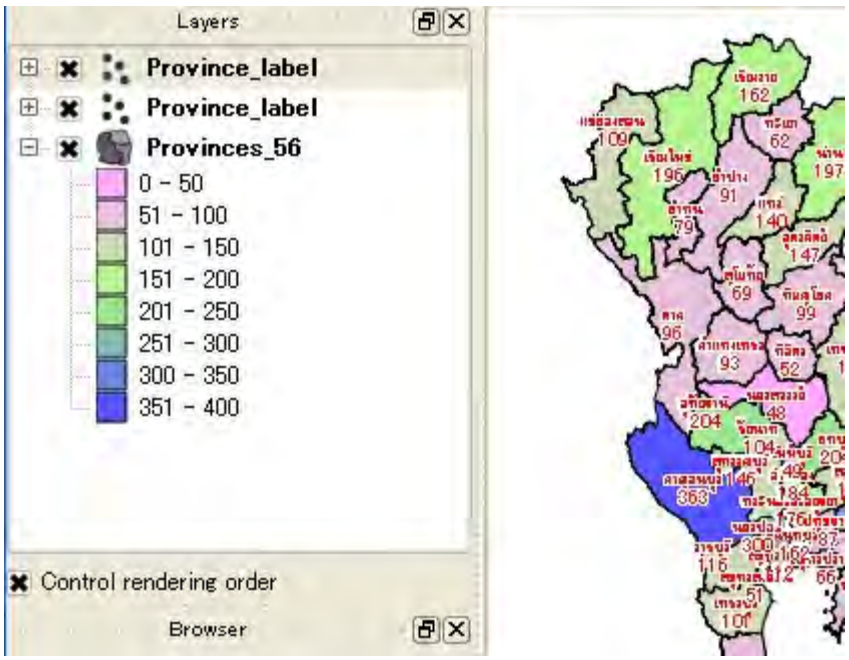


Set "Transparency" to 100 % to remove point symbols.

4. Making Inventory Maps (CBDRM)

4.2.4 Labels

Then, the labels are displayed in the map.

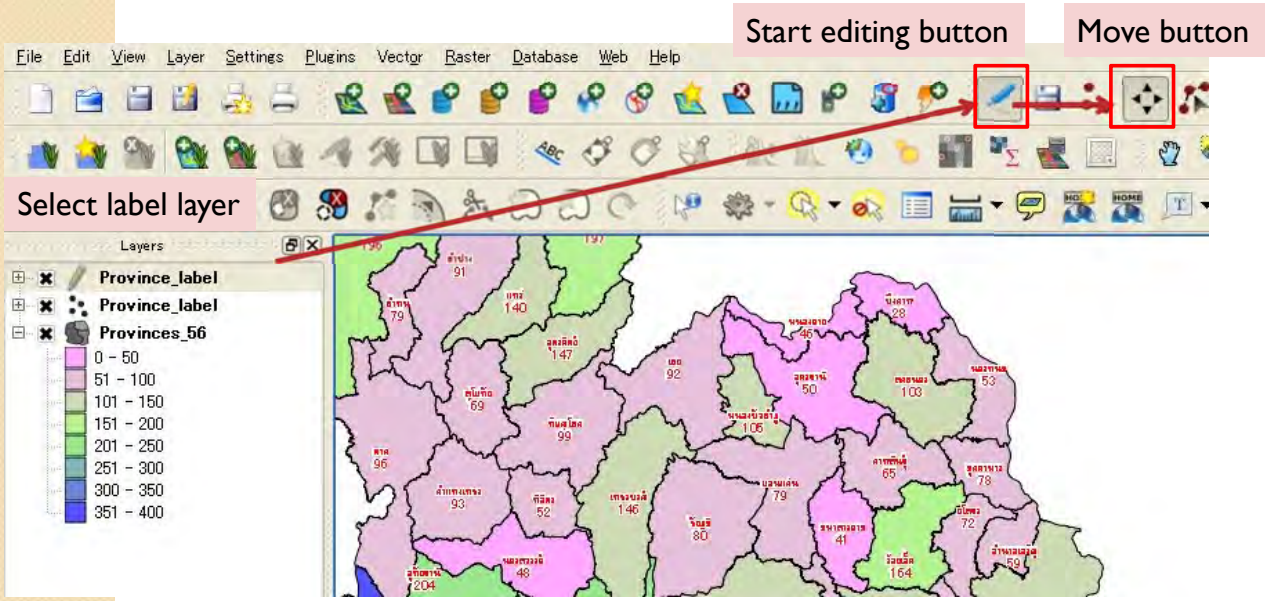


4. Making Inventory Maps (CBDRM)

4.2.4 Labels

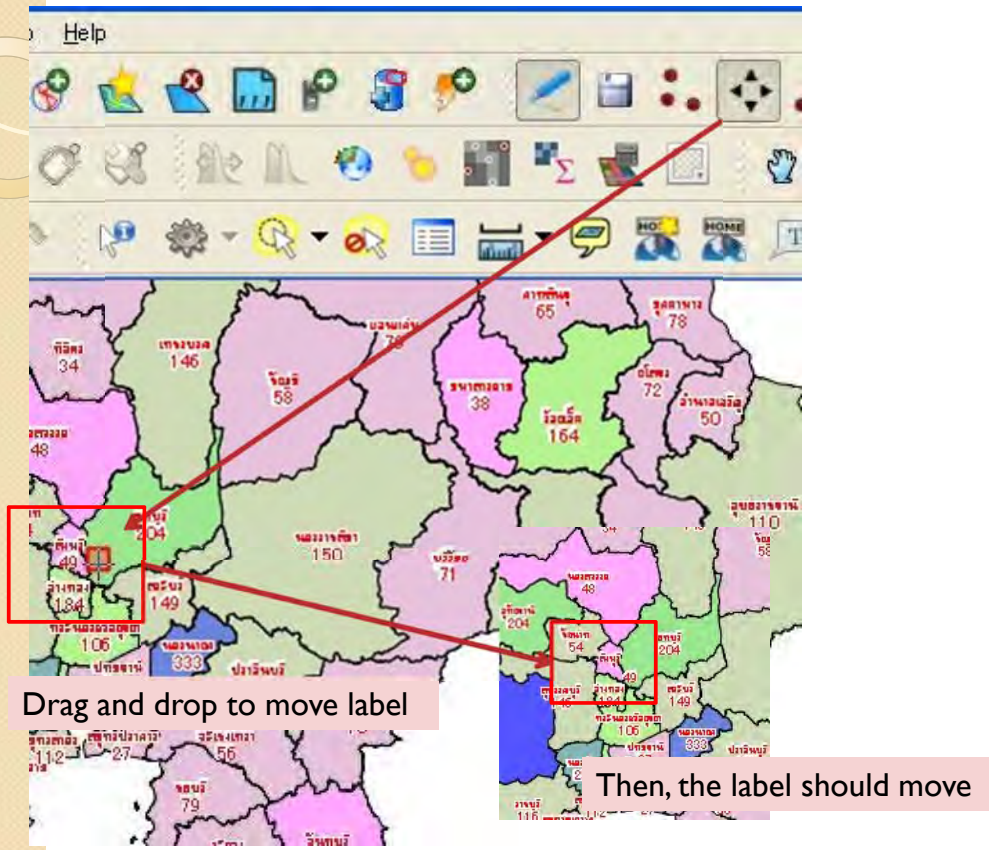
Move labels

In some case, the labels may overlap each other.
You can move the lapped labels by following process.



4. Making Inventory Maps (CBDRM)

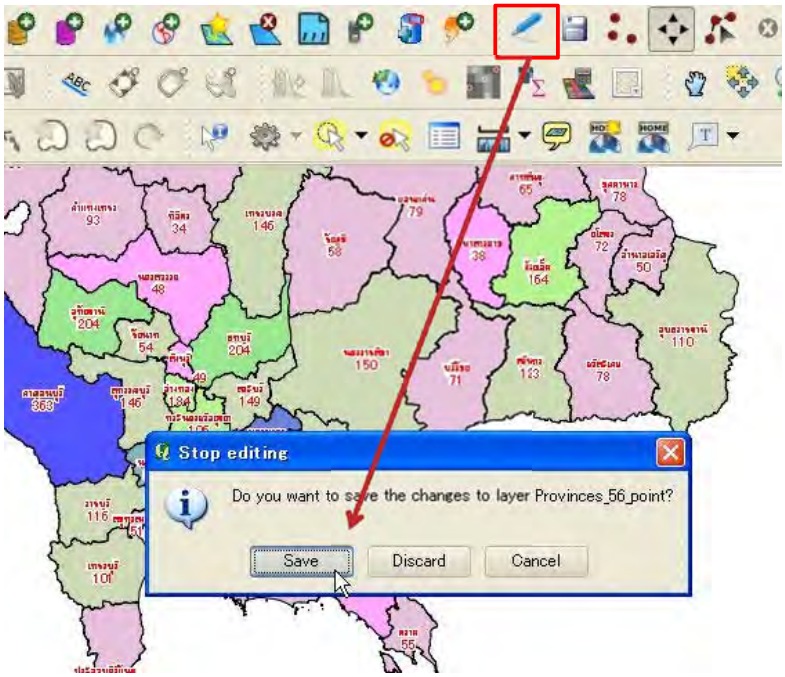
4.2.4 Labels



4. Making Inventory Maps (CBDRM)

4.2.4 Labels

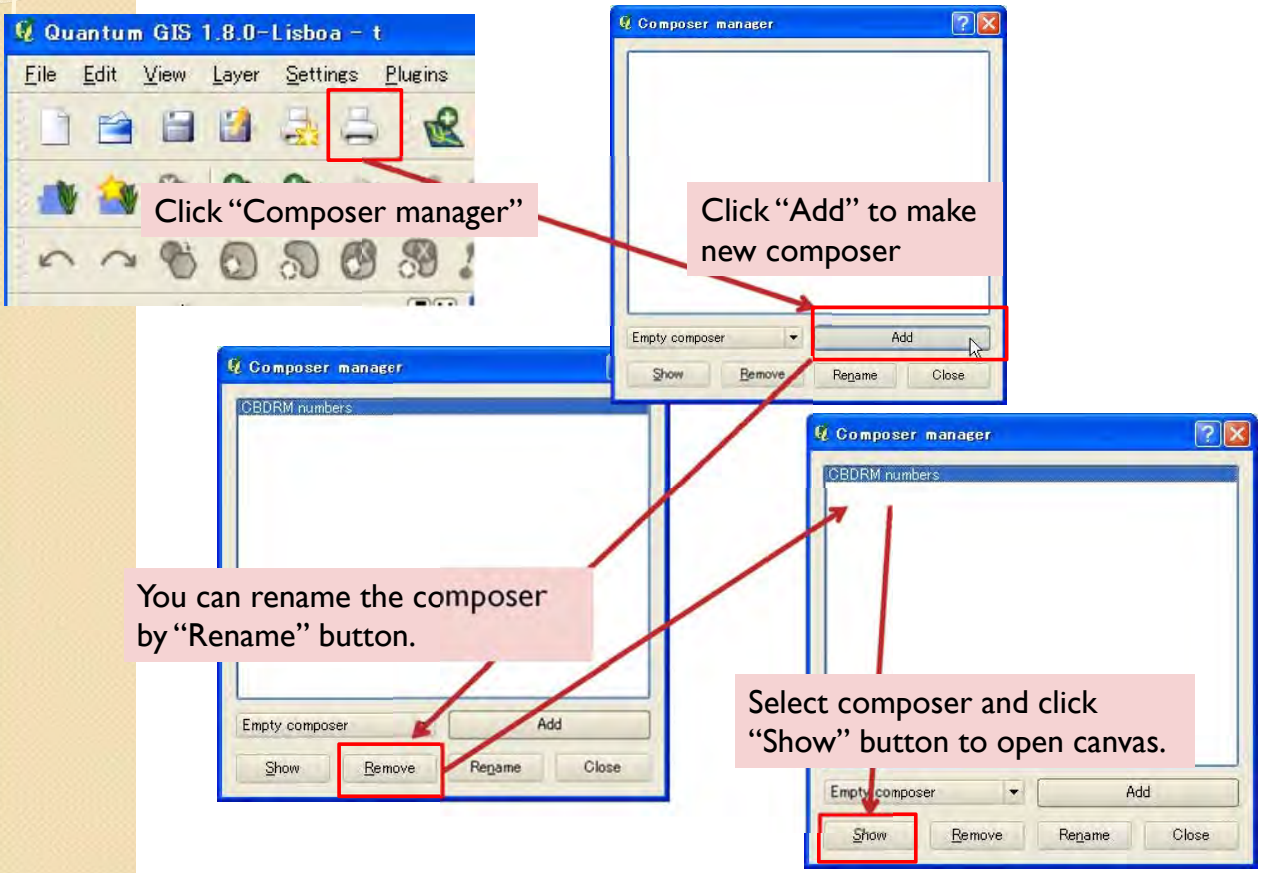
After you finish moving labels, re-click edit button and save changes. Then, the labels should be fixed at new position.



4. Making Inventory Maps (CBDRM)

4.2.5 Print composer

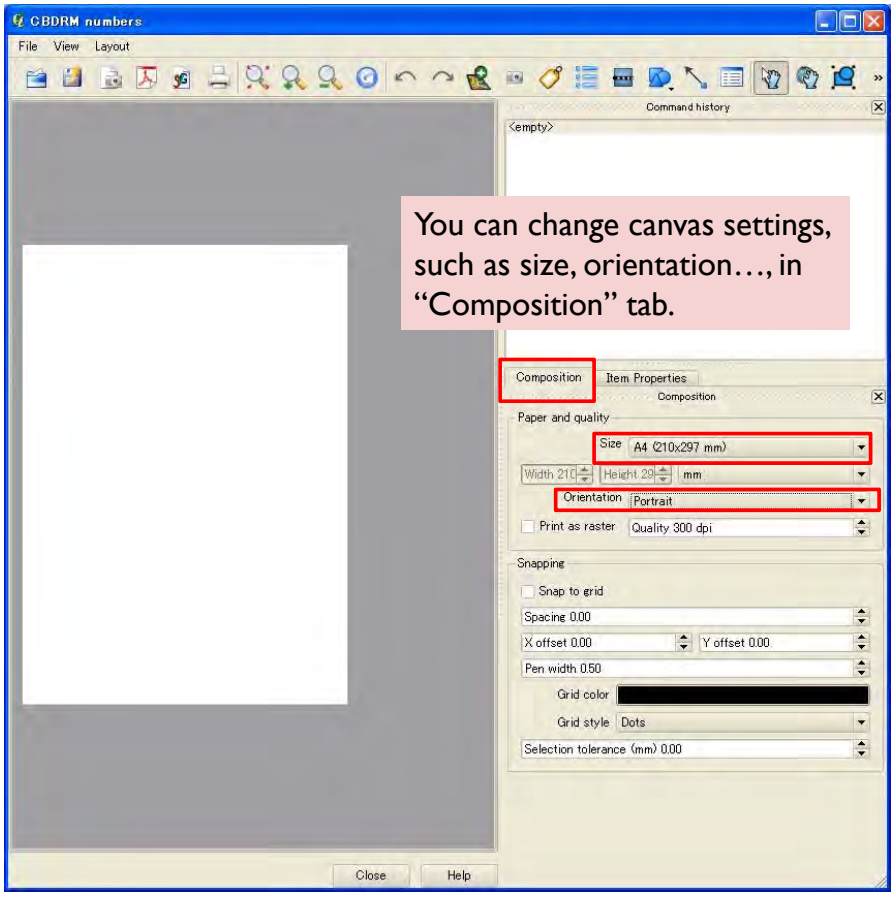
Print composer is a canvas to export map as image file (jpg, pdf, etc…).



4. Making Inventory Maps (CBDRM)

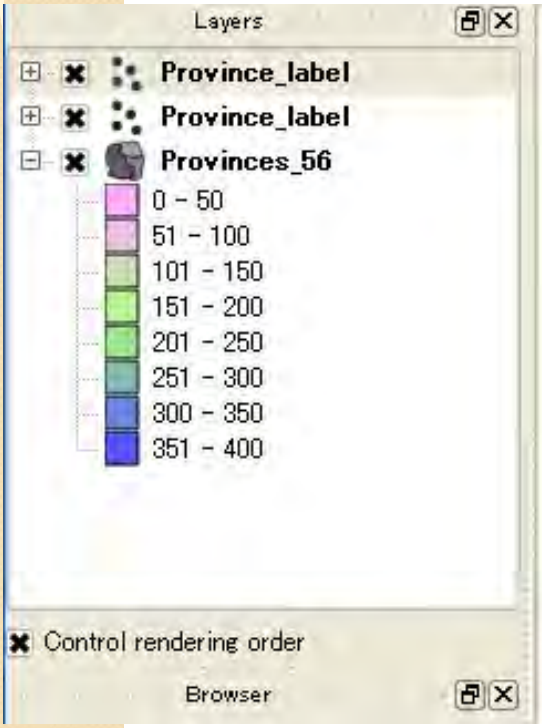
4.2.5 Print composer

This is Print Composer window.



4. Making Inventory Maps (CBDRM)

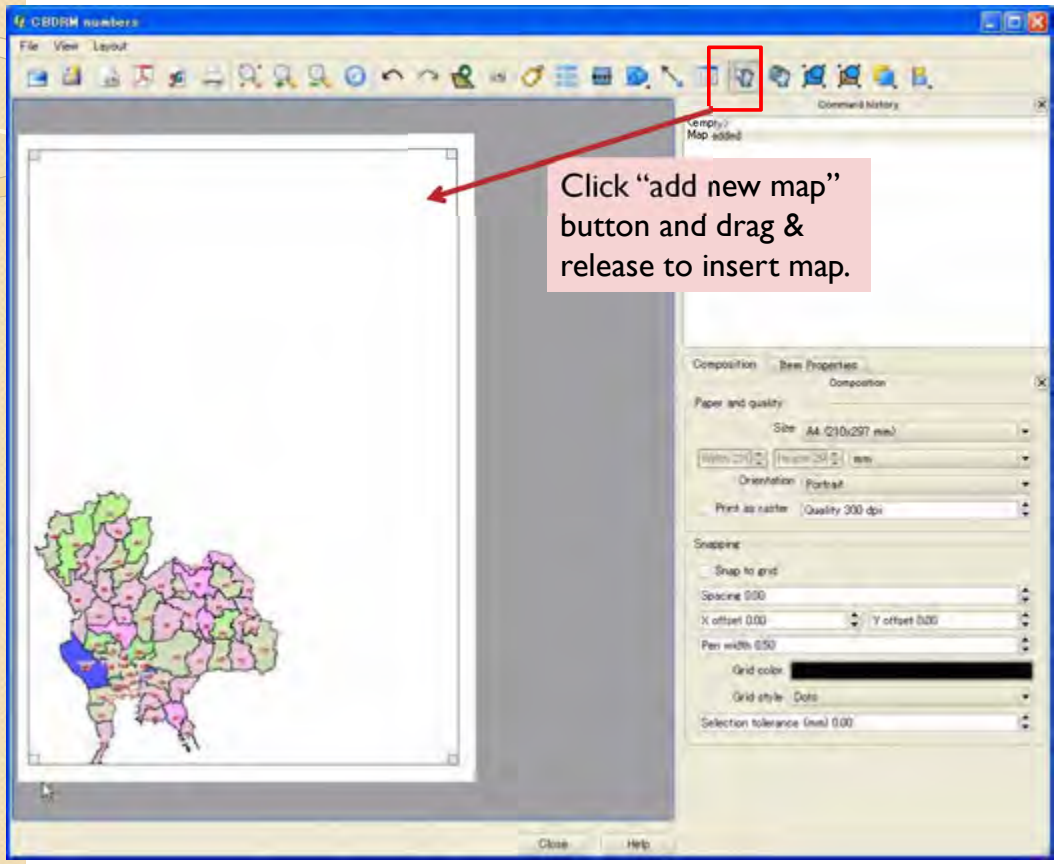
4.2.5 Print composer



To make inventory map of whole Thailand, please display total numbers of conducted CBDRM colored map and labels in the QGIS map window.

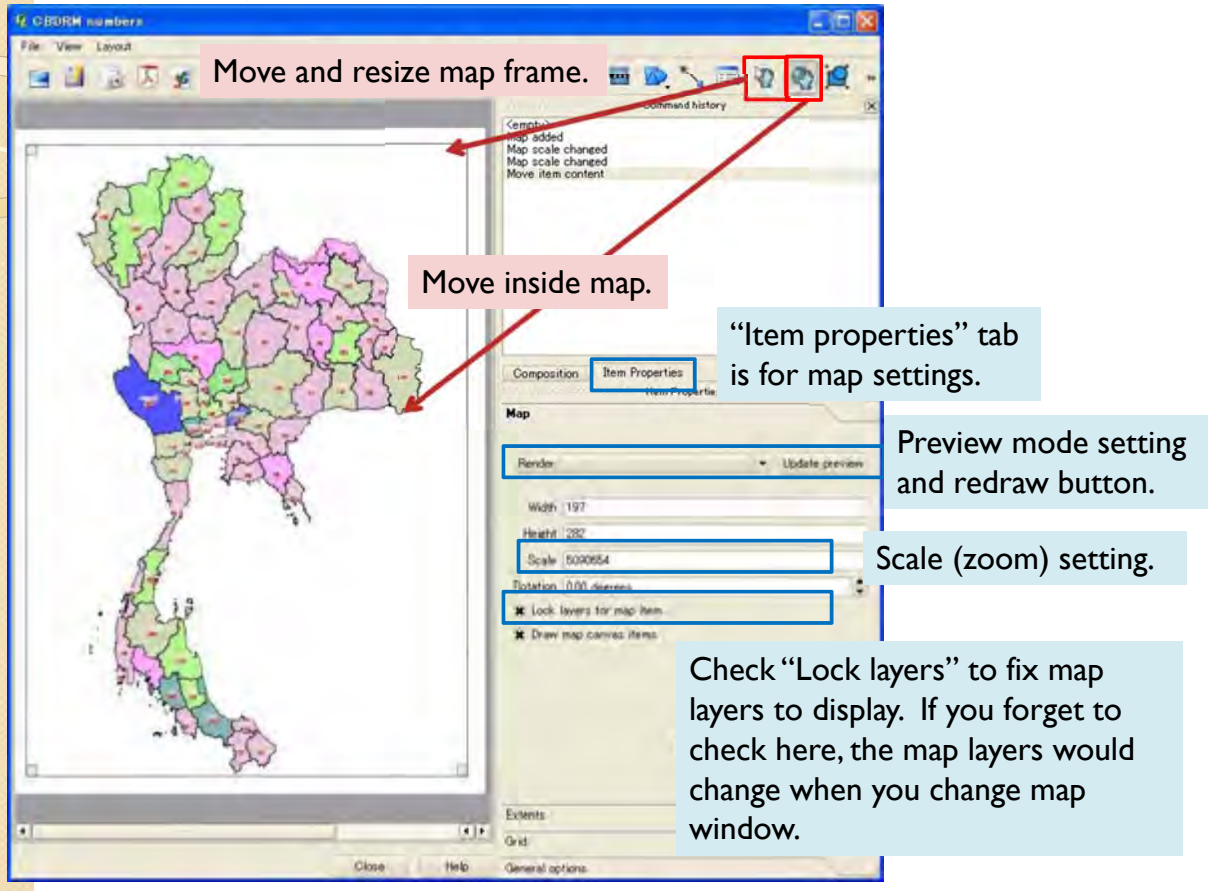
4. Making Inventory Maps (CBDRM)

4.2.5 Print composer



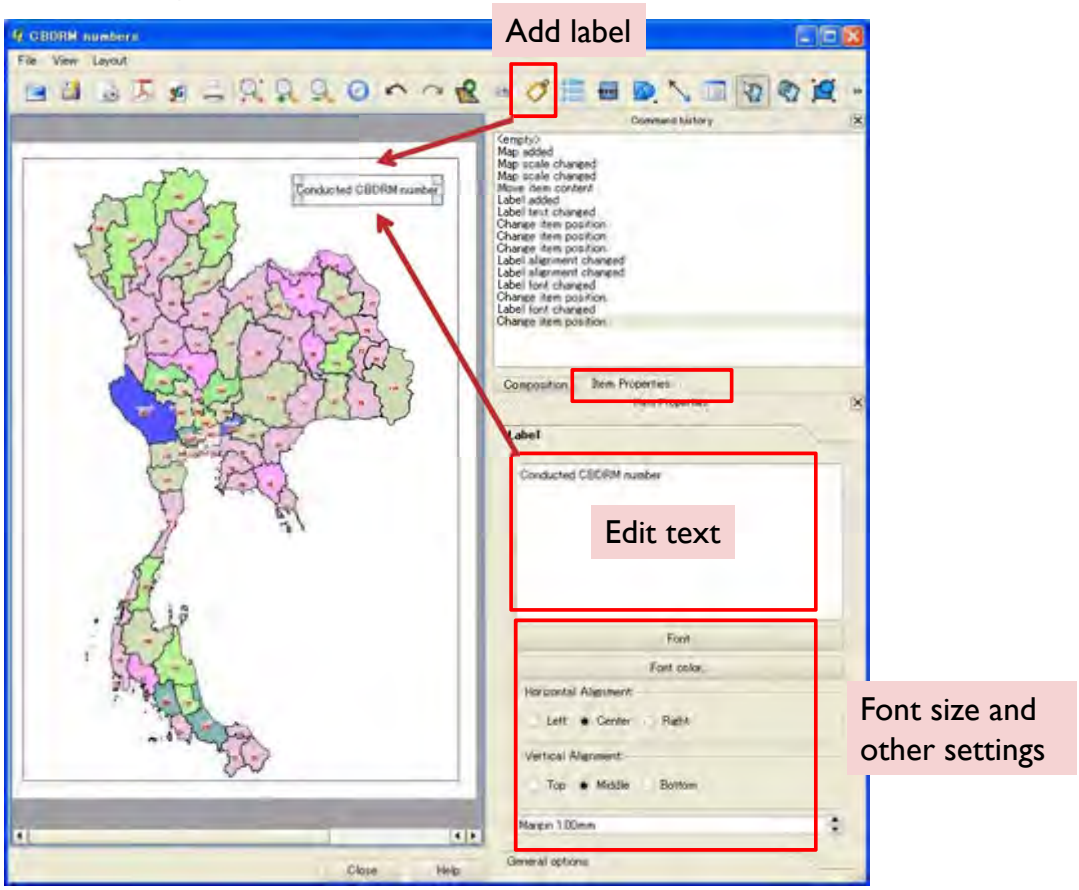
4. Making Inventory Maps (CBDRM)

4.2.5 Print composer



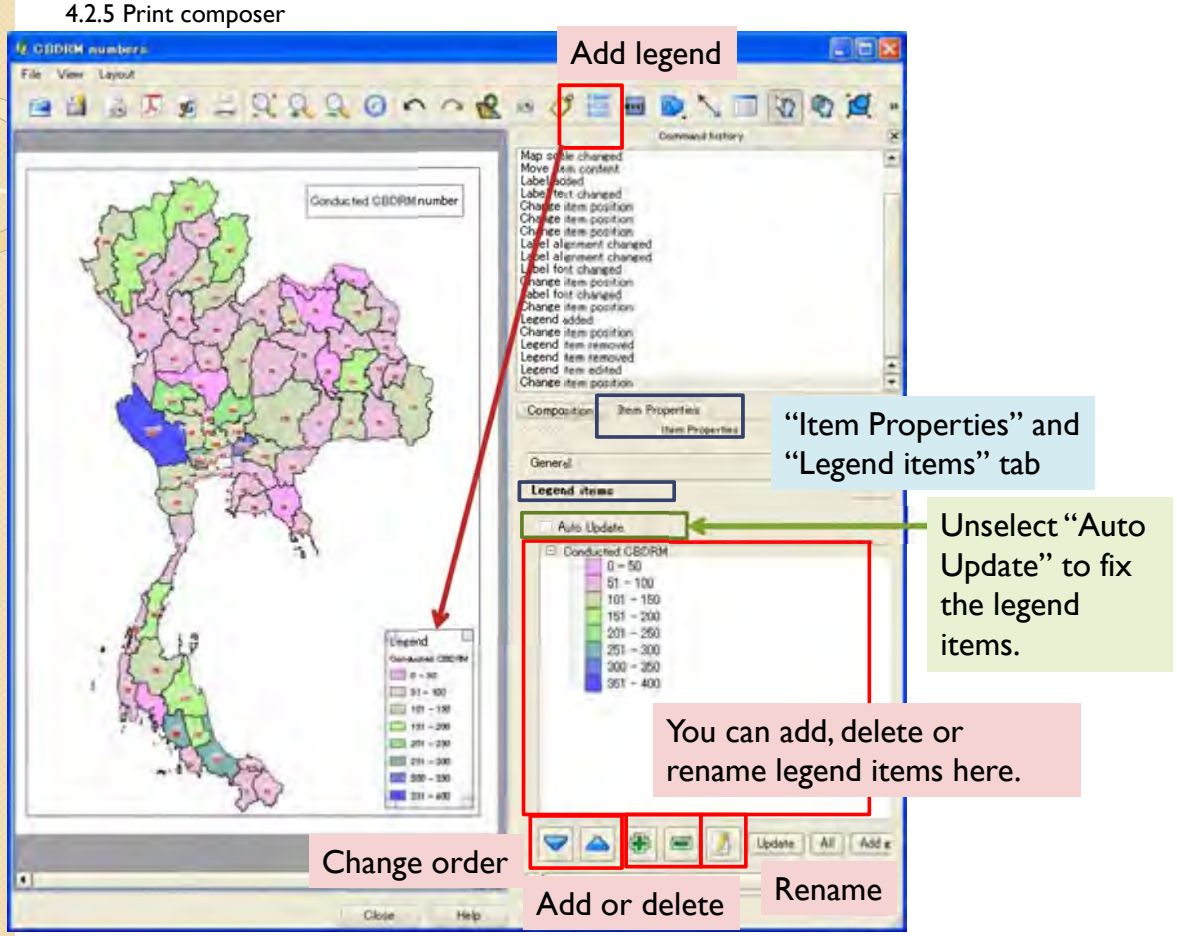
4. Making Inventory Maps (CBDRM)

4.2.5 Print composer



4. Making Inventory Maps (CBDRM)

4.2.5 Print composer



4. Making Inventory Maps (CBDRM)

4.2.5 Print composer

It is able to export map to file.

Export as image file

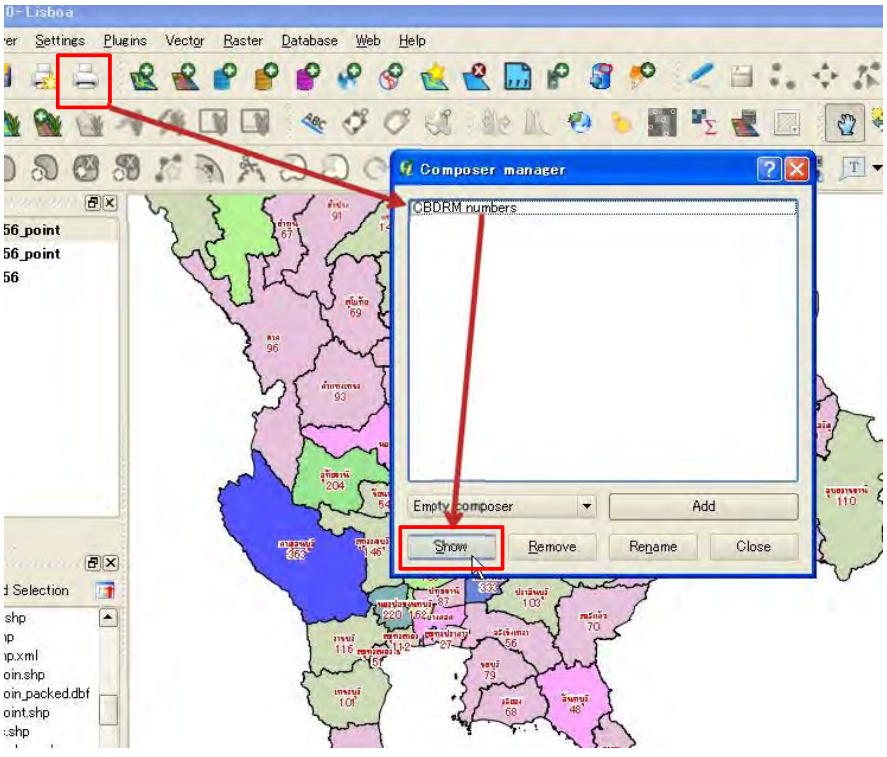
Export as pdf file

Print

4. Making Inventory Maps (CBDRM)

4.2.5 Print composer

After you made composer once, you can recall the canvas from this button.



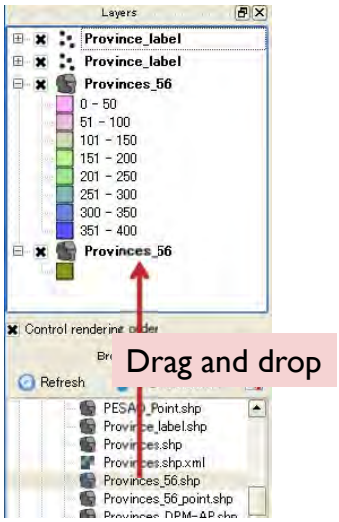
4.3 Map of CBDRM conducting percentage in risk community

4.3.1 Data import

You can import data about CBDRM conducting percentage in risk community from Excel file by same process in 4.1.2.

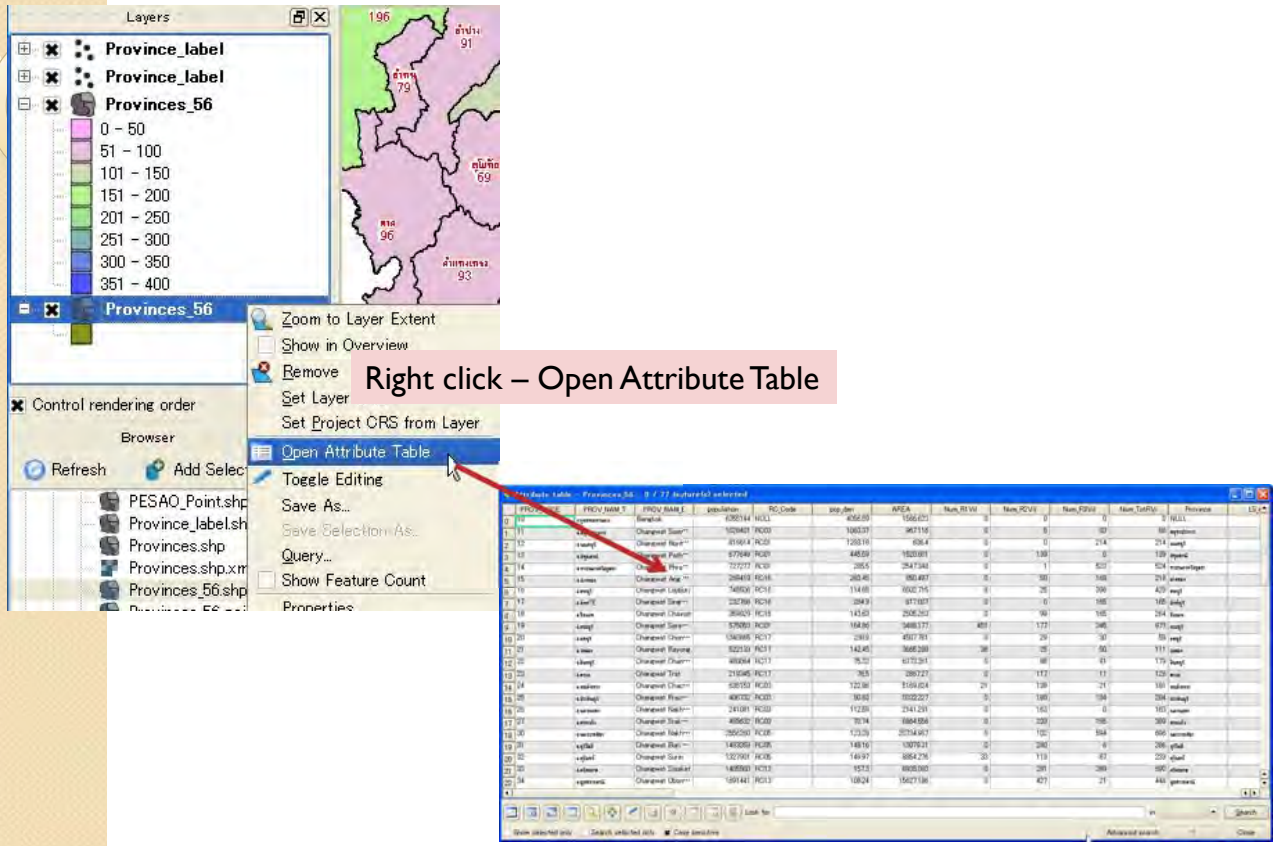
Other method is directly input to the province shape file.
Following is explanation about making new column in attribute table and input the information.

At first, import "Province_56", one more.



4. Making Inventory Maps (CBDRM)

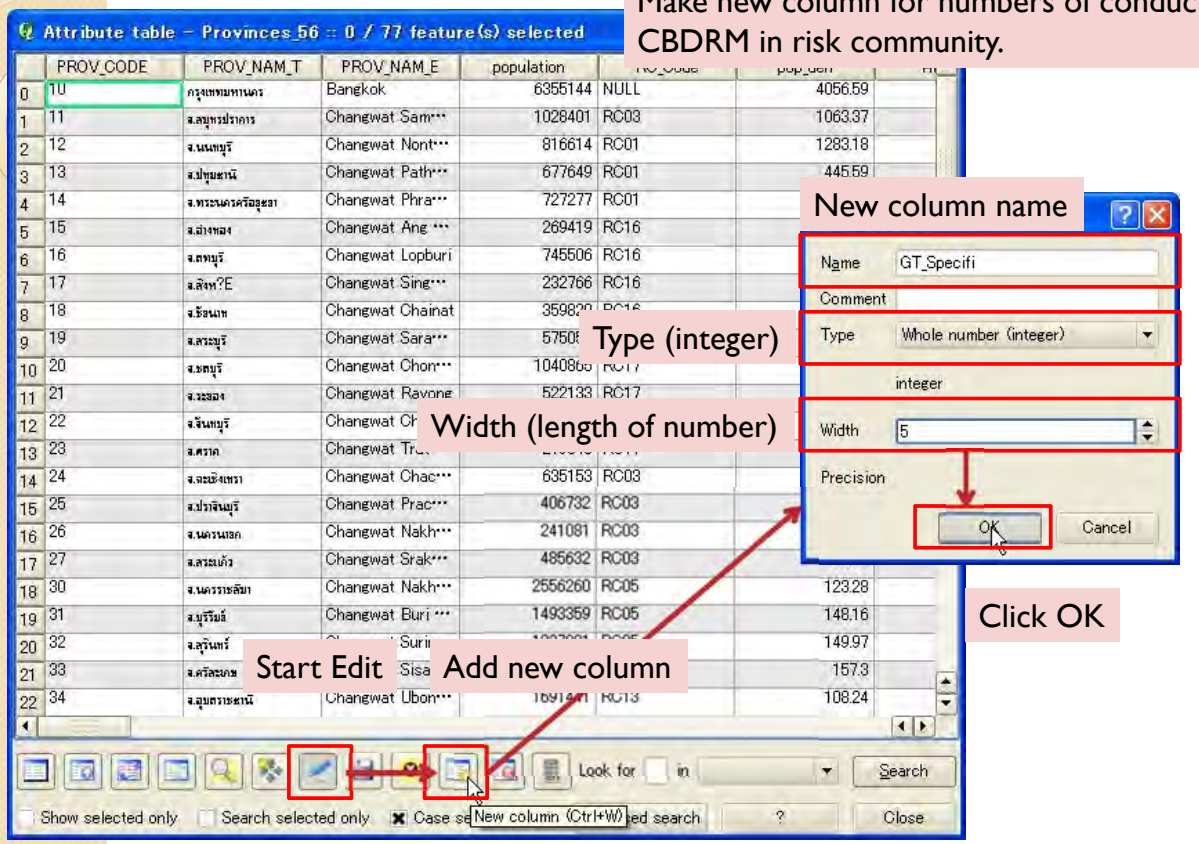
4.3.1 Data import



4. Making Inventory Maps (CBDRM)

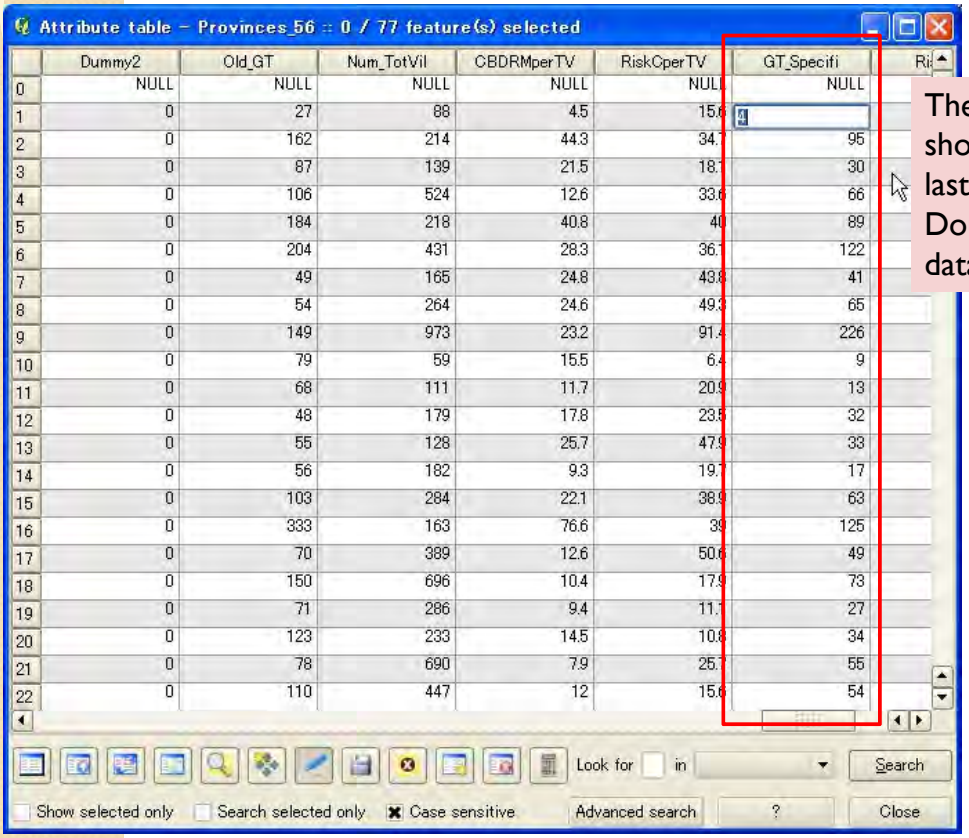
4.3.1 Data import

Make new column for numbers of conducted CBDRM in risk community.



4. Making Inventory Maps (CBDRM)

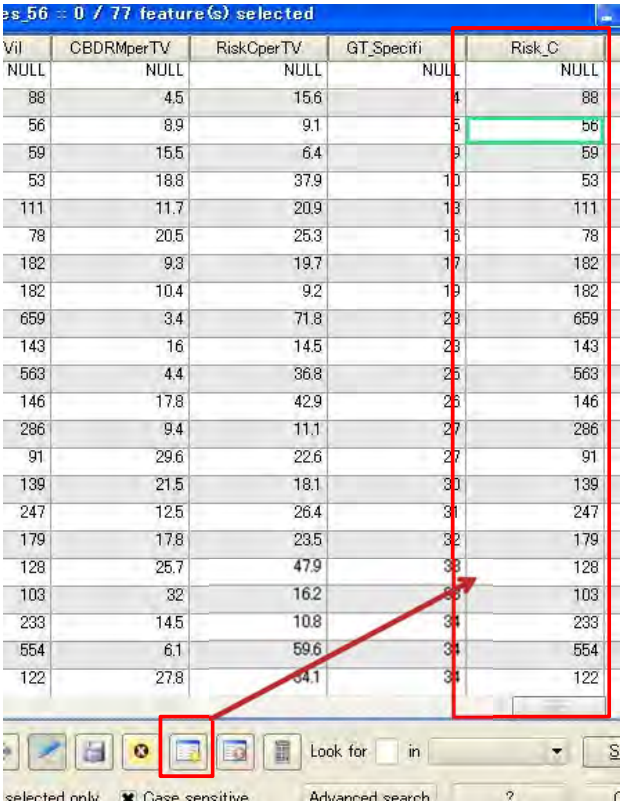
4.3.1 Data import



Then, new column should be added at the last of attribute table. Double click to input data.

4. Making Inventory Maps (CBDRM)

4.3.1 Data import

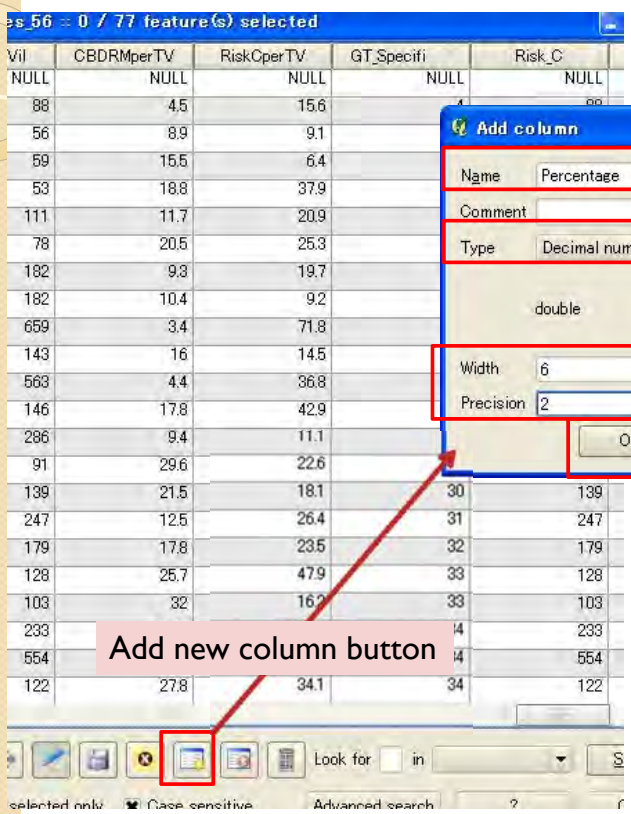


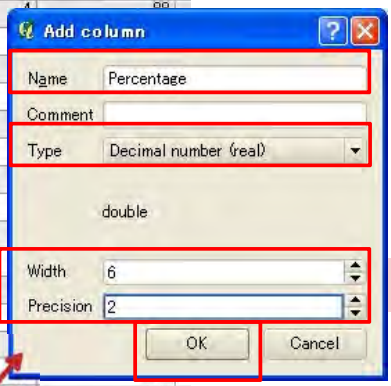
You can also make "Risk_C" column for numbers of total risk community.

4. Making Inventory Maps (CBDRM)

4.3.1 Data import

After you input numbers of conducted CBDRM in risk communities and numbers of total risk communities, make new column for percentage.





Add new column button

Type is "Decimal number"

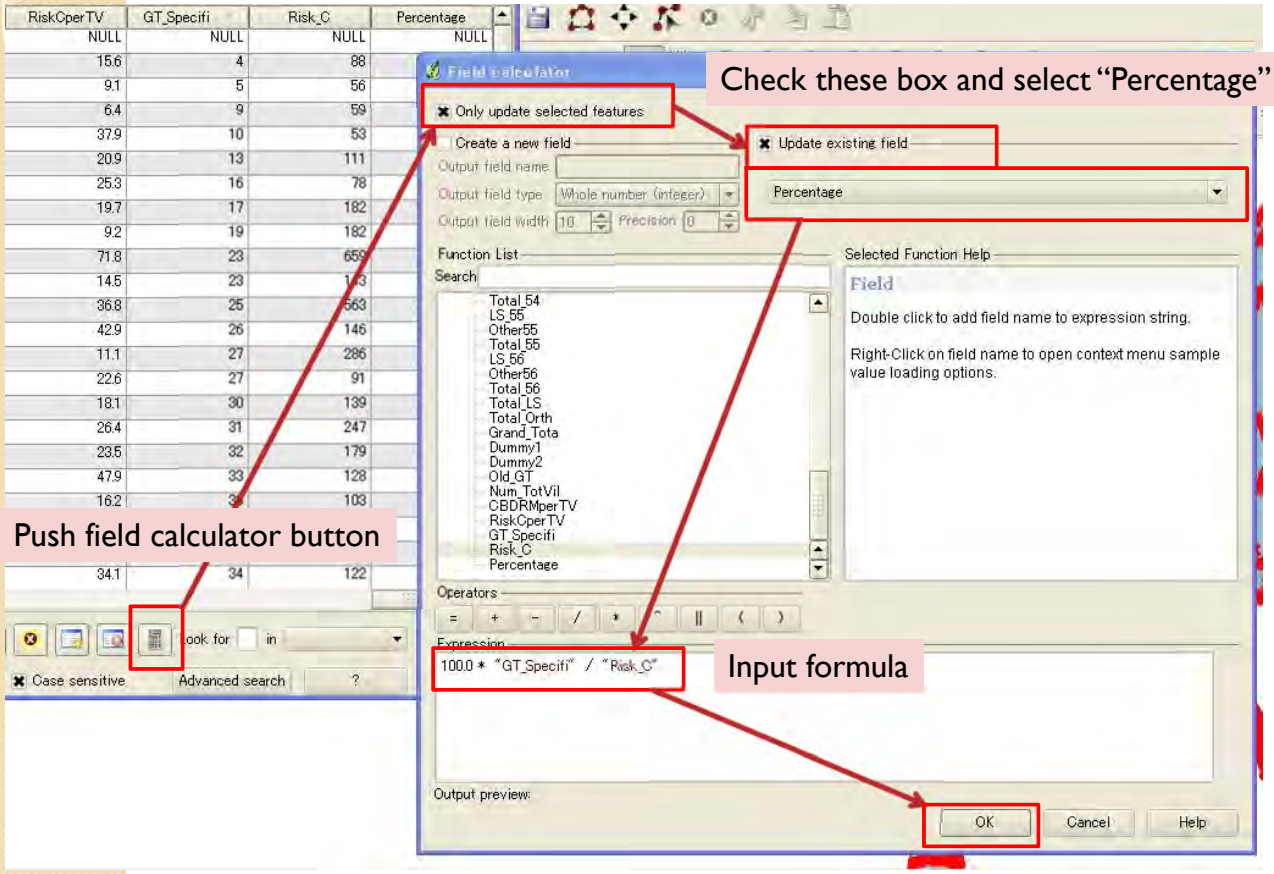
Set Width and Precision

Click OK

4. Making Inventory Maps (CBDRM)

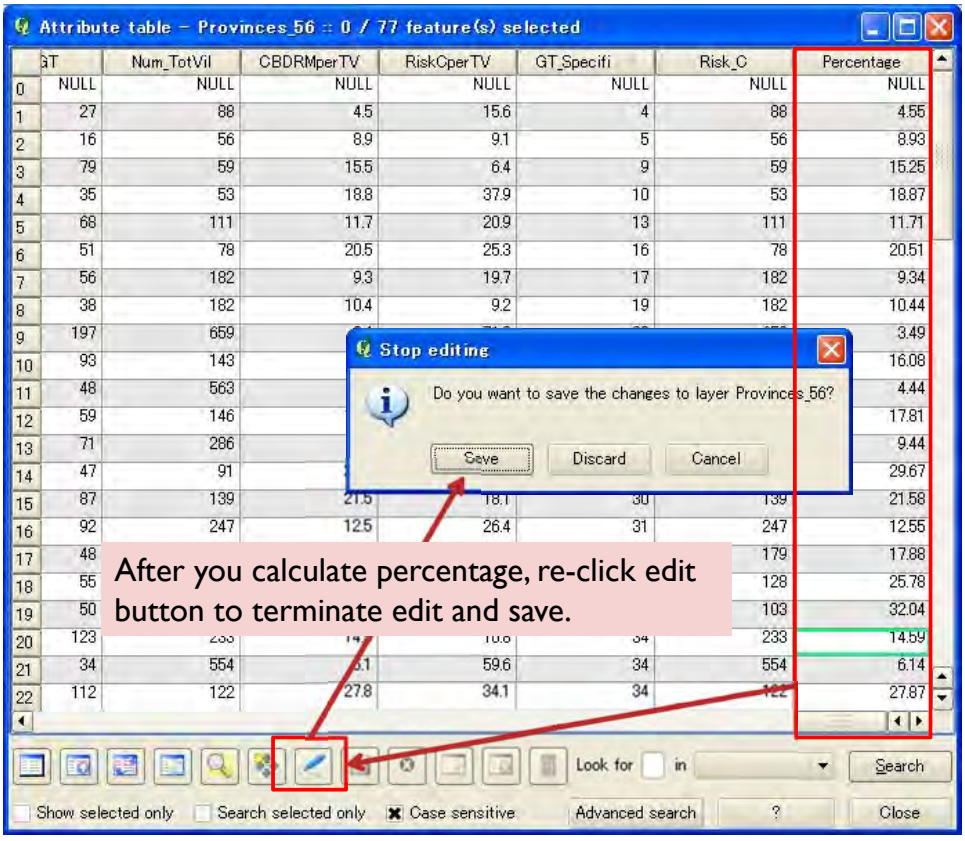
4.3.1 Data import

After you add "Percentage" column, calculate percentage as follows.



4. Making Inventory Maps (CBDRM)

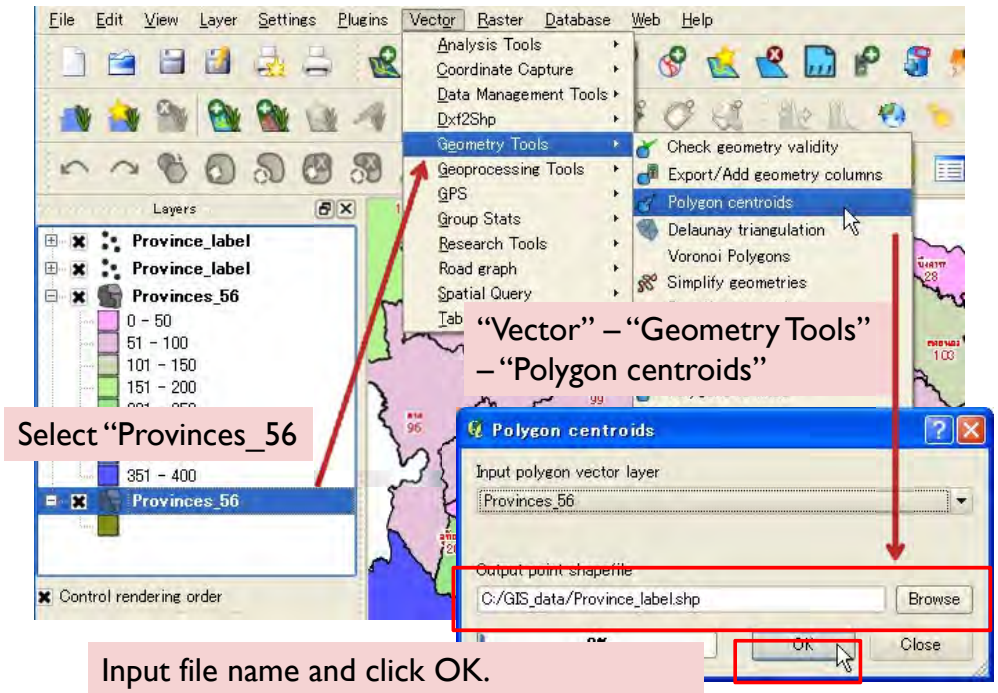
4.3.1 Data import



4. Making Inventory Maps (CBDRM)

4.3.1 Data import

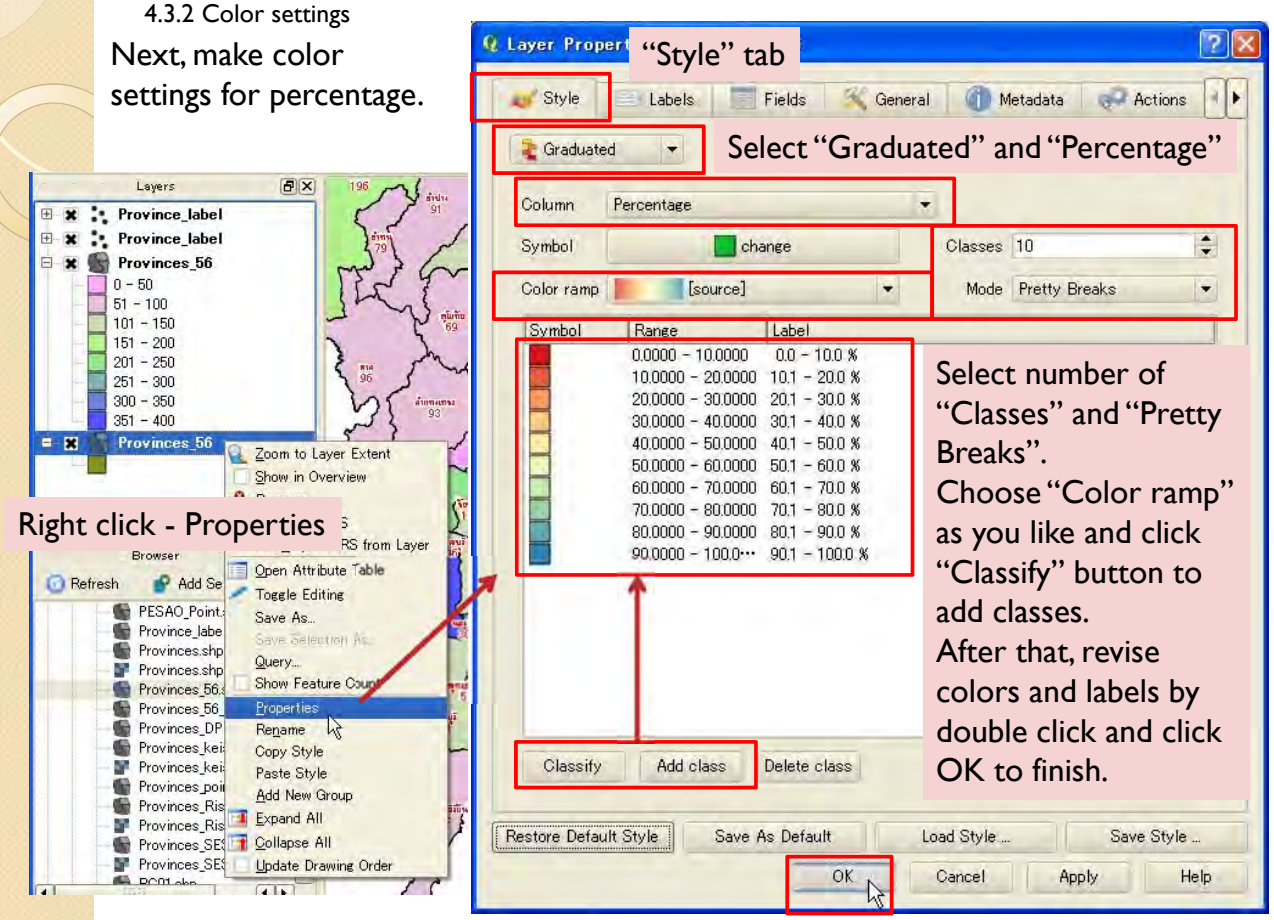
Next, make point data for labels same as 4.2.2



4. Making Inventory Maps (CBDRM)

4.3.2 Color settings

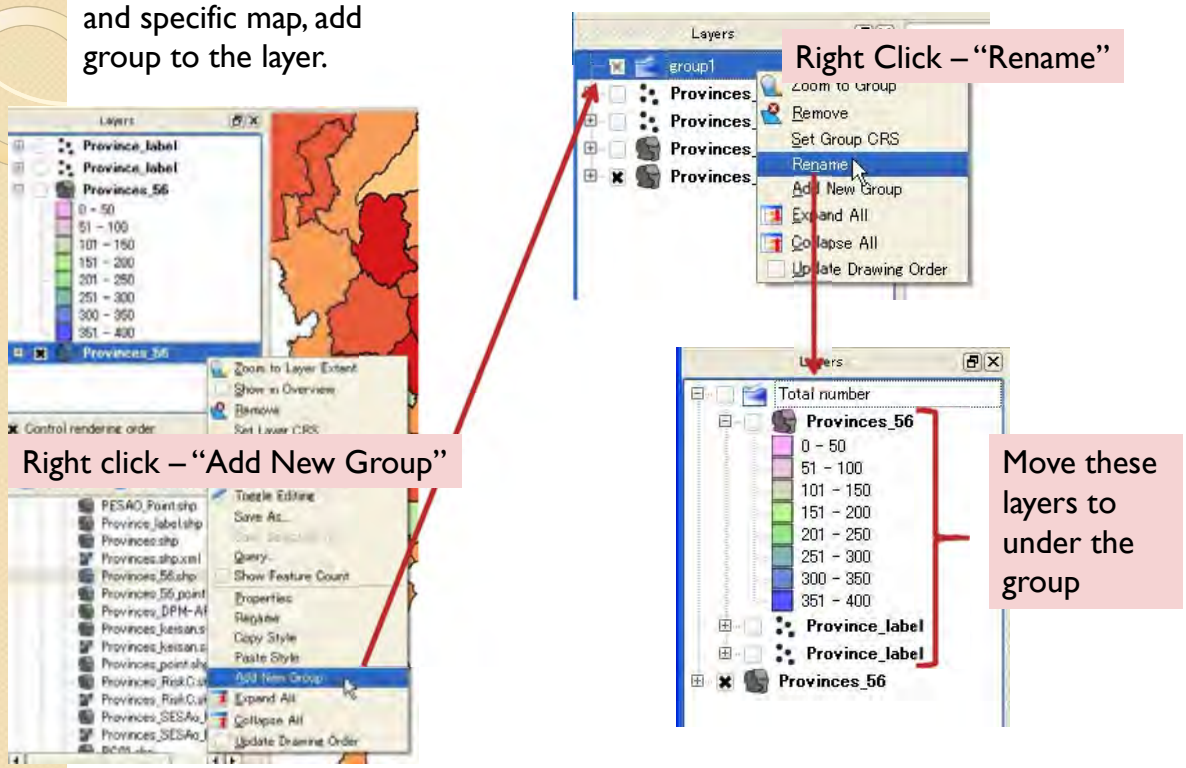
Next, make color settings for percentage.



4. Making Inventory Maps (CBDRM)

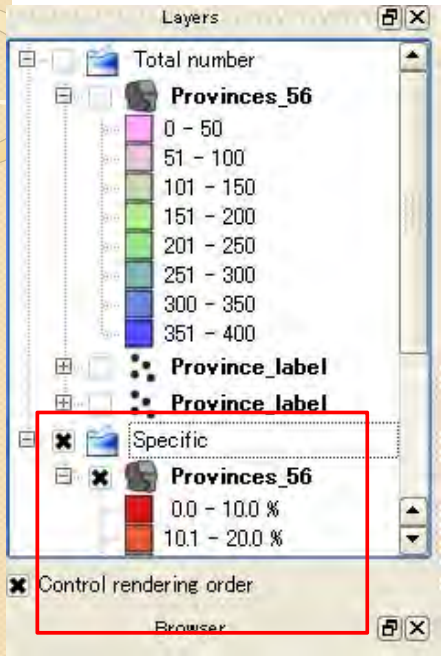
4.3.3 Group

In order to separate total and specific map, add group to the layer.



4. Making Inventory Maps (CBDRM)

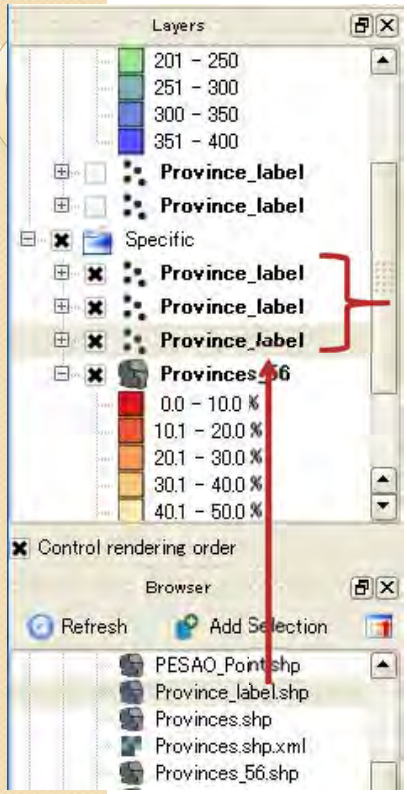
4.3.3 Group



Make Specific group by same process.

4. Making Inventory Maps (CBDRM)

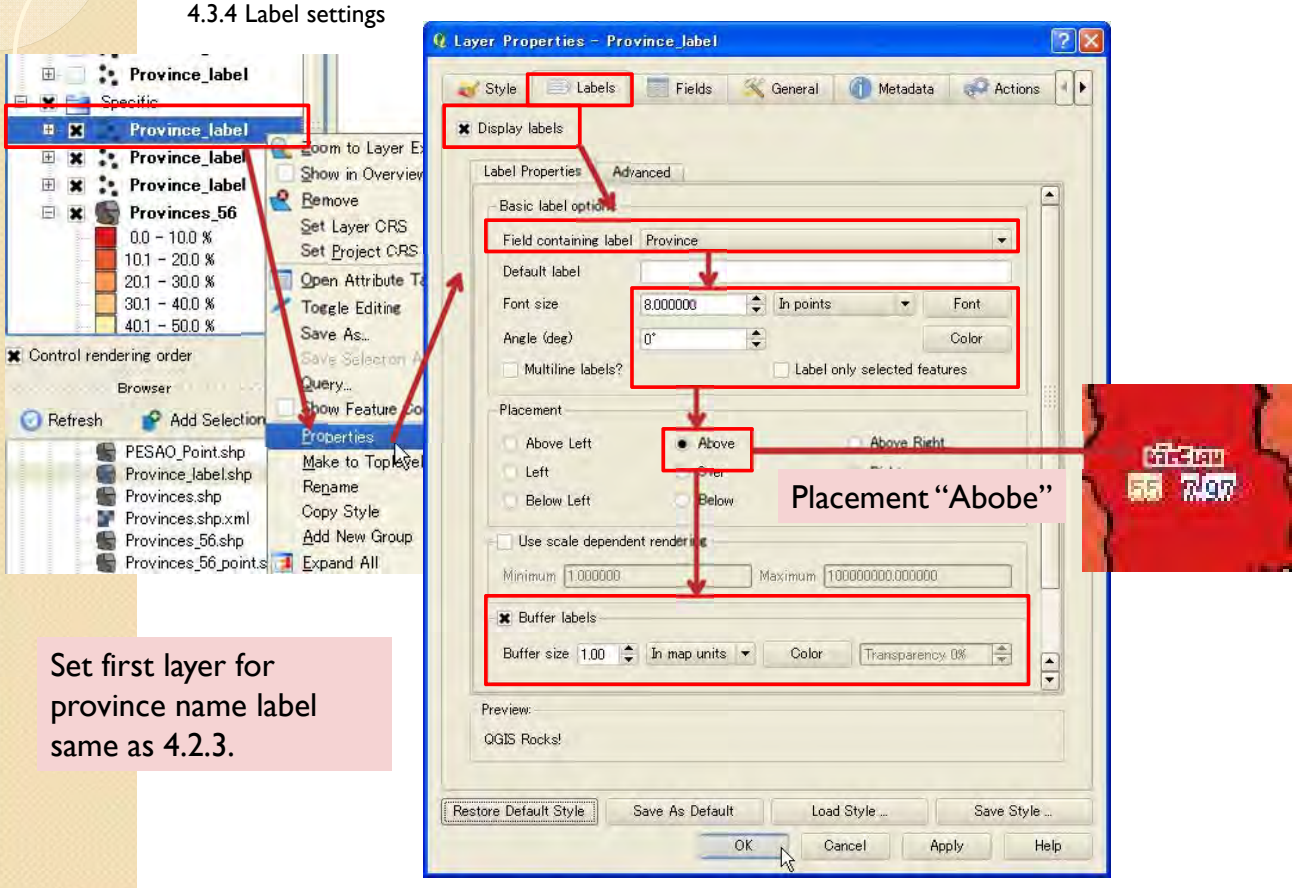
4.3.4 Label settings



In order to make label, import three layers for label you made in 4.3.1.

4. Making Inventory Maps (CBDRM)

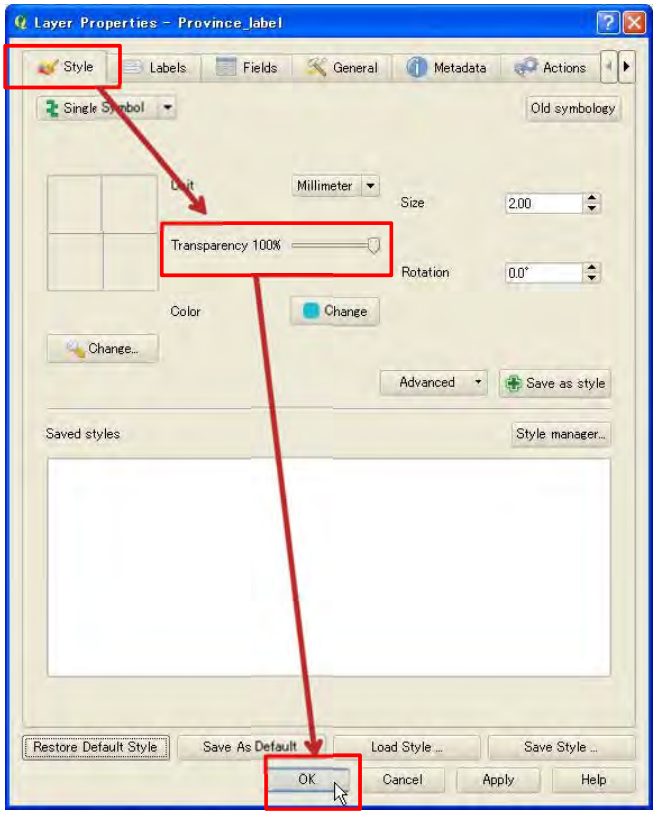
4.3.4 Label settings



Set first layer for province name label same as 4.2.3.

4. Making Inventory Maps (CBDRM)

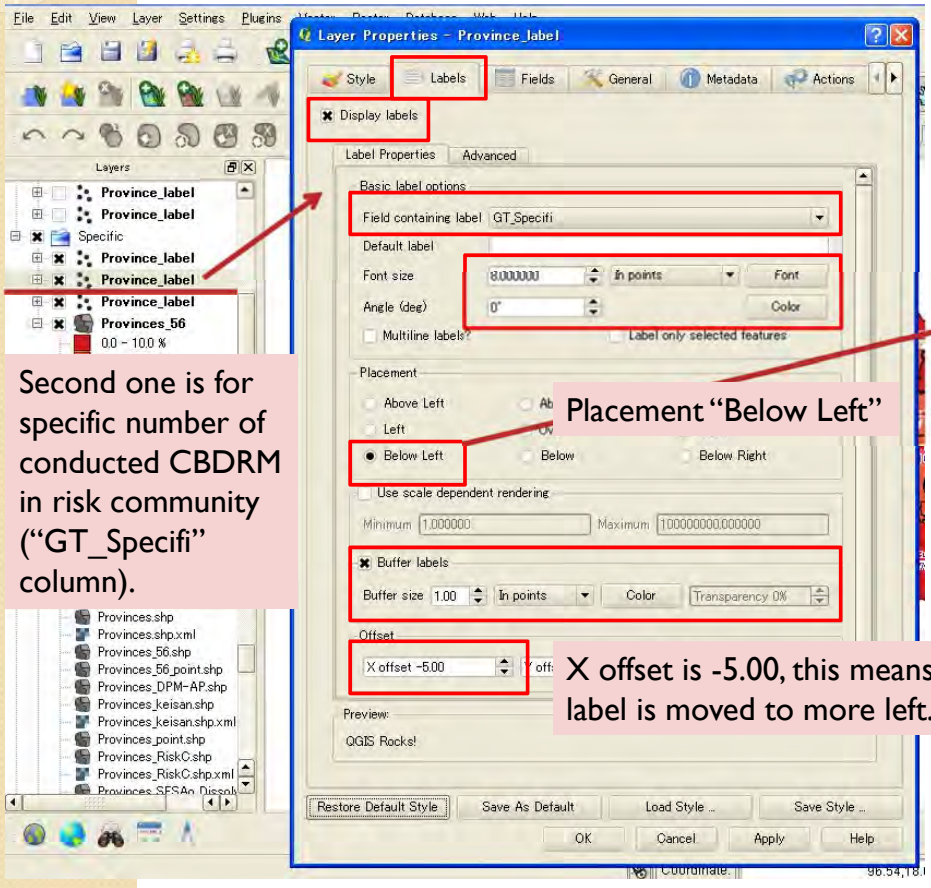
4.3.4 Label settings



After make label, set transparency to 100% and push OK to finish.

4. Making Inventory Maps (CBDRM)

4.3.4 Label settings



Second one is for specific number of conducted CBDRM in risk community ("GT_Specifi" column).

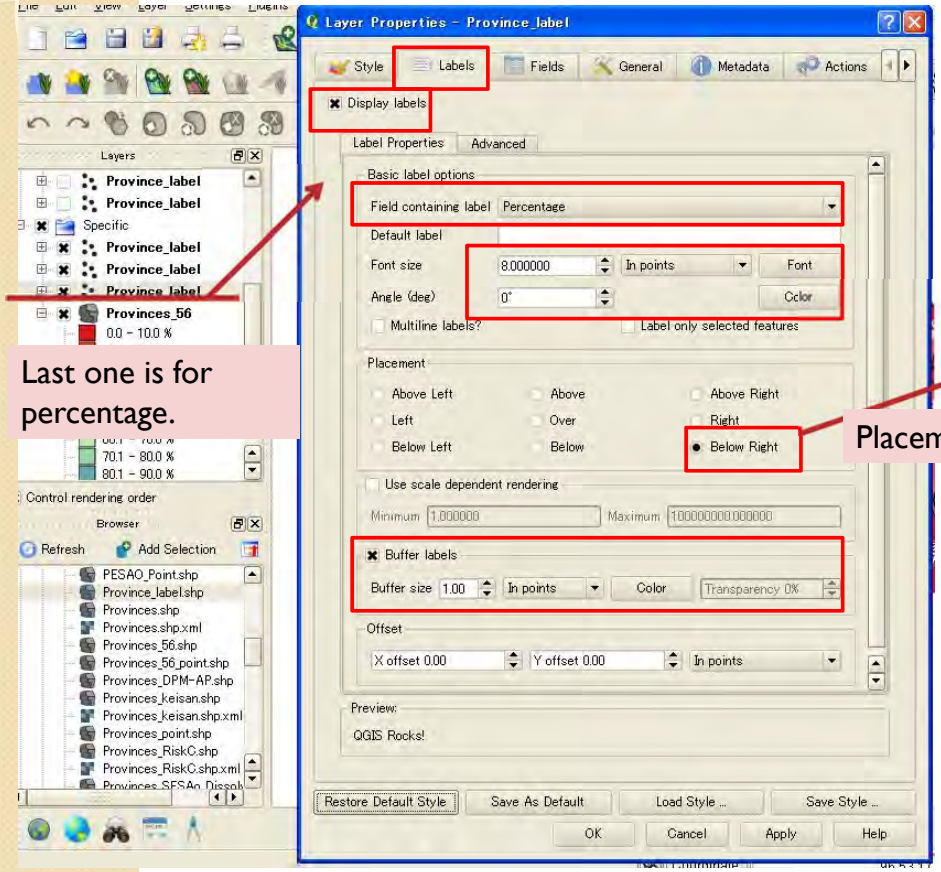
Placement "Below Left"

X offset is -5.00, this means label is moved to more left.

After set label, change transparency to 100% at "Style" tab and click OK.

4. Making Inventory Maps (CBDRM)

4.3.4 Label settings



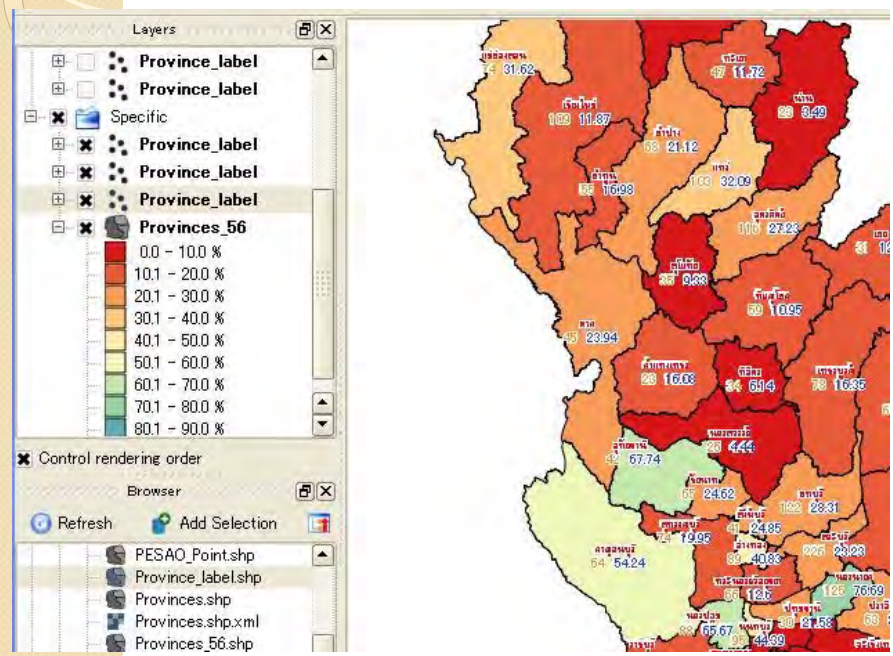
Last one is for percentage.

Placement "Below Left"

After set label, change transparency to 100% at "Style" tab and click OK.

4. Making Inventory Maps (CBDRM)

4.3.4 Label settings



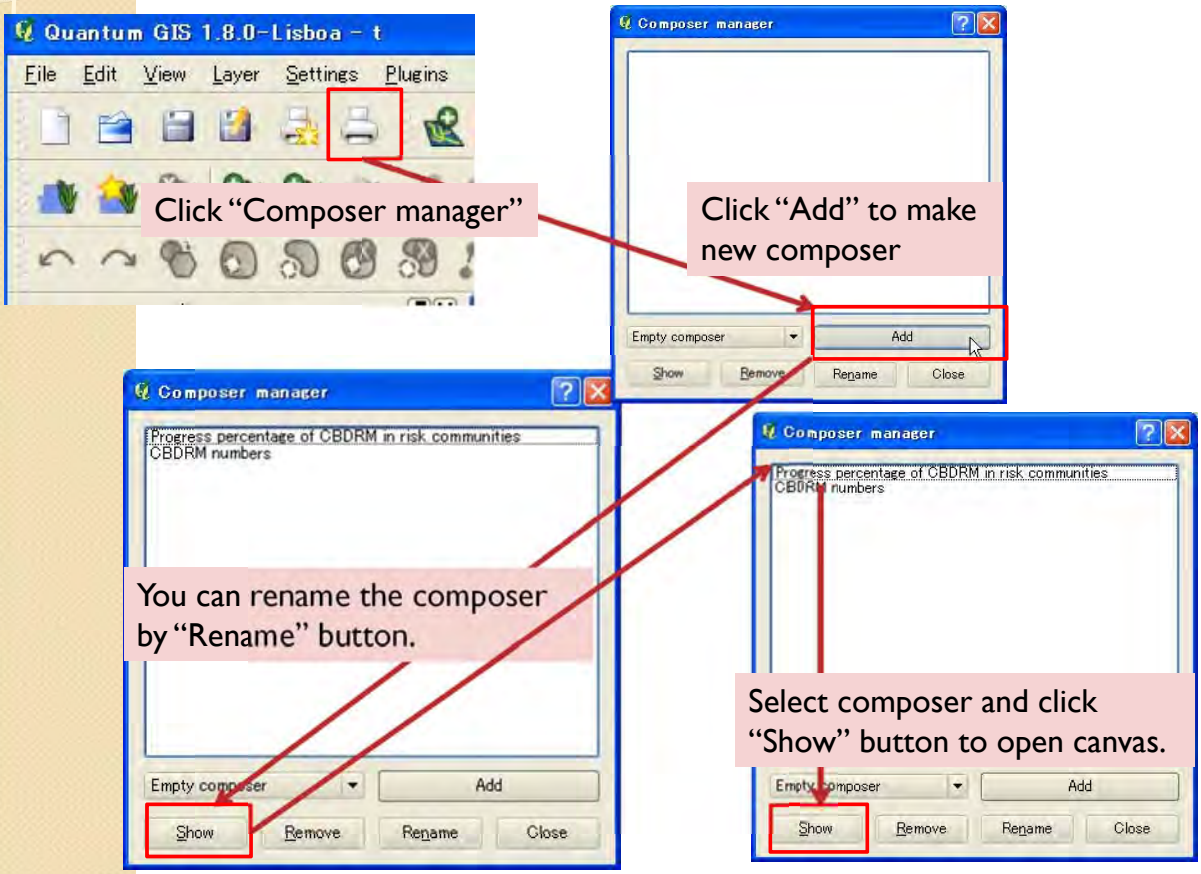
Then, you can see the progress percentage map for CBDRM in risk communities.

If there are some overlaps of labels, you can move (see 4.2.3 move labels).

4. Making Inventory Maps (CBDRM)

4.3.5 Print Composer

Make print composer to print the map.



4. Making Inventory Maps (CBDRM)

4.3.5 Print Composer