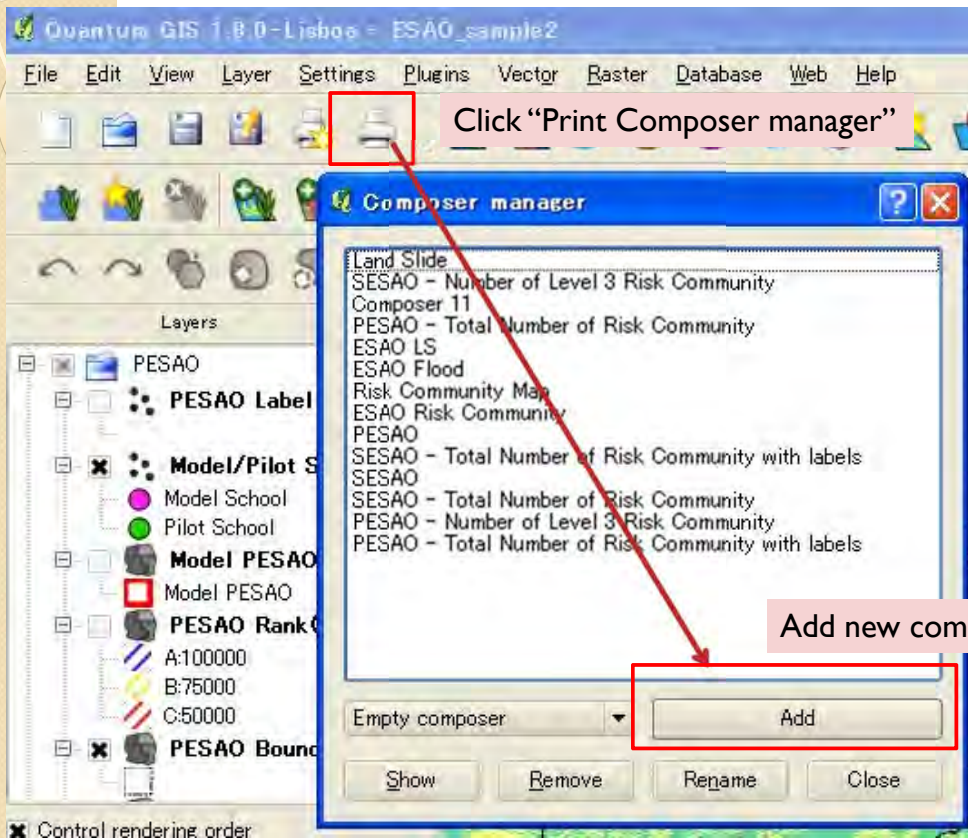


3. Making Inventory Maps

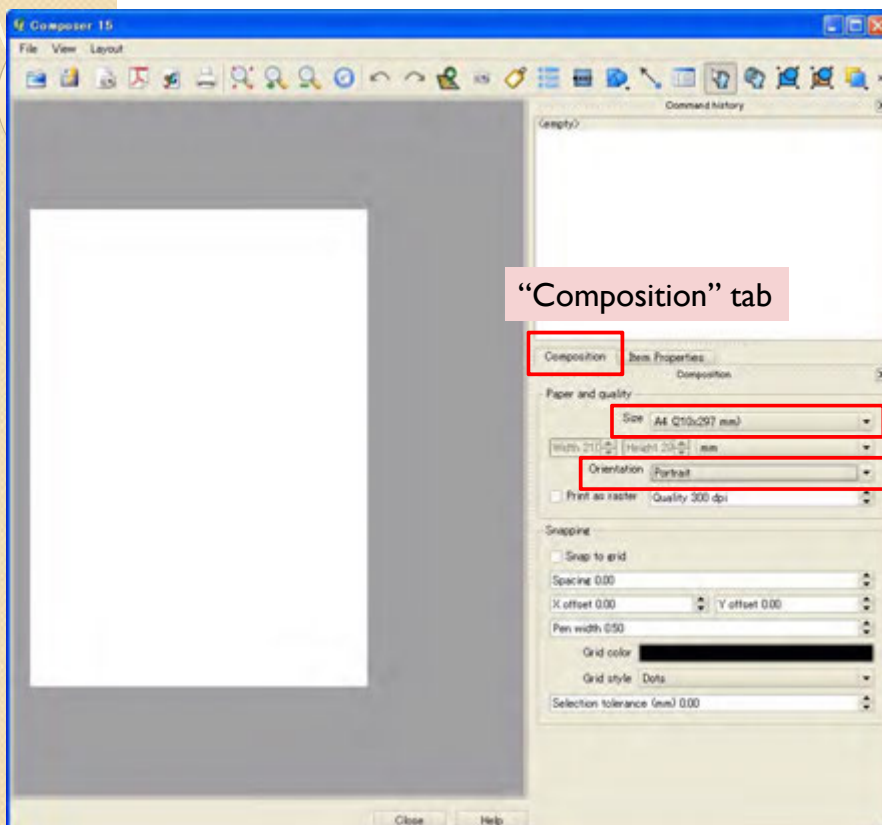
3.6 Print Composer



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

3. Making Inventory Maps

3.6 Print Composer



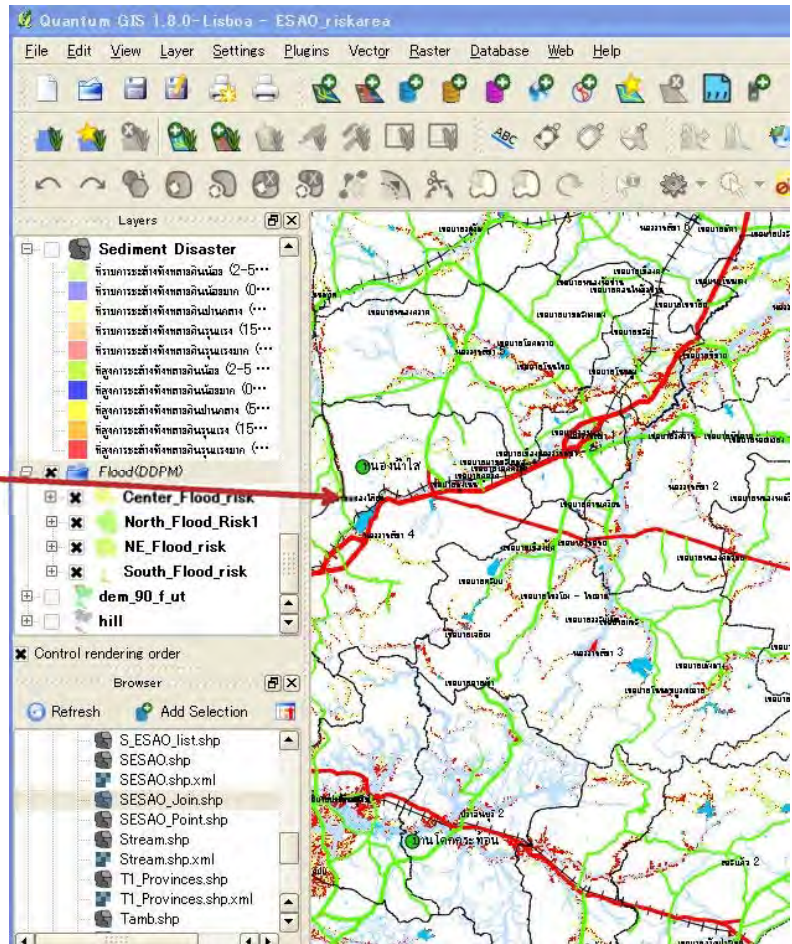
You can select size, orientation and other settings here.

3. Making Inventory Maps

3.6 Print Composer

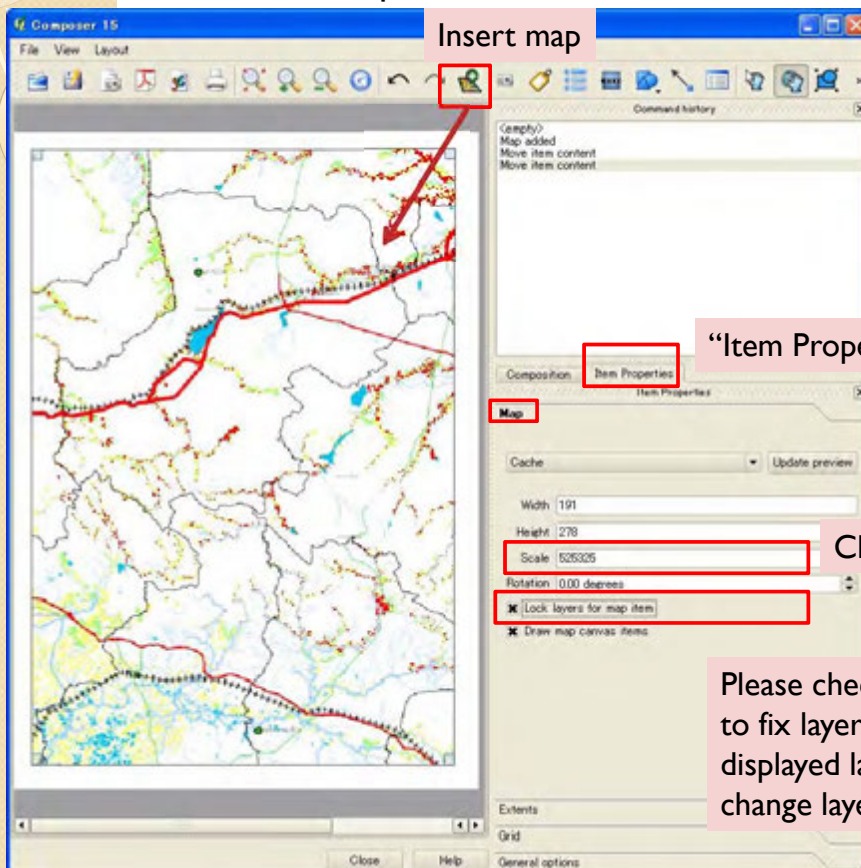
Before make map at print composer, you need to select layers to show in the map at main window.

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

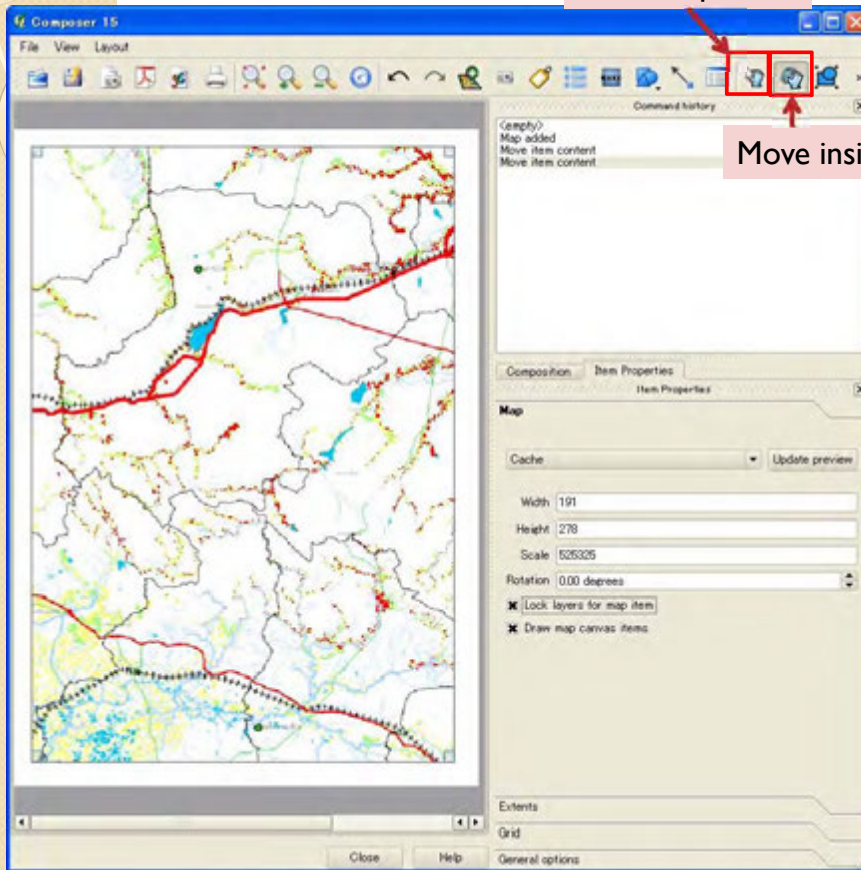
Change “scale” here

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

Move map frame



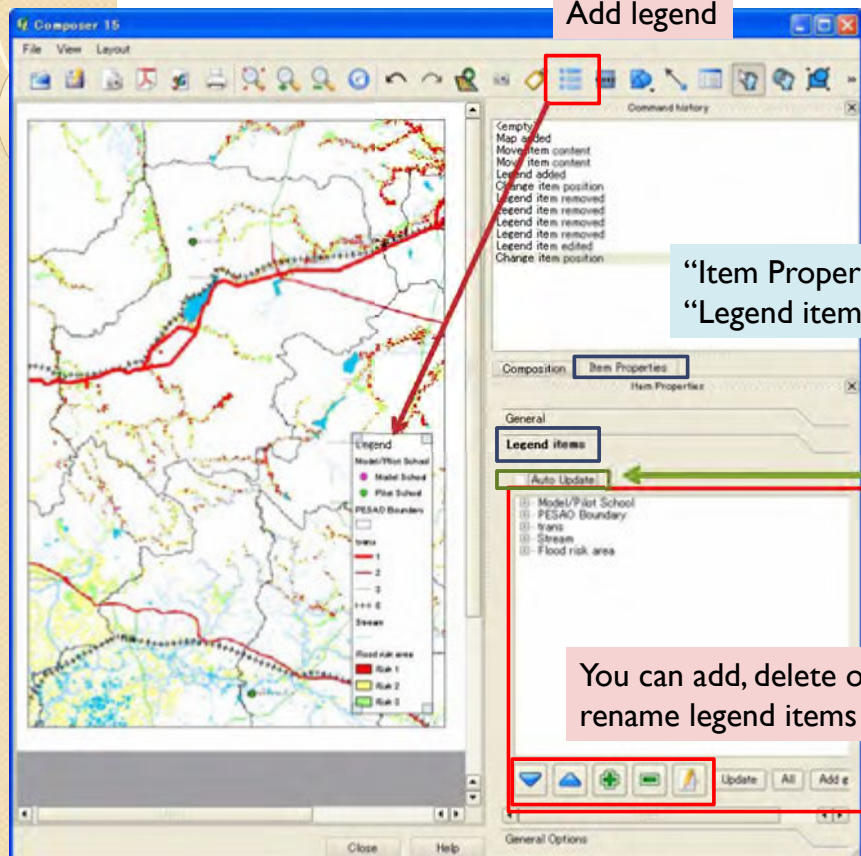
Move inside map

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

Add legend



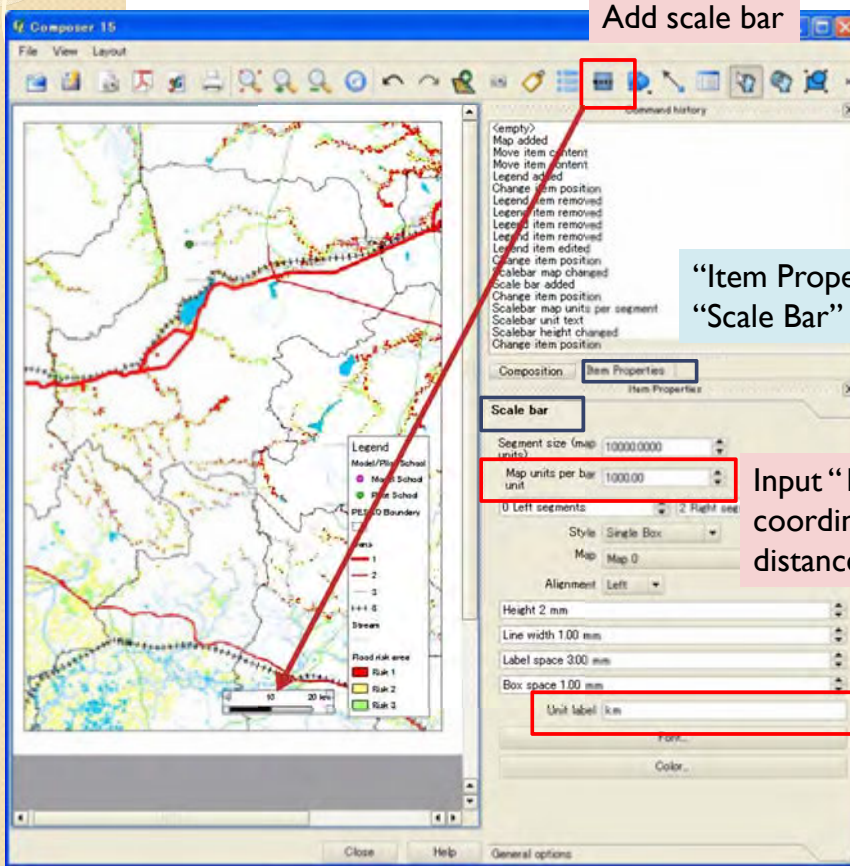
“Item Properties” and “Legend items” tab

Unselect “Auto Update” to fix the legend items.

You can add, delete or rename legend items here.

3. Making Inventory Maps

3.6 Print Composer



Add scale bar

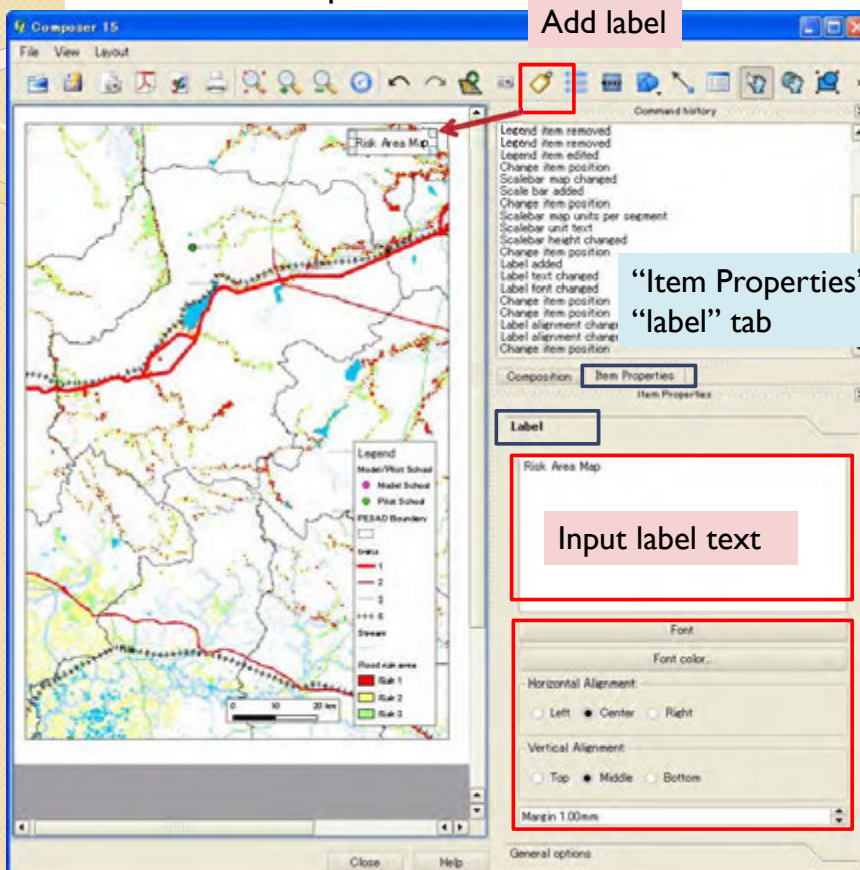
"Item Properties" and "Scale Bar" tab

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

Unit label is "km"

3. Making Inventory Maps

3.6 Print Composer



Add label

"Item Properties" and "label" tab

Input label text

You can change font settings here.

3. Making Inventory Maps

3.6 Print Composer

Export as image file

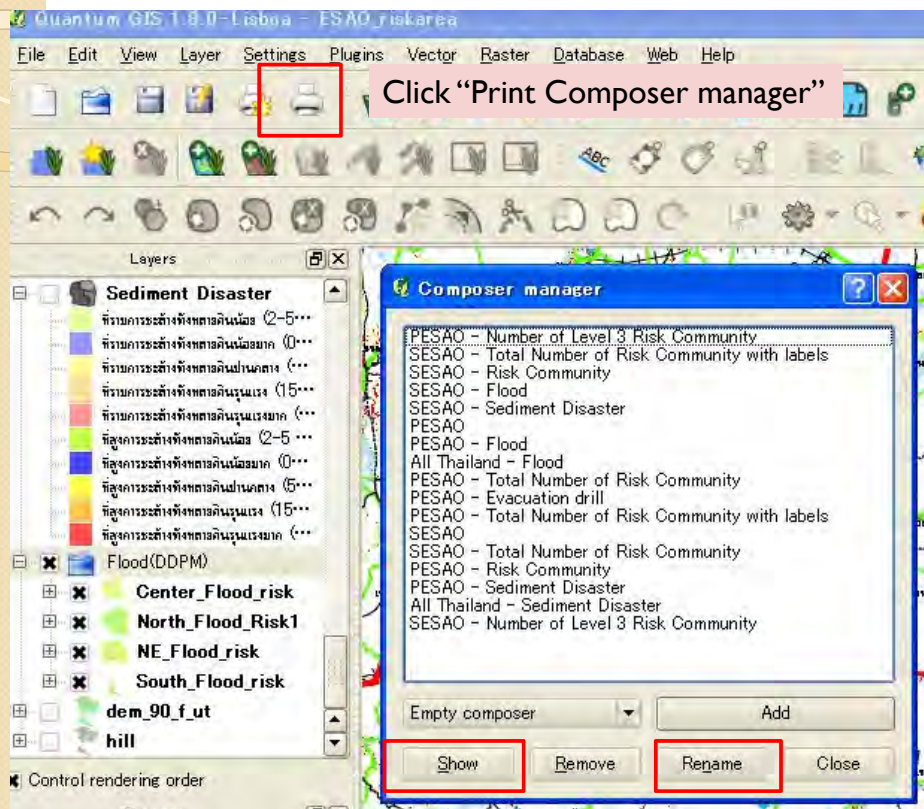


Export as pdf file

Print

3. Making Inventory Maps

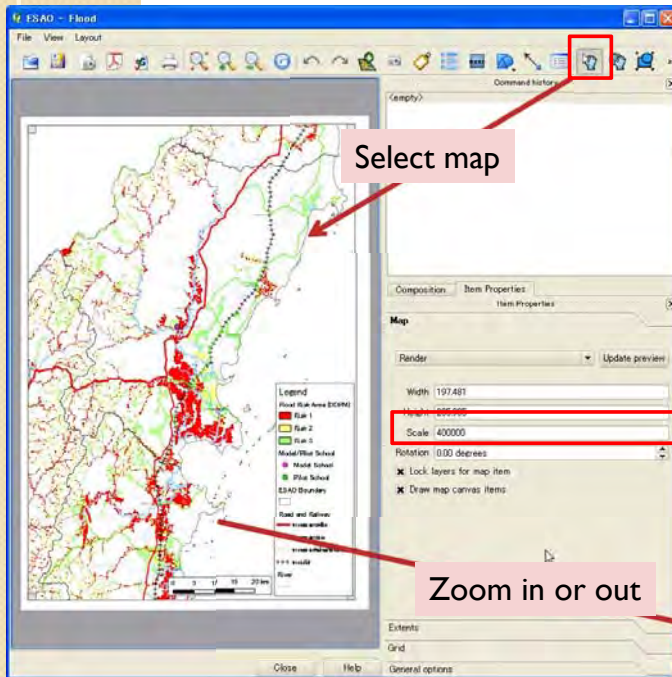
3.6 Print Composer



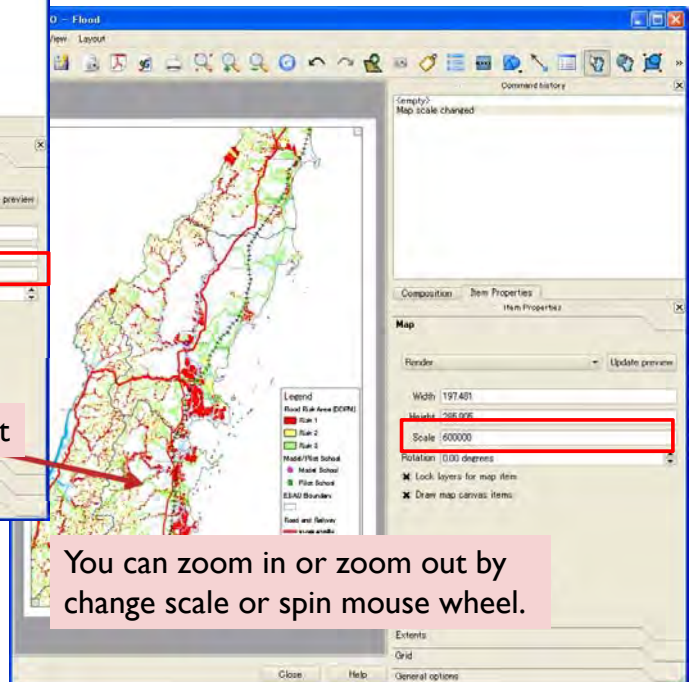
After you have made composer once, you can recall the composer by "show" button and rename.

3. Making Inventory Maps

3.7 Make inventory map in other region

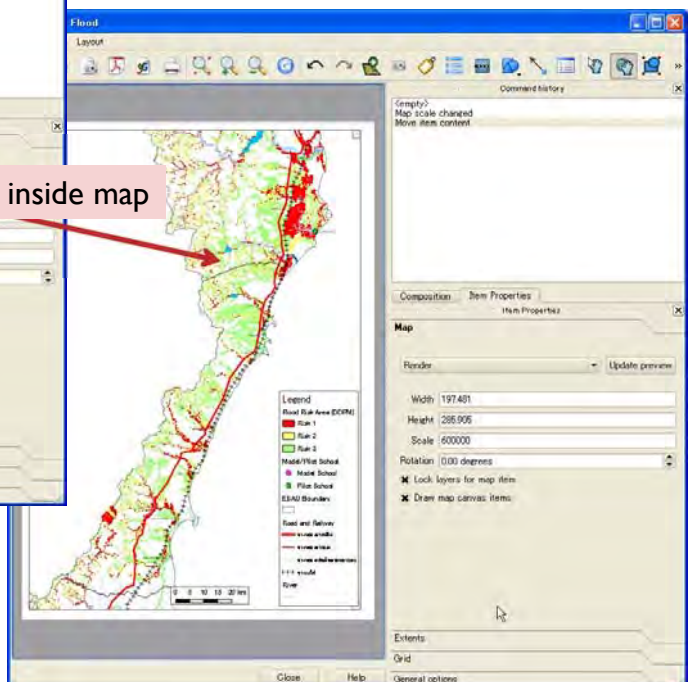
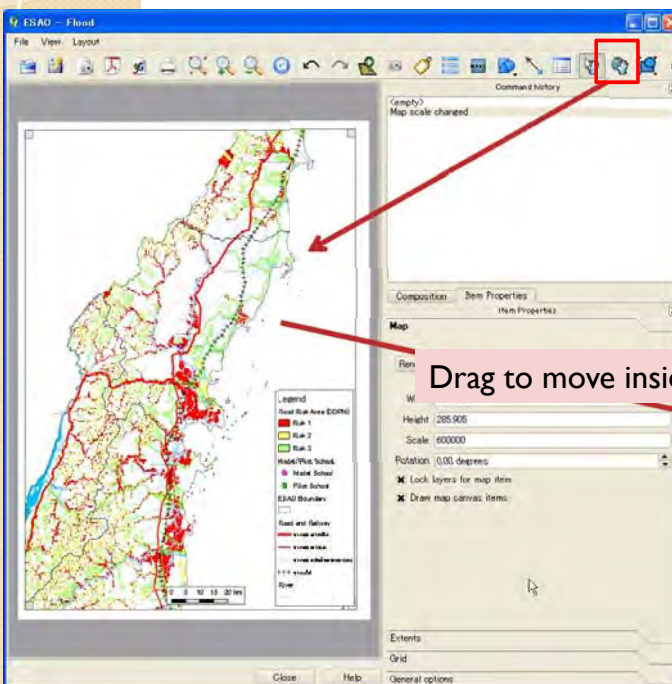


You can zoom in, zoom out or move inside map to other region to make other ESAD map.



3. Making Inventory Maps

3.7 Make inventory map map in other region



3. Making Inventory Maps

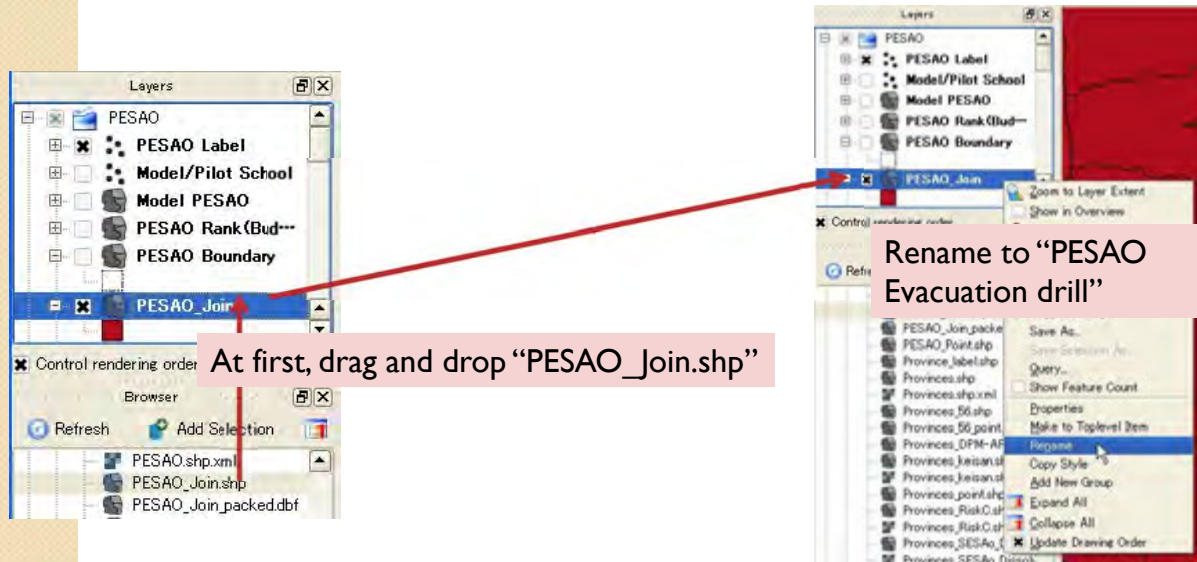
3.8 Add new data (evacuation drill, etc...)

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

There are some method to add data.

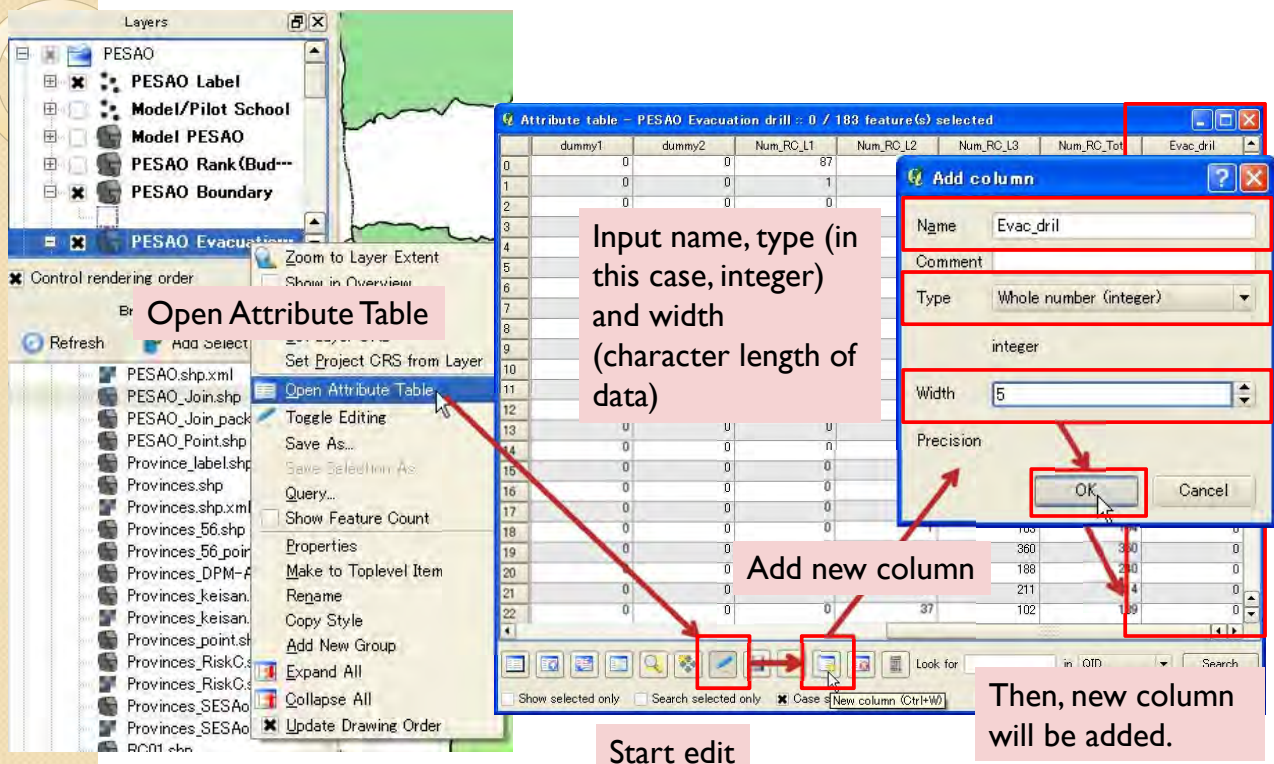
One is make new excel file and import to GIS, please refer to 3.1.2.

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



3. Making Inventory Maps

3.8 Add new data (evacuation drill, etc...)



3. Making Inventory Maps

3.8 Add new data (evacuation drill, etc...)

Attribute table - PESAO Evacuation drill :: 0 / 183 feature(s) selected

	dummy1	dummy2	Num_RC_L1	Num_RC_L2	Num_RC_L3	Num_RC_Tot	Evac_dril
0	0	0	87	174	12	273	110
1	0	0	1	48	27	76	0
2	0	0	0	0	0	0	0
3	0	0	0	7	11	18	207
4	0	0	0	124	268	392	0
5	0	0	2	78	0	80	0
6	0	0	0	99	0	163	0
7	0	0	0	163	0	163	0
8	0	0	0	21	23	44	0
9	0	0	0	11	79	90	123
10	0	0	0	8	340	348	0
11	0	0	1	19	80	100	0
12	0	0	0	14	102	116	0
13	0	0	0	0	60	60	0
14	0	0	0	0	131	131	0
15	0	0	0	99	168	267	156
16	0	0	0	64	0	64	0
17	0	0	0	74	0	74	0
18	0	0	0	1	163	164	0
19	0	0	0	0	360	360	0
20	0	0	0	50	100	240	0
21	0	0	0	0	102	314	0
22	0	0	0	0	102	139	0

Double click to input data

After you finish input, click here to stop editing and save.

3. Making Inventory Maps

3.8 Add new data (evacuation drill, etc...)

Open "Style" tab

Select "Graduated" and "Evac_dril" column

Set color ramp, classes and mode

Double click to edit colors, ranges and labels

"Classify" or "Add class" to make color categories

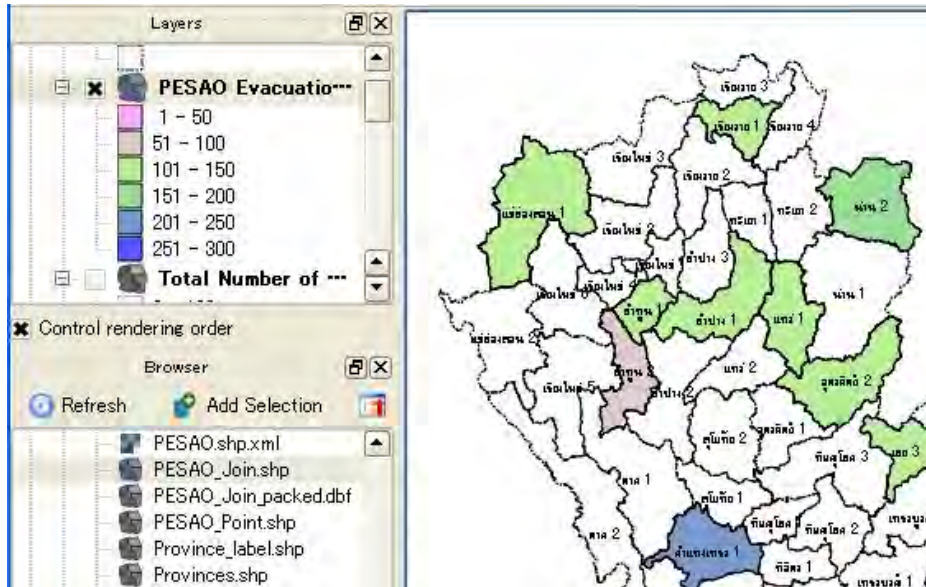
Then, make color settings

Symbol	Range	Label
	1.0000 - 50.0000	1 - 50
	50.0000 - 100.0000	51 - 100
	100.0000 - 150.0000	101 - 150
	150.0000 - 200.0000	151 - 200
	200.0000 - 250.0000	201 - 250
	250.0000 - 300.0000	251 - 300

3. Making Inventory Maps

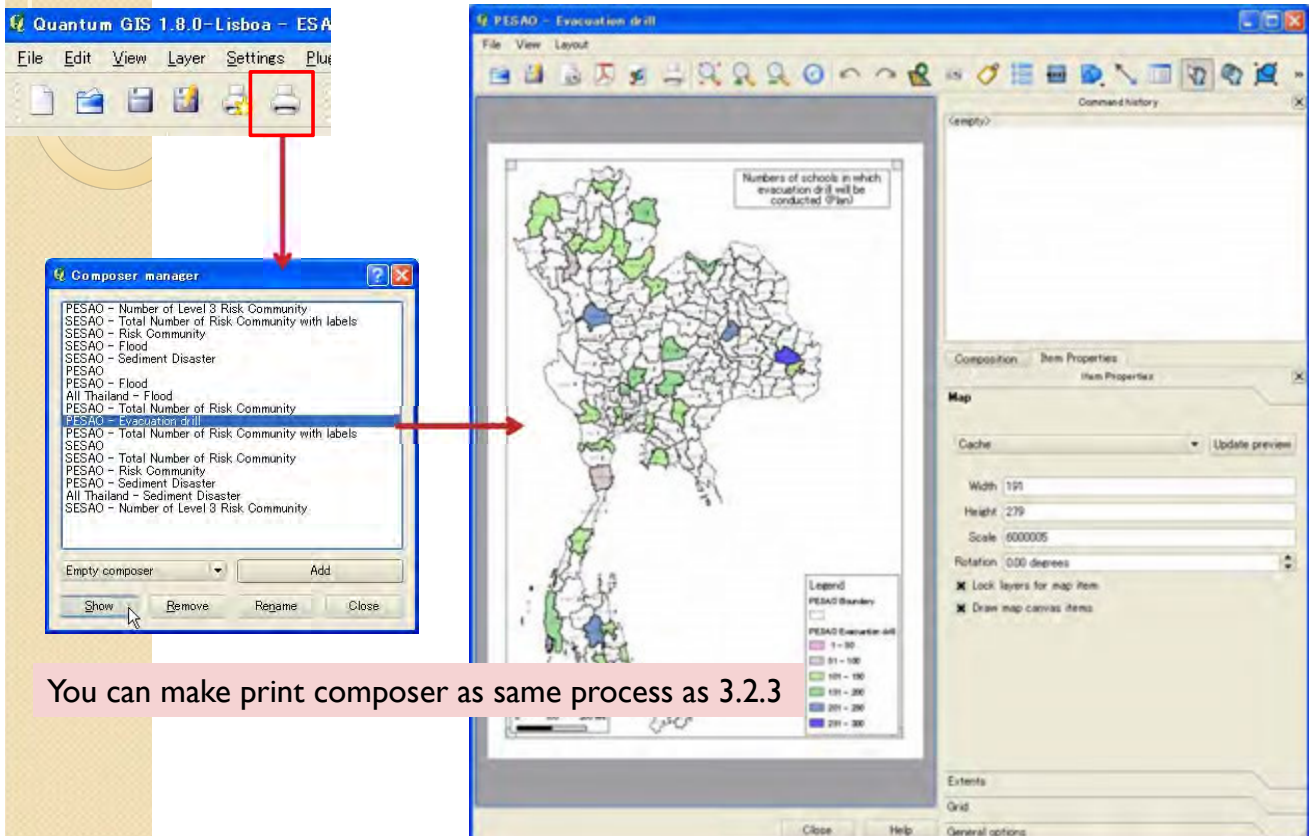
3.8 Add new data (evacuation drill, etc...)

Then, the new map will appear.



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. Making Inventory Maps

3.9 Update data

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

QID	Name	Budget	Model_ESAO	Model_Scho
0	เมืองจาง 1	75000	0	0
1	เมืองไทย 6	103	0	0
2	กรุงเทพมหานคร	37	0	0
3	กำแพงเพชร 1			
4	น่าน 1			
5	กำแพงเพชร 2			
6	ธัญบุรี			
7	น่านเขต			
8	น่าน 1			
9	น่าน 2			
10	น่าน 1	172	0	0
11	น่าน 2	152	0	0
12	น่าน 3	207	0	0
13	น่าน 1	32	0	0
14	น่าน 2	64	0	0
15	น่าน 2	156	50000	0
16	น่าน 1	103	0	0
17	น่าน 2	67	0	0
18	น่าน 1			
19	น่าน 2			
20	น่าน 1	100	0	0
21	น่าน 2	107	0	0
22	น่าน 1	133	0	0

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. Making Inventory Maps

3.9 Update data

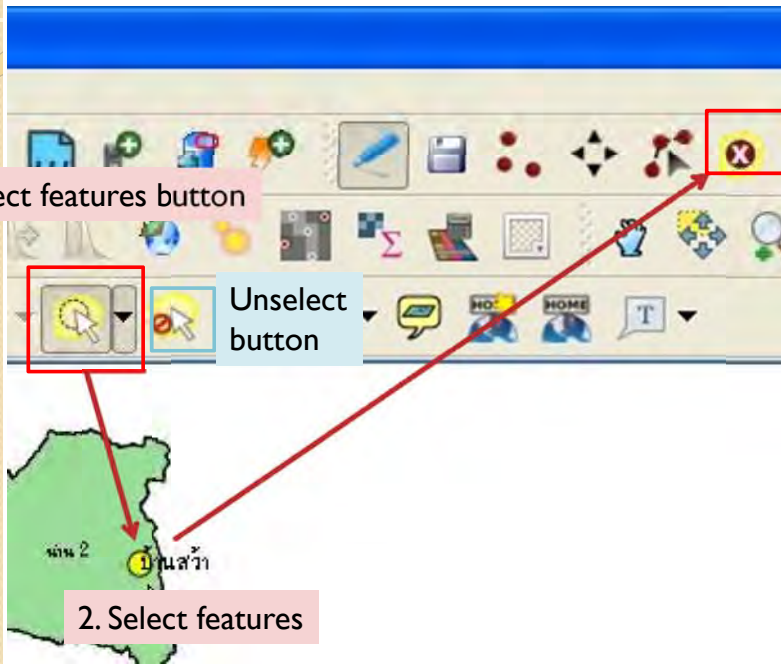
You can edit features also.

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

3. Making Inventory Maps

3.9 Update data

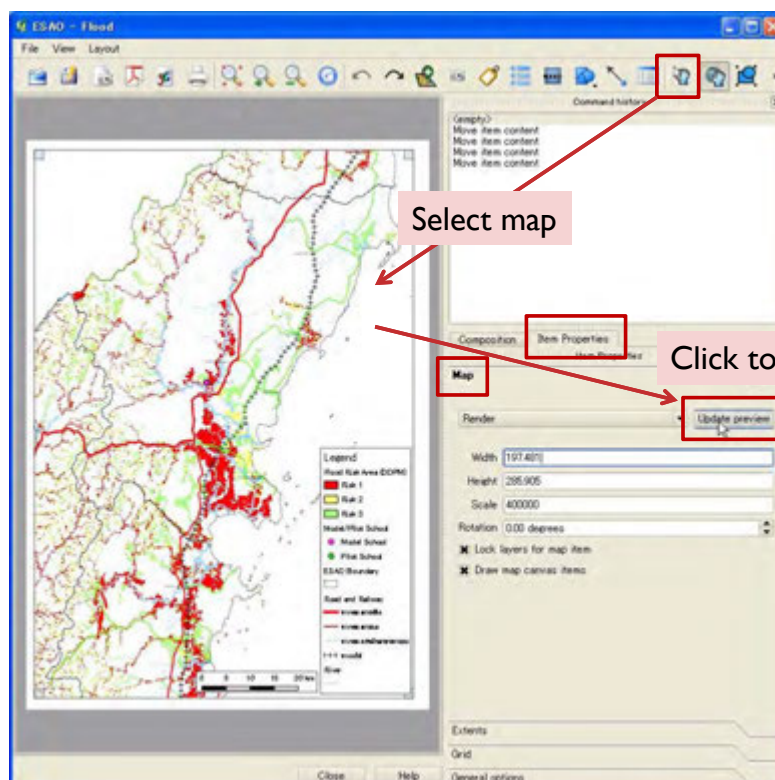
Operation to delete features is little deferent.



3. Making Inventory Maps

3.9 Update data

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



3. Making Inventory Maps

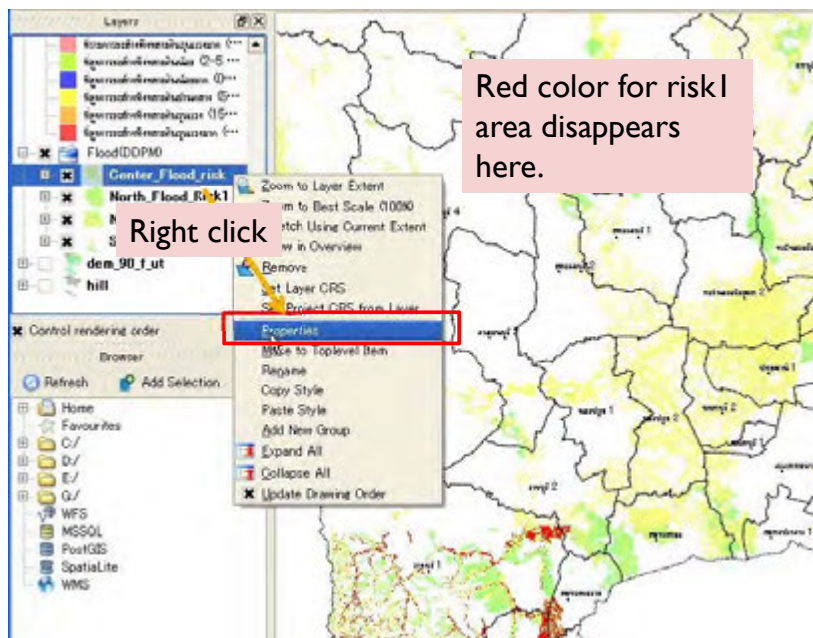
3.10 Notes

- 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. Making Inventory Maps

3.11 Bugs for flood risk area map

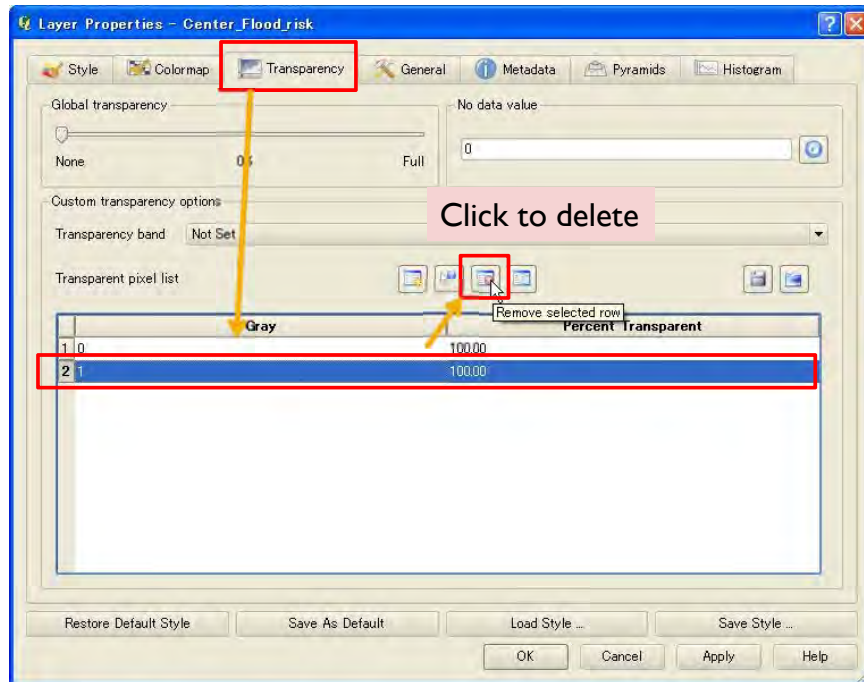
When you open flood risk area file, the color of risk I in “Flood (DDPM)” should disappear because of program problem. So, please fix the settings as follows. Please right click on the layer in which the color of risk I disappears and select “Properties”



3. Making Inventory Maps

3.1 I Bugs for flood risk area map

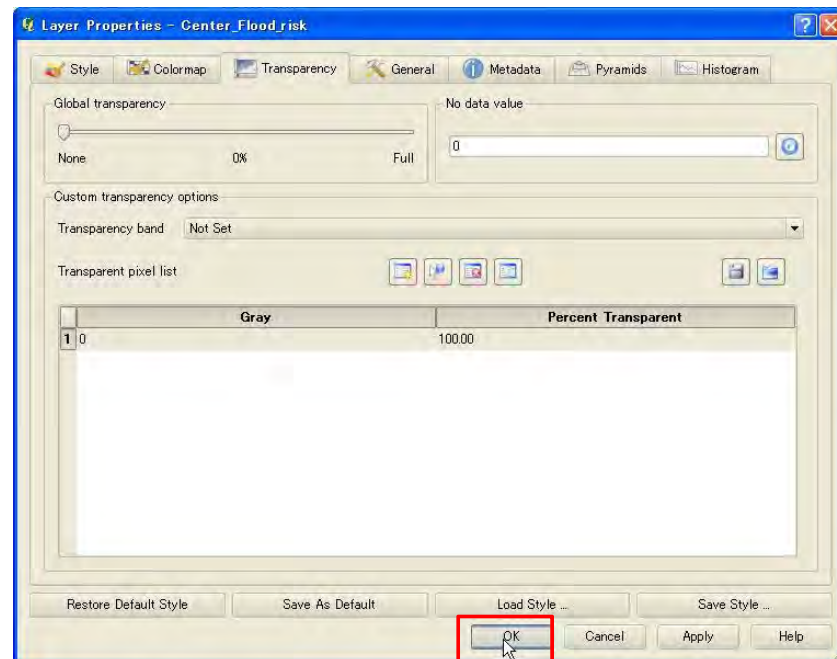
Select “Transparency” tab and remove “I” in the below field.



3. Making Inventory Maps

3.1 I Bugs for flood risk area map

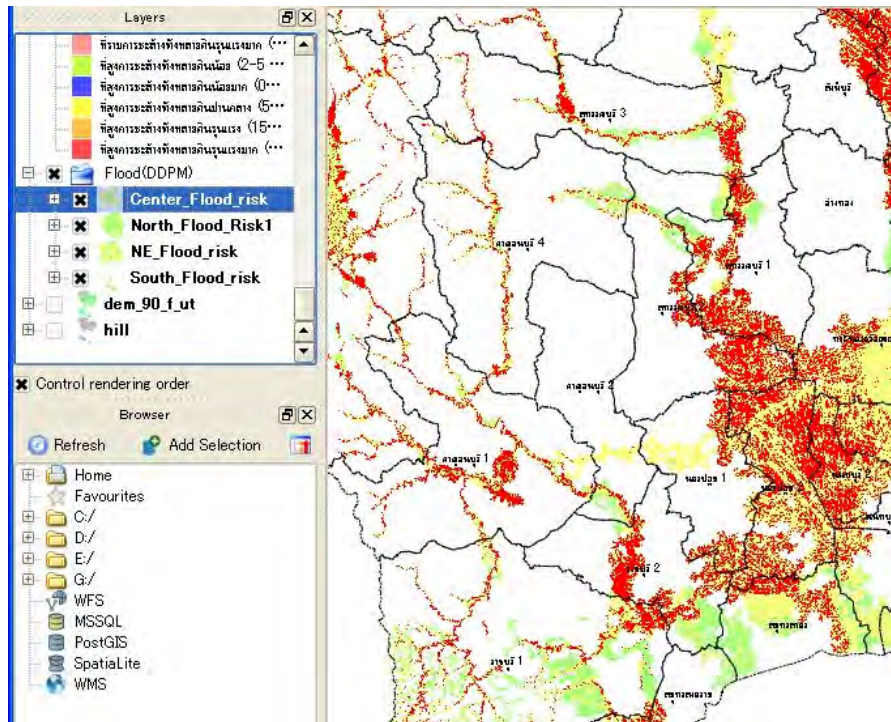
Then, the “I” should be deleted. Please click “OK” to return map.



3. Making Inventory Maps

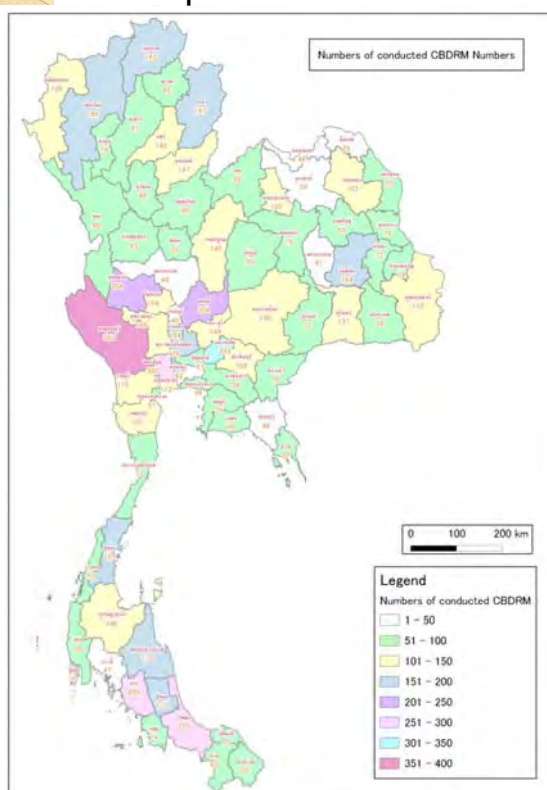
3.1 I Bugs for flood risk area map

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



4. Making Inventory Maps (CBDRM)

4.1 Import CBDRM data



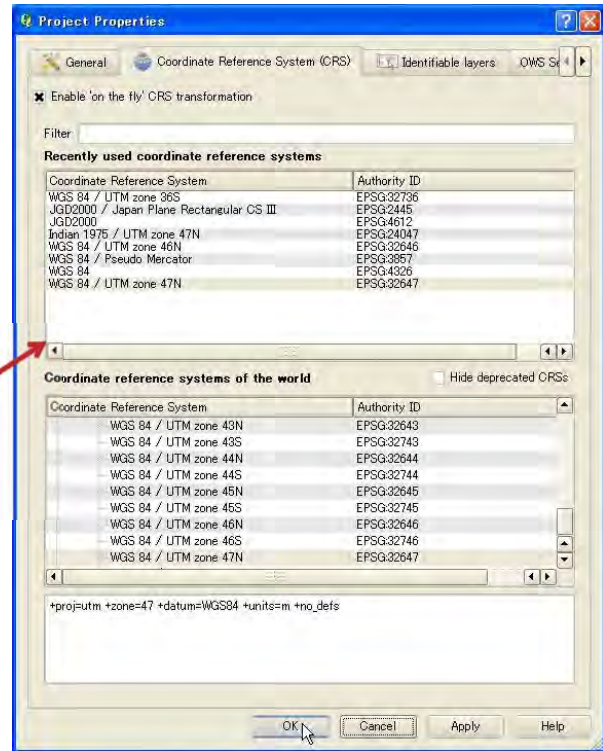
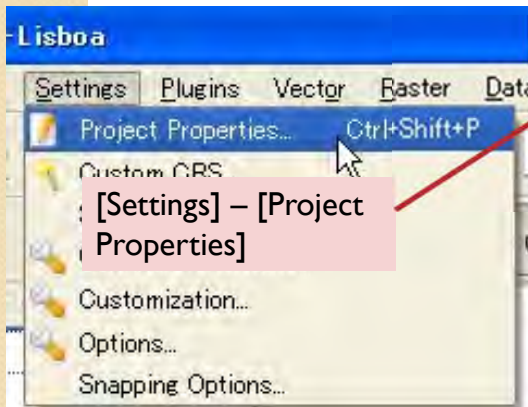
In this chapter, we make CBDRM Map by using QGIS and Excel.

- 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. Making Inventory Maps (CBDRM)

4.1.1 Import provinces file

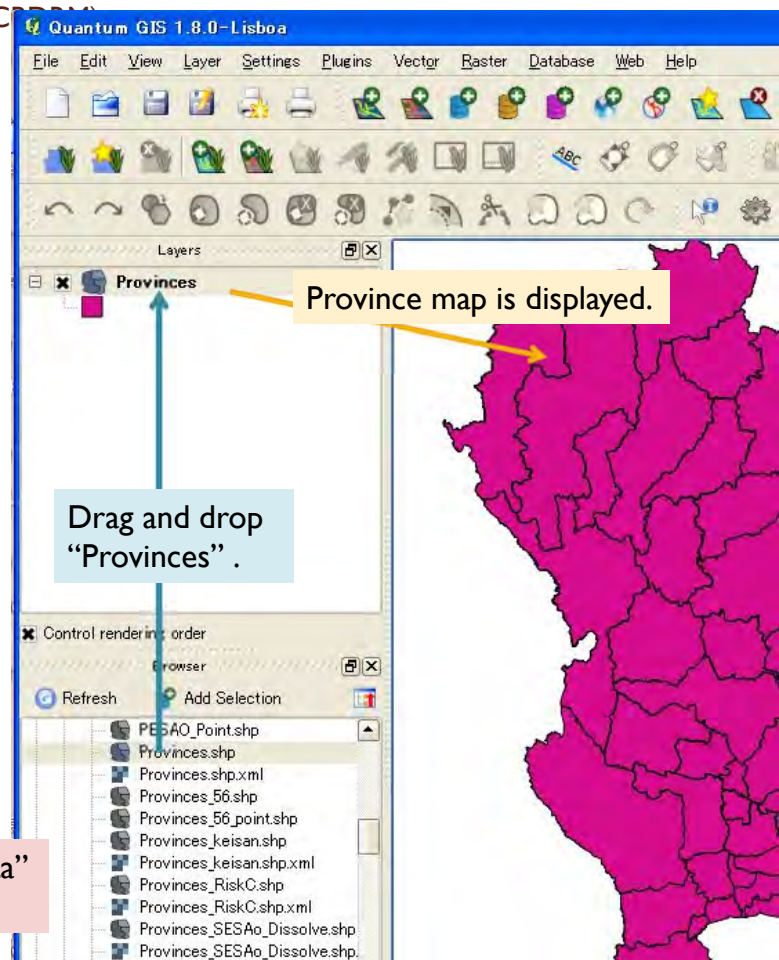
At first, make sure that Coordination Reference System (CRS) is set as WGS84 / UTM 47N and “Enable ‘on the fly’ CRS transformation” is checked.



4. Making Inventory Maps (CBDRM)

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

Right click and select "Open Attribute Table"

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

PROV_NAME	PROV_NAME	population	RC_Code	pop_den	AREA	Nu_RV1	Nu_RV2
Bangkok		6265144	NULL	4066.59	1556.622	0	0
Changwat Sam...	1029401	RC03	1063.37	967.116	0	5	
Changwat Nont...	816614	RC01	1263.18	686.4	0	0	
Changwat Path...	673649	RC01	445.59	1120.881	0	139	
Changwat Phra...	727277	RC01	295.5	2547.348	0	1	
Changwat Ana...	269419	RC16	293.45	950.497	0	50	
Changwat Lopbu...	740306	RC16	114.65	6502.716	6	25	
Changwat Sing...	232766	RC16	204.9	817.007	0	0	
Changwat Chanat...	359629	RC16	143.63	2505.263	0	99	
Changwat Sarab...	579283	RC01	164.86	3488.177	461	177	
Changwat Chon...	104085	RC17	230.9	4507.781	0	29	
Changwat Phang...	522133	RC17	142.45	3665.289	36	25	
Changwat Chant...	480064	RC17	76.32	6373.261	0	88	
Changwat Trat...	219345	RC17	76.5	2867.27	0	117	
Changwat Chac...	695153	RC03	122.86	5169.624	21	139	
Changwat Pro...	406732	RC08	90.83	5032.227	0	180	
Changwat Nakh...	241081	RC03	112.59	2141.291	0	163	
Changwat Sak...	492632	RC03	70.74	6964.566	0	233	
Changwat Nakh...	255620	RC06	123.28	20734.987	0	162	
Changwat Bu...	1490393	RC06	148.16	10079.31	0	291	

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 Exccel file

Province	Pro_Code	LS_55	Other55	Total_55	LS_56	Other56	Total_56	Total_LS	Total_Other	Grand_Total	Dummy1	Dummy2
1		13	0	13	0	0	0	13	0	13	0	0
2		12	0	113	113	0	15	15	0	162	162	0
3		14	0	12	12	0	0	0	0	106	106	0
4		19	0	4	4	0	16	16	9	140	149	0
5		72	0	71	71	0	17	17	14	132	146	0
6		71	0	1	1	0	9	9	17	346	363	0
7		73	0	12	12	0	3	3	0	220	220	0
8		70	0	4	4	0	16	16	31	85	116	0
9		25	0	3	3	0	10	10	13	90	103	0
10		24	0	6	6	0	12	12	6	50	56	0
11		27	0	1	1	0	6	6	40	30	70	0
12		26	3	208	291	0	3	3	3	330	333	0
13		11	0	3	3	0	0	0	0	27	27	0
14		77	0	5	5	0	3	3	9	64	73	0
15		76	0	8	8	0	18	18	23	78	101	0
16		74	0	70	70	0	12	12	0	112	112	0
17		75	0	6	6	0	5	5	0	51	51	0
18		30	0	12	12	0	84	84	0	150	150	0
19		32	0	0	0	0	0	0	26	97	123	0
20		31	0	0	0	0	12	12	21	50	71	0
21		36	0	0	0	0	0	0	50	8	58	0
22		40	0	6	6	0	11	17	49	30	79	0
23		45	0	12	12	0	26	26	25	139	164	0
24		44	0	3	3	0	0	0	0	38	38	0
25		46	0	5	5	0	9	9	0	65	65	0
26		47	6	0	6	0	30	30	35	68	103	0
27		49	0	9	9	0	18	18	10	68	78	0
28		48	0	9	9	0	18	18	2	51	53	0
29		62	0	4	4	0	3	3	48	45	93	0
30		66	0	6	6	0	0	0	0	34	34	0
31		60	0	6	6	0	21	21	18	30	48	0

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), "-", ",", ...

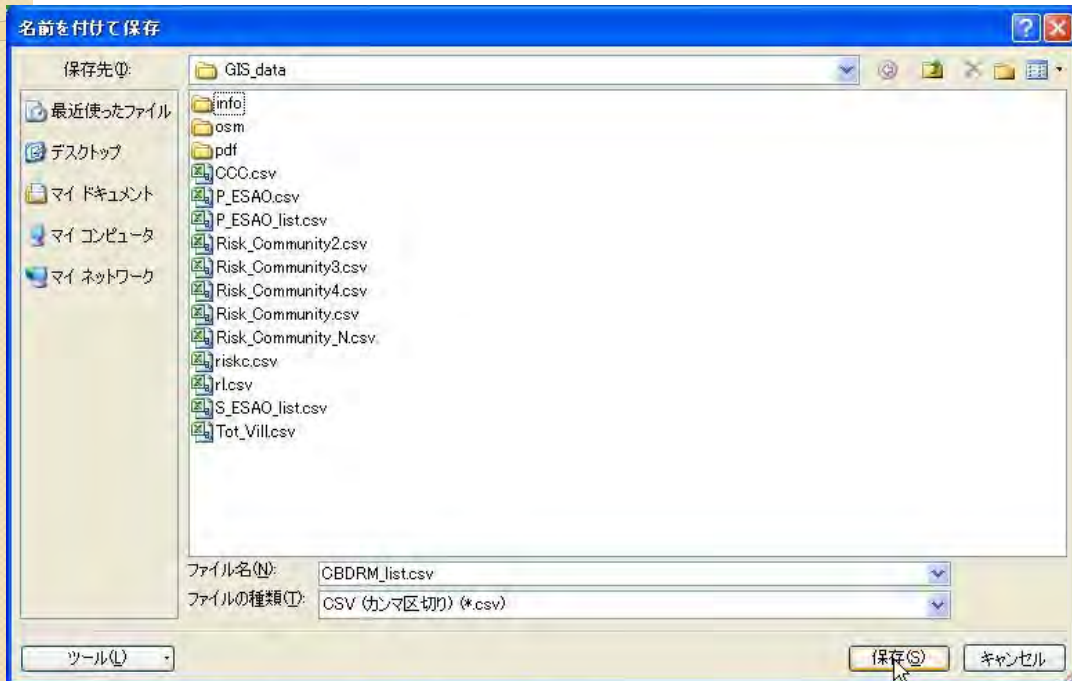
Data field is below. Do not use " ;".

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

4. Making Inventory Maps (CBDRM)

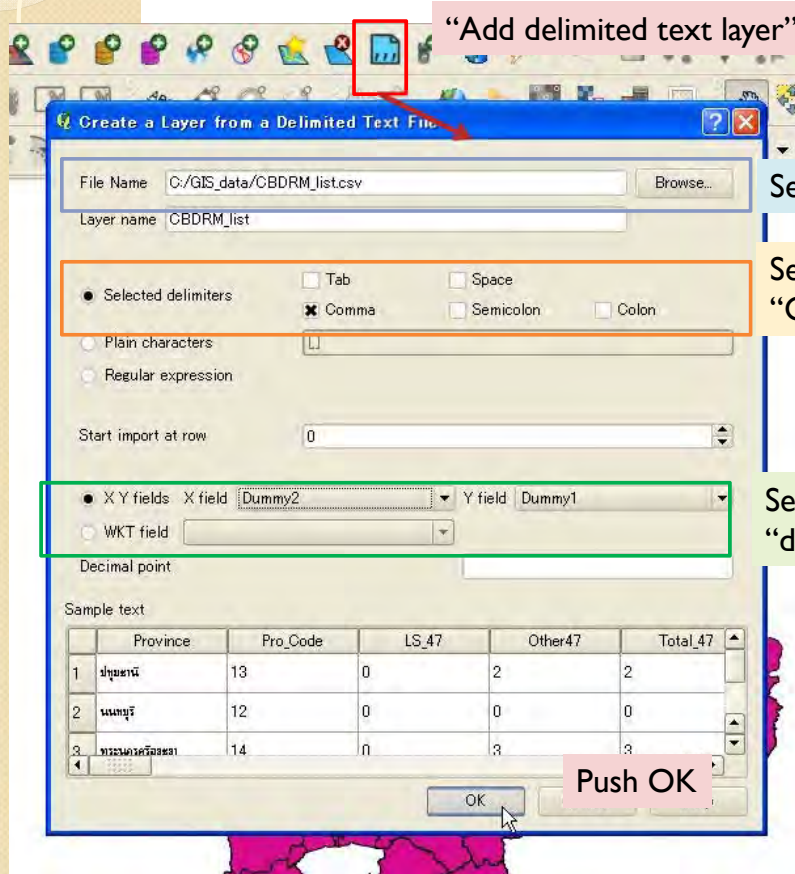
4.1.2 Import CBDRM data from Excel file

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.



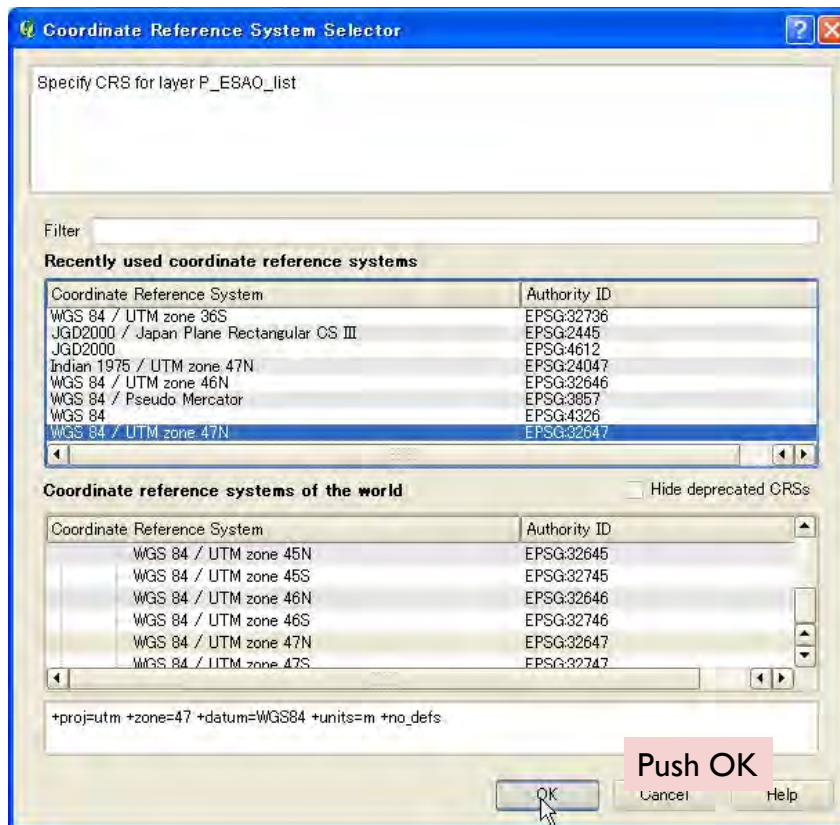
4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excel file



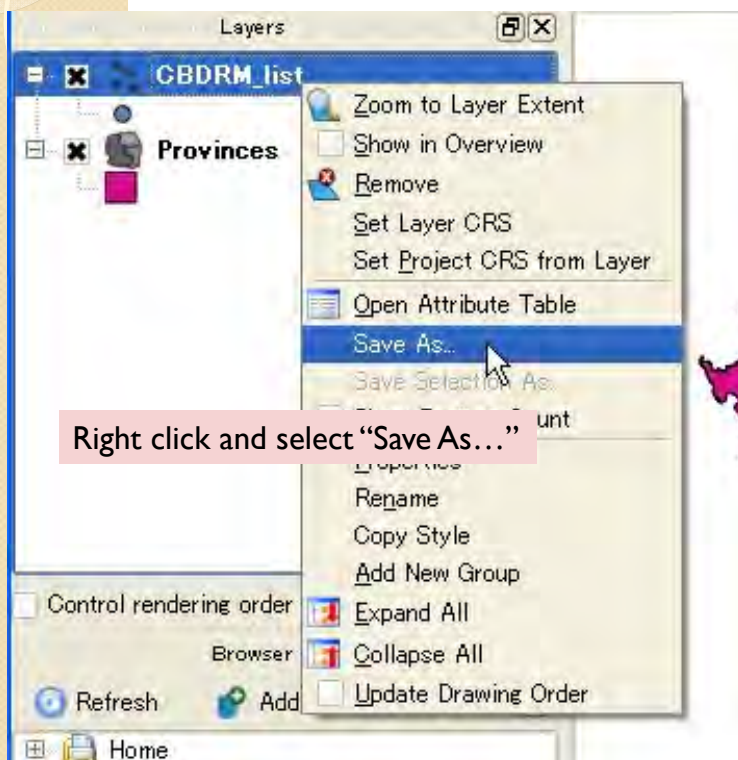
4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excel file



4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excel file

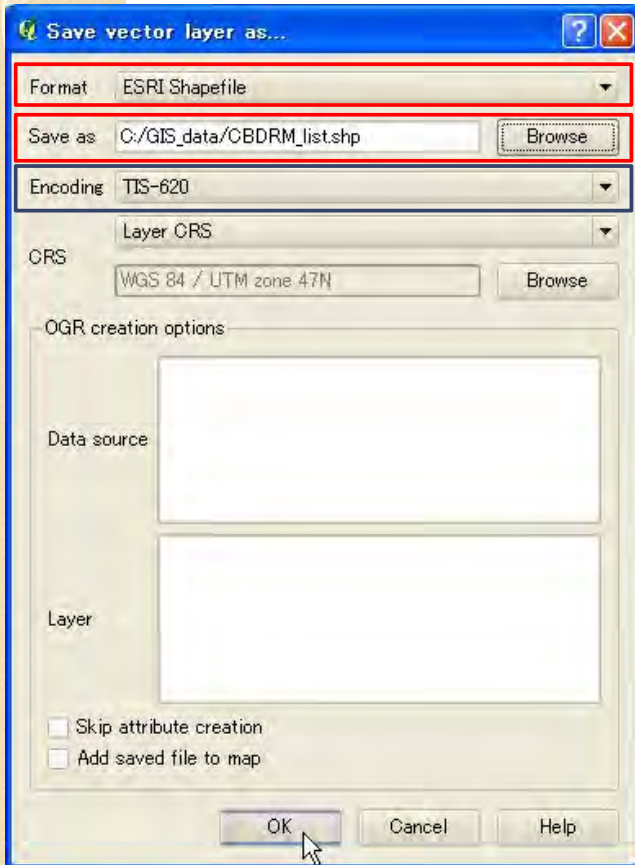


Then, the data will imported.

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

4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excel file



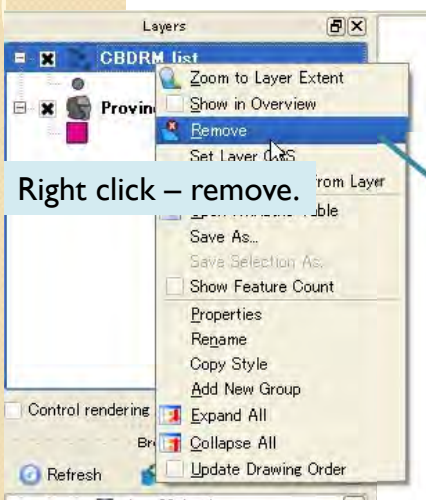
Select format and file name.

Select "Encoding" as "TIS-620".

Push OK

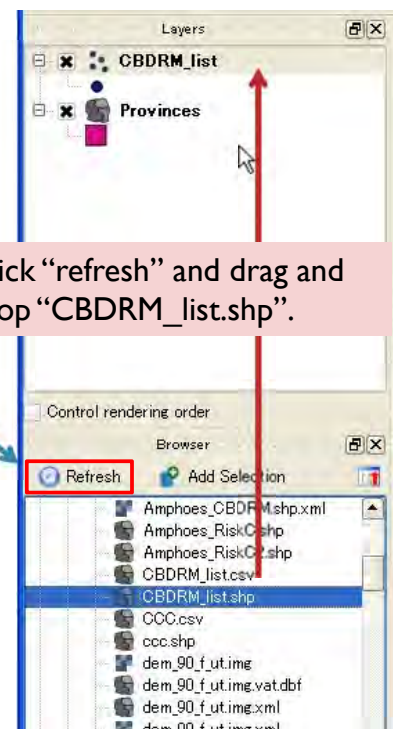
4. Making Inventory Maps (CBDRM)

4.1.2 Import CBDRM data from Excel file



Remove the temporary layer.

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

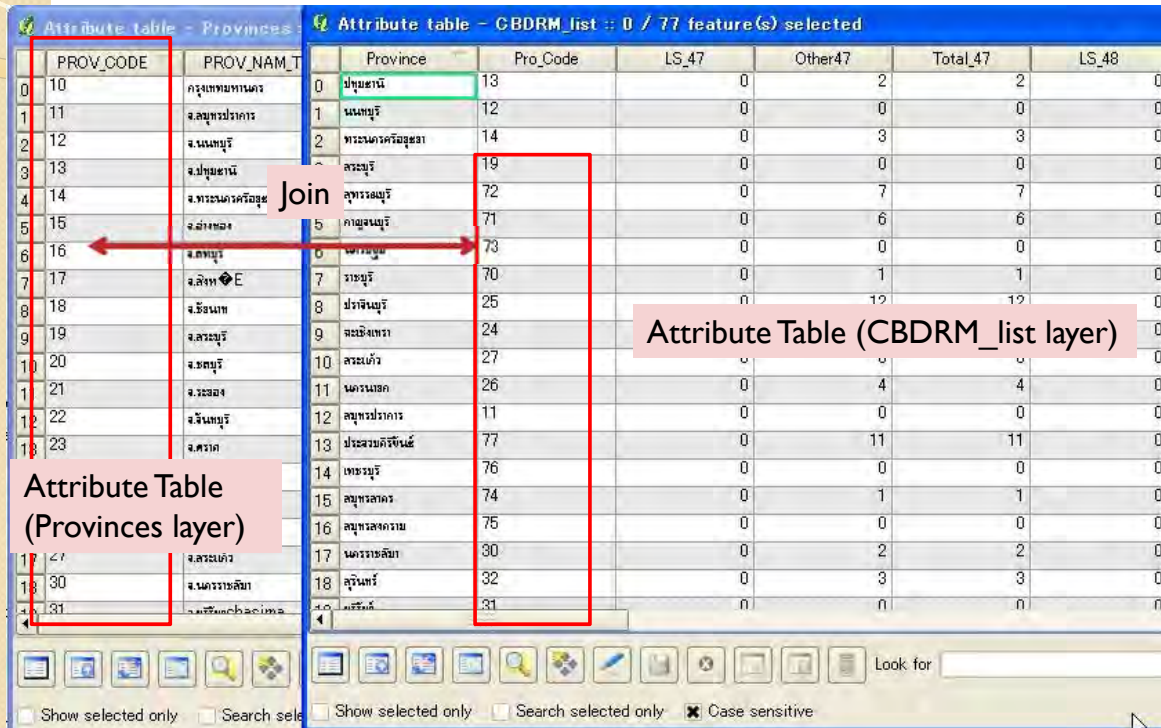


Click "refresh" and drag and drop "CBDRM_list.shp".

4. Making Inventory Maps (CBDRM)

4.1.3 Join attribute table

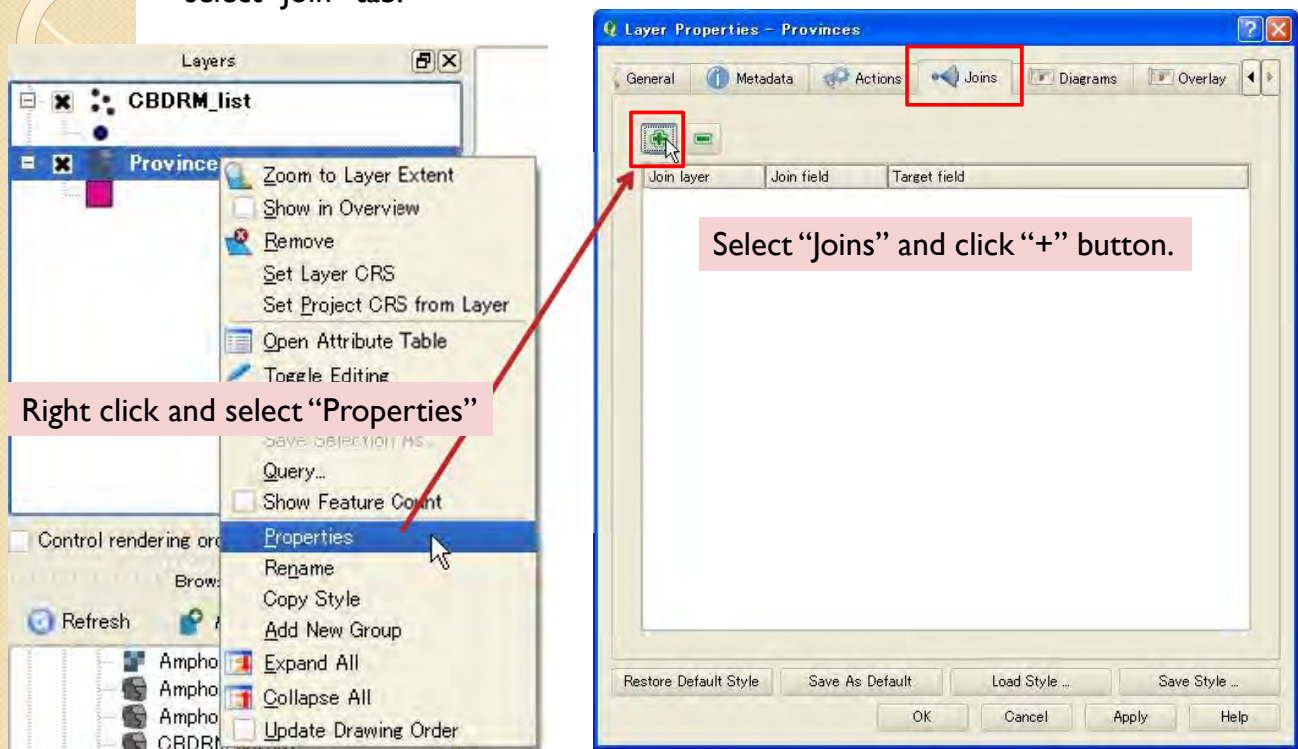
In next step, attribute table of “CBDRM_list” will be joined into “Provinces” layers.



4. Making Inventory Maps (CBDRM)

4.1.3 Join attribute table

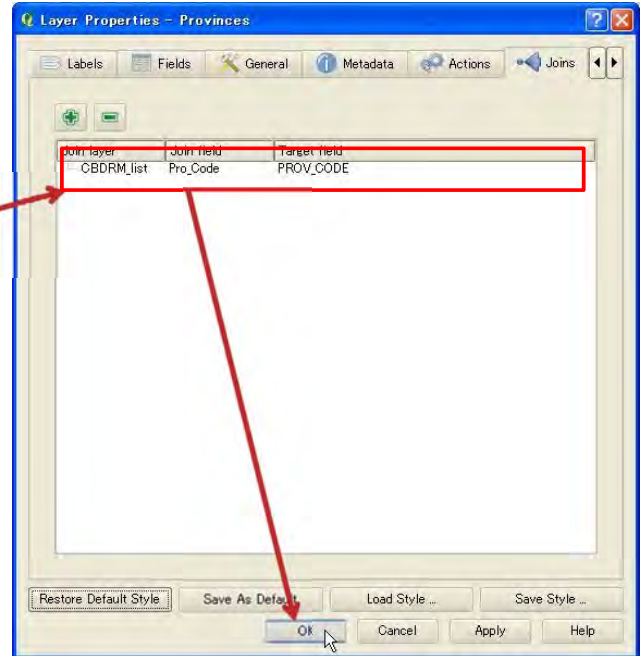
Open “Properties” window and select “Join” tab.



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.

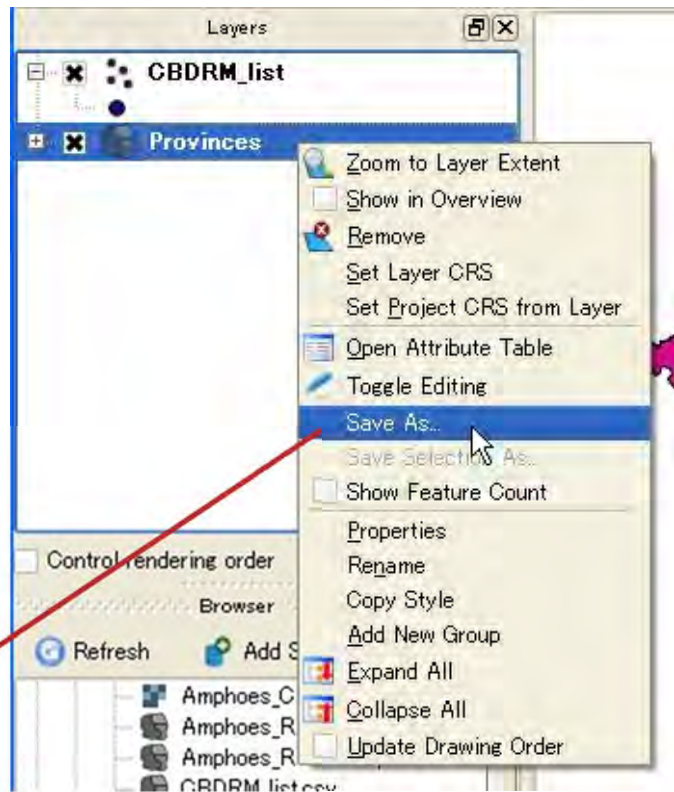
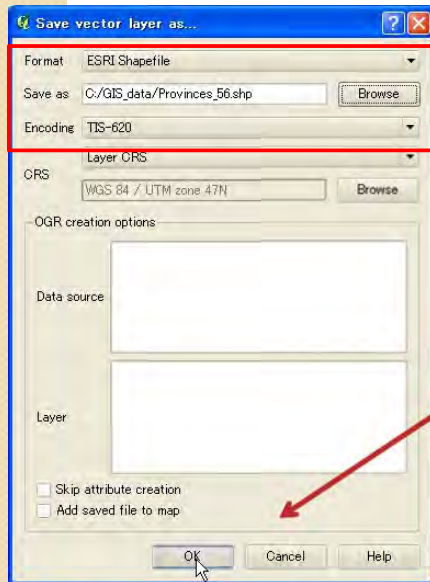
PROV_CODE	PROV_NAME_T	PROV_NAME_E	population	RC_Code	pop_den	AREA	No_RT/VIS	No_RCVIS	No_RQVIS	No_TotRVIS	Province	L5_47
0		Bangkok	6395144	NULL	4066.59	1566.623	0	0	0	0	NULL	NULL
1	กรุงเทพมหานคร	Changwat Saen...	1026461	RC03	1069.37	967.116	0	5	30	36	กรุงเทพมหานคร	11
2	เชียงใหม่	Changwat Nong...	616614	RC01	1263.78	636.4	0	3	214	214	เชียงใหม่	12
3	อุบลราชธานี	Changwat Path...	677649	RC01	445.59	1520.801	0	139	0	139	อุบลราชธานี	13
4	นครราชสีมา	Changwat Phra...	727277	RC01	295.5	2547.346	0	1	523	524	นครราชสีมา	14
5	ขอนแก่น	Changwat Ang...	269419	RC16	293.45	950.497	0	50	168	218	ขอนแก่น	15
6	เลย	Changwat Lopburi	749506	RC16	114.65	6502.715	5	25	390	420	เลย	16
7	ชัยภูมิ	Changwat Sira...	232766	RC16	294.9	817.007	0	0	165	165	ชัยภูมิ	17
8	อุดรธานี	Changwat Chai...	359629	RC16	143.63	2505.263	0	99	165	264	อุดรธานี	18
9	เลย	Changwat Sara...	575053	RC01	164.86	3486.177	451	177	345	973	เลย	19
10	เลย	Changwat Cha...	1040685	RC17	230.9	4507.761	0	29	30	59	เลย	20
11	เลย	Changwat Ra...	822133	RC17	142.45	5685.288	36	25	50	111	เลย	21
12	เลย	Changwat Cha...	480064	RC17	75.32	6373.251	0	88	91	179	เลย	22
13	เลย	Changwat Tra...	219345	RC17	76.5	2867.27	0	117	11	128	เลย	23
14	เลย	Changwat Cha...	635153	RC03	122.66	5169.624	21	139	21	181	เลย	24
15	เลย	Changwat Ph...	406792	RC03	80.83	5032.227	0	180	104	284	เลย	25
16	เลย	Changwat Nakh...	241081	RC03	112.59	2141.291	0	163	0	163	เลย	26
17	เลย	Changwat Sak...	486632	RC03	70.74	6864.886	0	230	156	389	เลย	27
18	เลย	Changwat Nakh...	256256	RC05	123.29	2074.907	0	102	504	606	เลย	28
19	เลย	Changwat Bu...	1402998	RC0K	149.14	10709.91	0	991	0	991	เลย	29

4. Making Inventory Maps (CBDRM)

4.1.3 Join attribute table

The joined attribute table is re-separable.

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



4. Making Inventory Maps (CBDRM)

4.2 Making CBDRM map

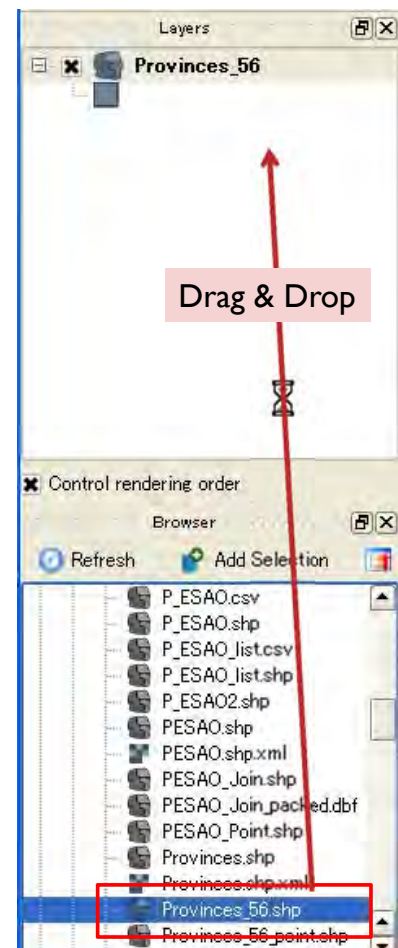
4.2.1 Import data

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.

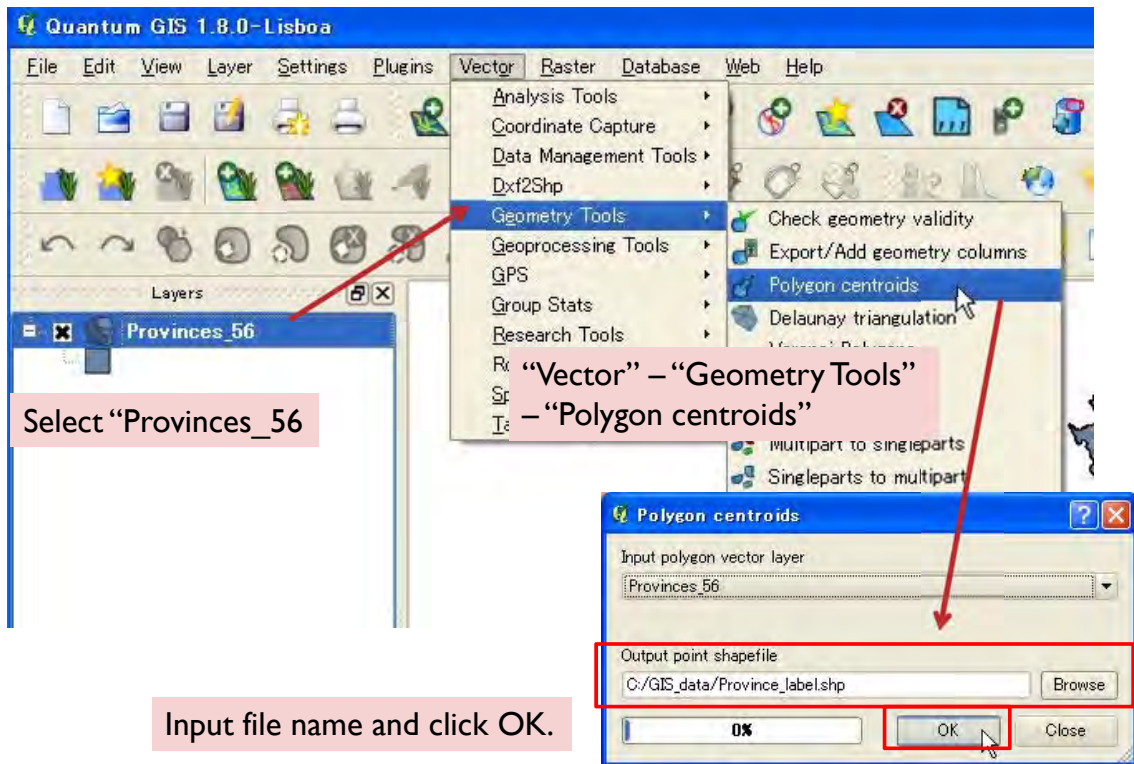
In case you want to update the data, it is required to remake or edit these files.



4. Making Inventory Maps (CBDRM)

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

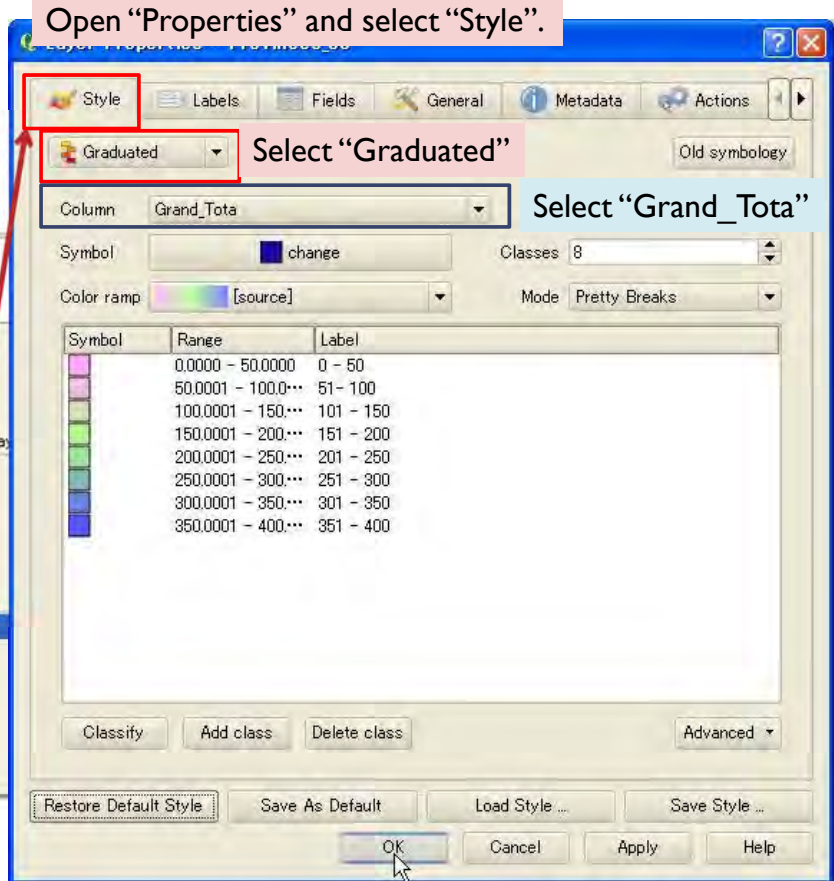
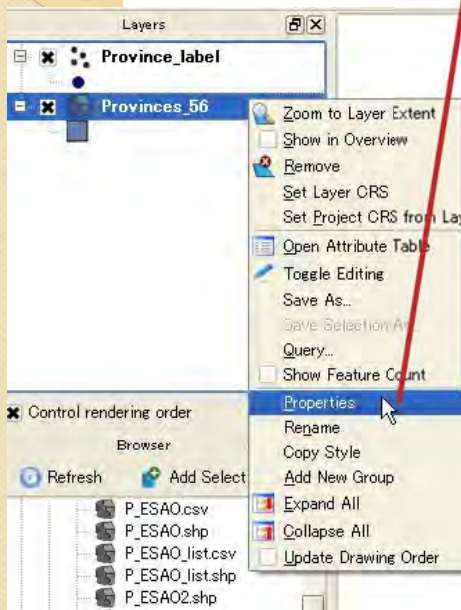
Import the file you made.



4. Making Inventory Maps (CBDRM)

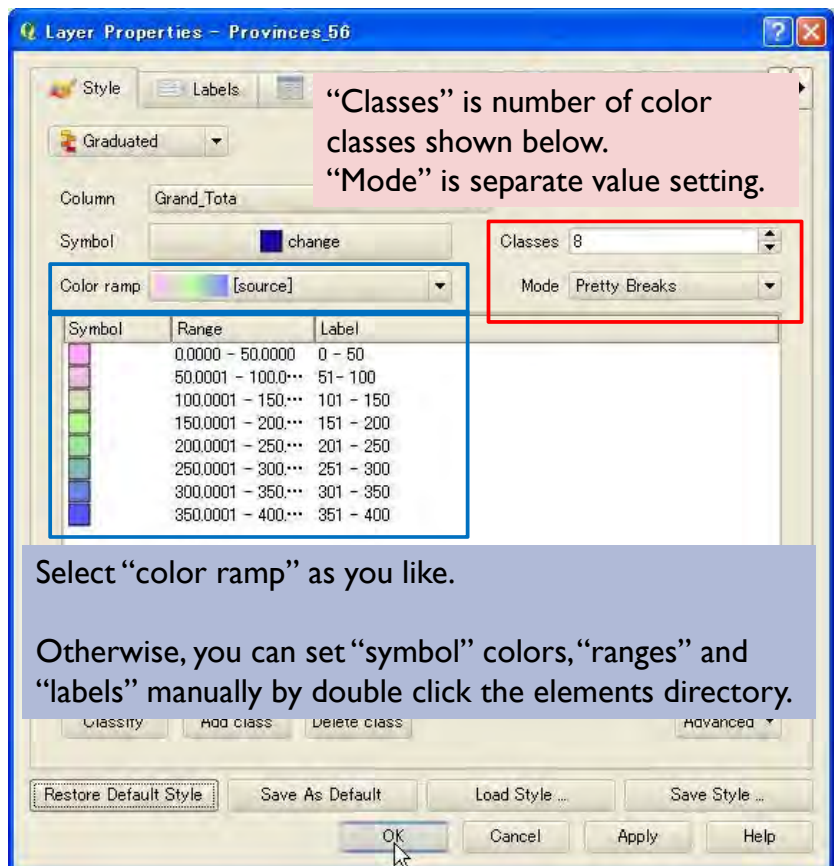
4.2.3 Color setting

Next, make color settings.



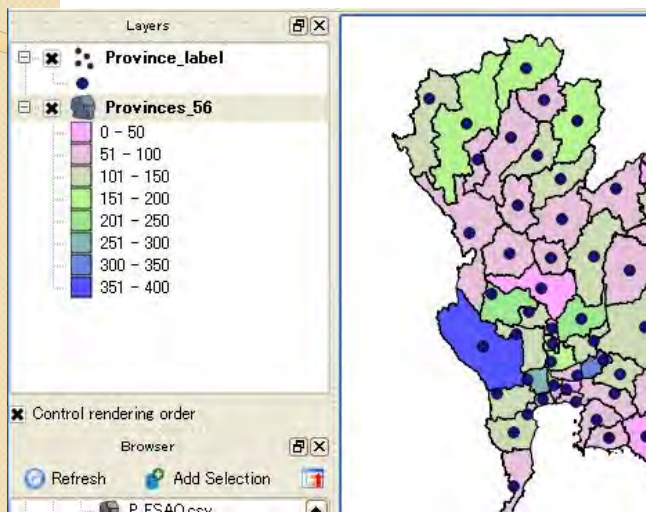
4. Making Inventory Maps (CBDRM)

4.2.3 Color setting



4. Making Inventory Maps (CBDRM)

4.2.3 Color setting

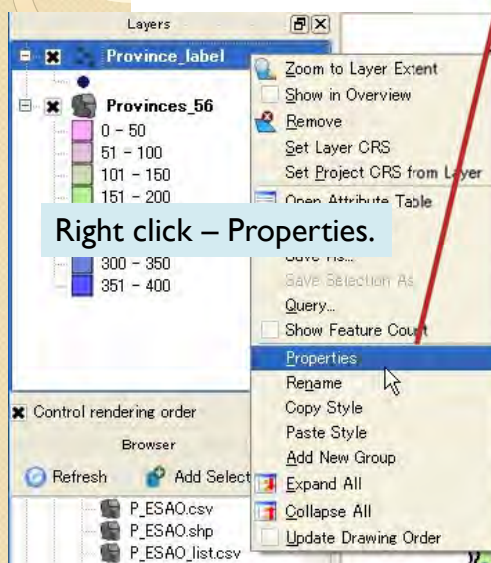


Then, you can see the colored map of total conducted numbers of CBDRM.

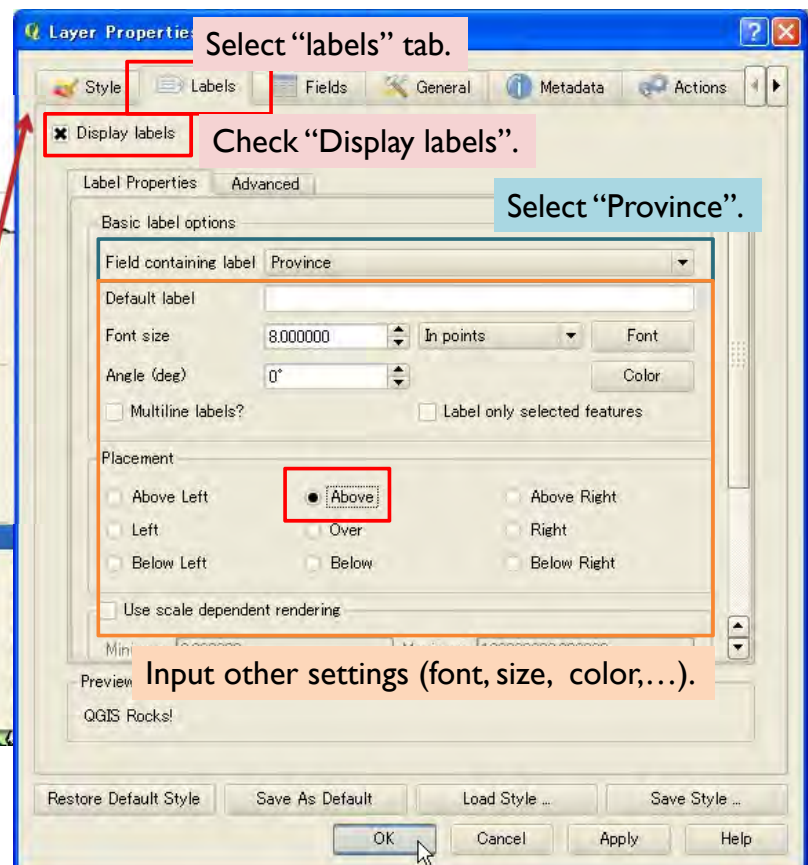
4. Making Inventory Maps (CBDRM)

4.2.4 Labels

Label setting
Next, make province label settings.



Right click – Properties.



Select "labels" tab.

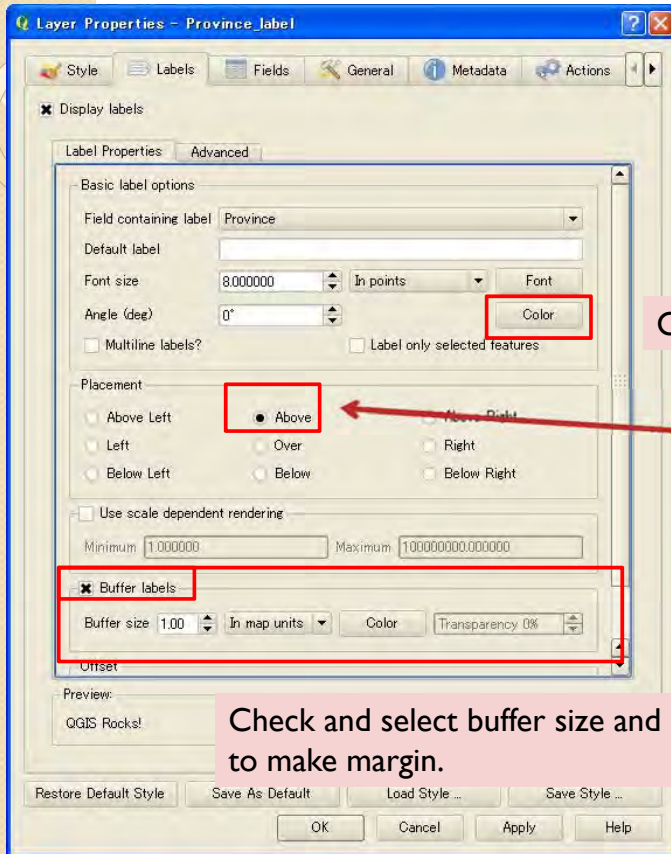
Check "Display labels".

Select "Province".

Input other settings (font, size, color,...).

4. Making Inventory Maps (CBDRM)

4.2.4 Labels



Change font color here

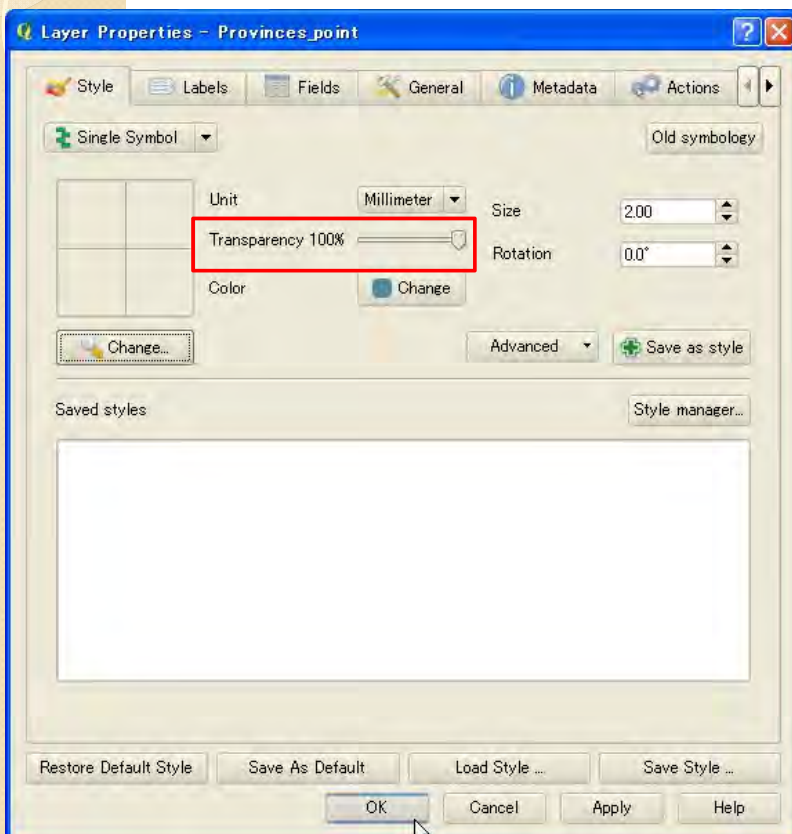
Select "Above" to display upper position.

Check and select buffer size and color to make margin.



4. Making Inventory Maps (CBDRM)

4.2.4 Labels

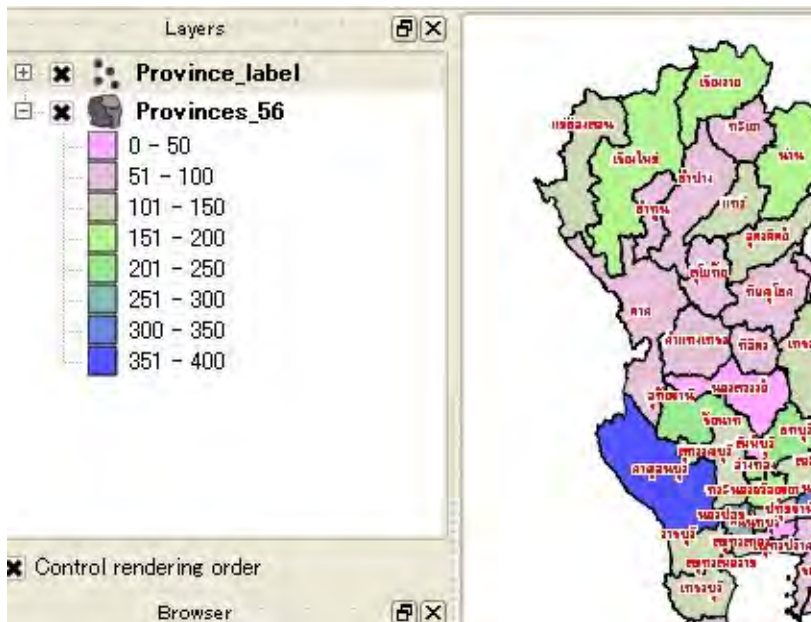


Set "Transparency" to 100 % to remove point symbols.

4. Making Inventory Maps (CBDRM)

4.2.4 Labels

Then, the province names are displayed in the map.

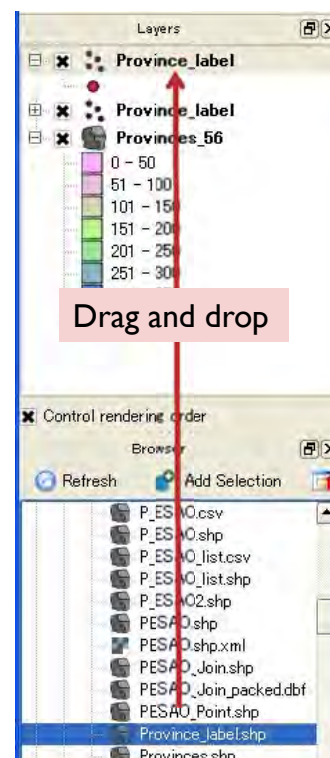


4. Making Inventory Maps (CBDRM)

4.2.4 Labels

Next, make province label settings.

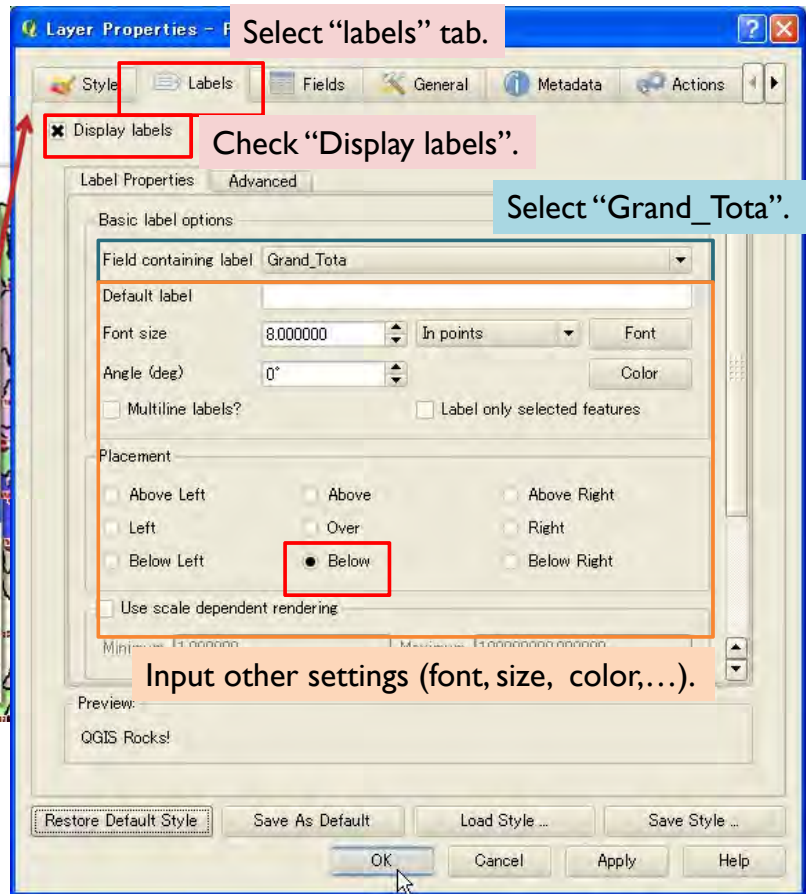
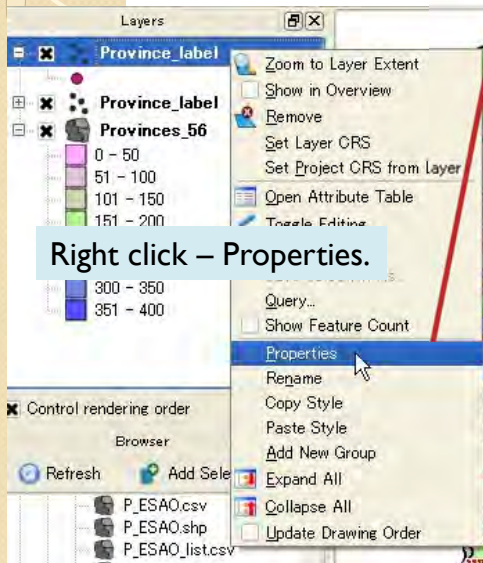
Import "Province_label" one more.



4. Making Inventory Maps (CBDRM)

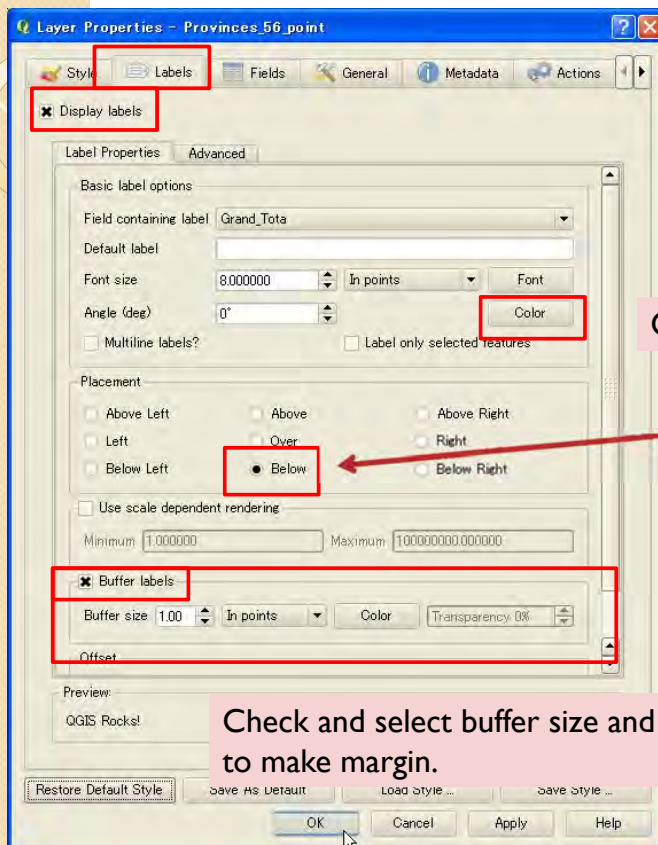
4.2.4 Labels

Next, make province label settings.



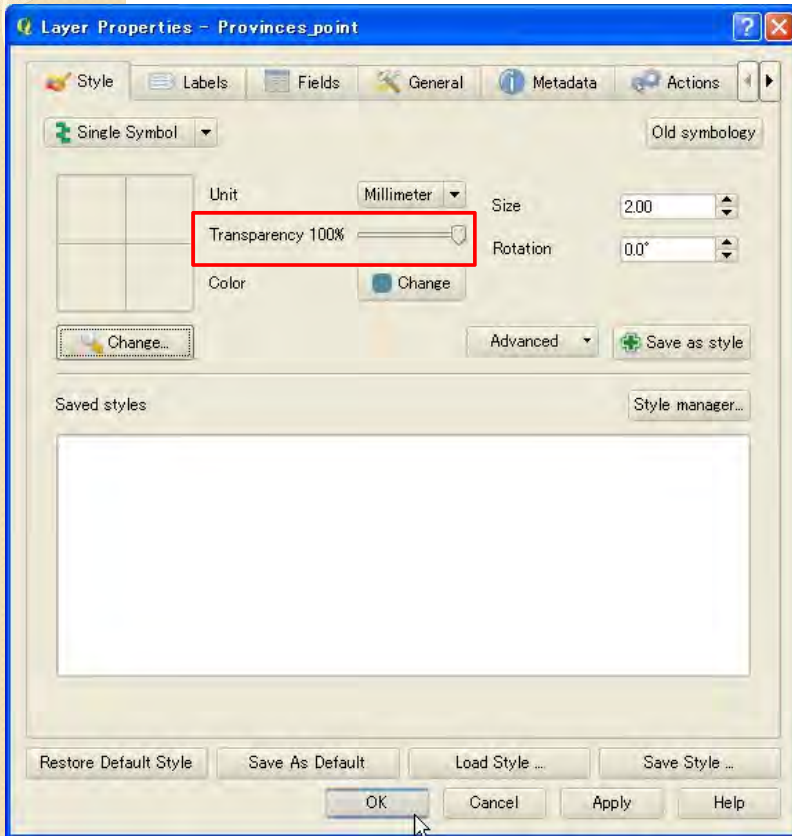
4. Making Inventory Maps (CBDRM)

4.2.4 Labels



4. Making Inventory Maps (CBDRM)

4.2.4 Labels

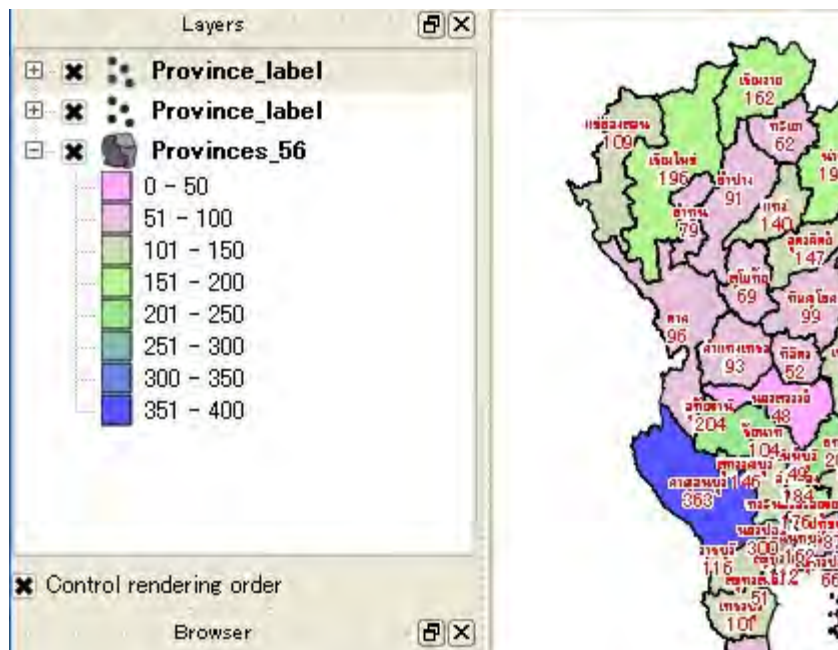


Set "Transparency" to 100 % to remove point symbols.

4. Making Inventory Maps (CBDRM)

4.2.4 Labels

Then, the labels are displayed in the map.

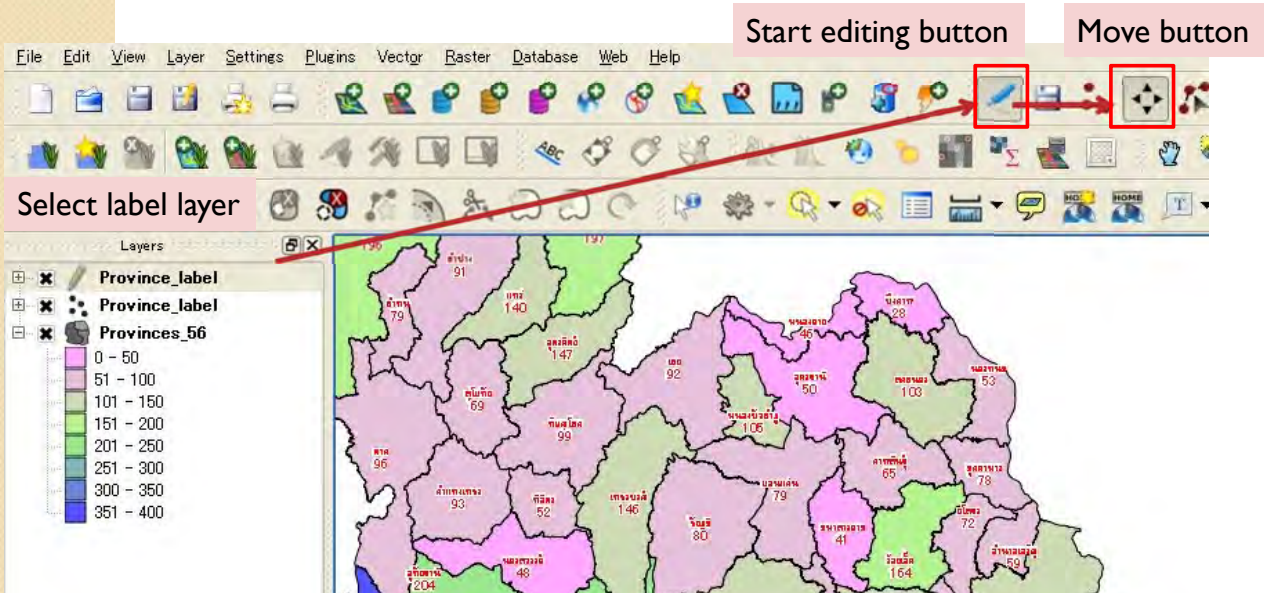


4. Making Inventory Maps (CBDRM)

4.2.4 Labels

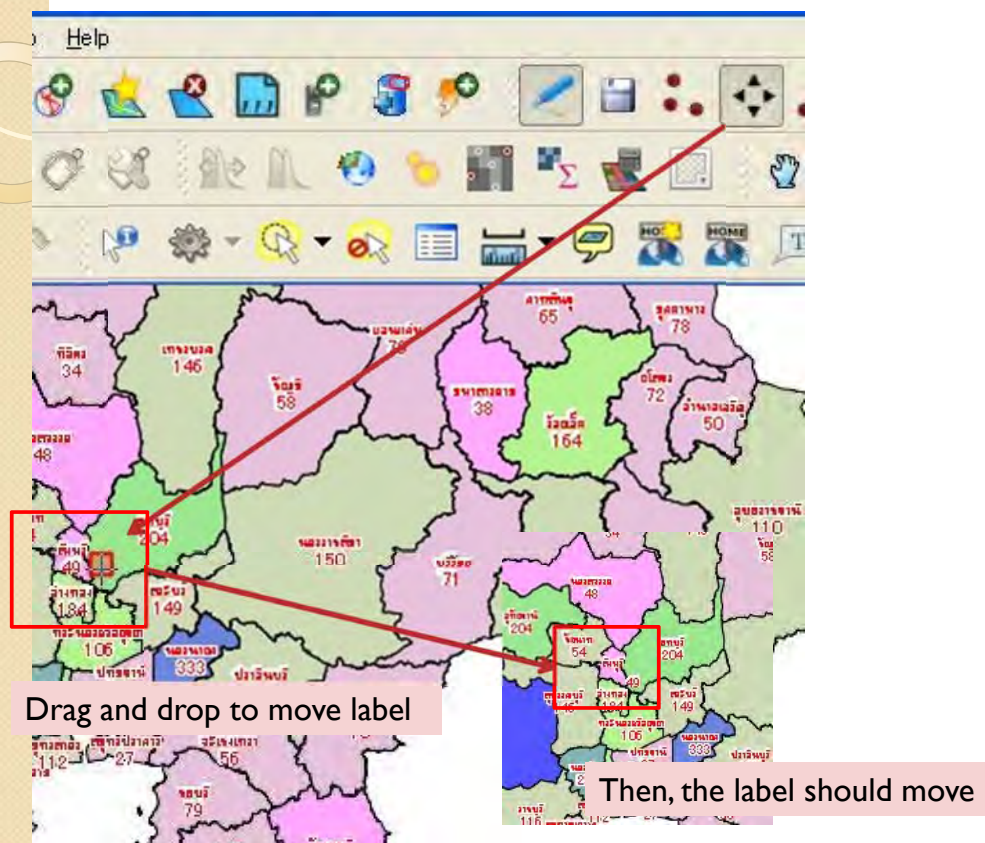
Move labels

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



4. Making Inventory Maps (CBDRM)

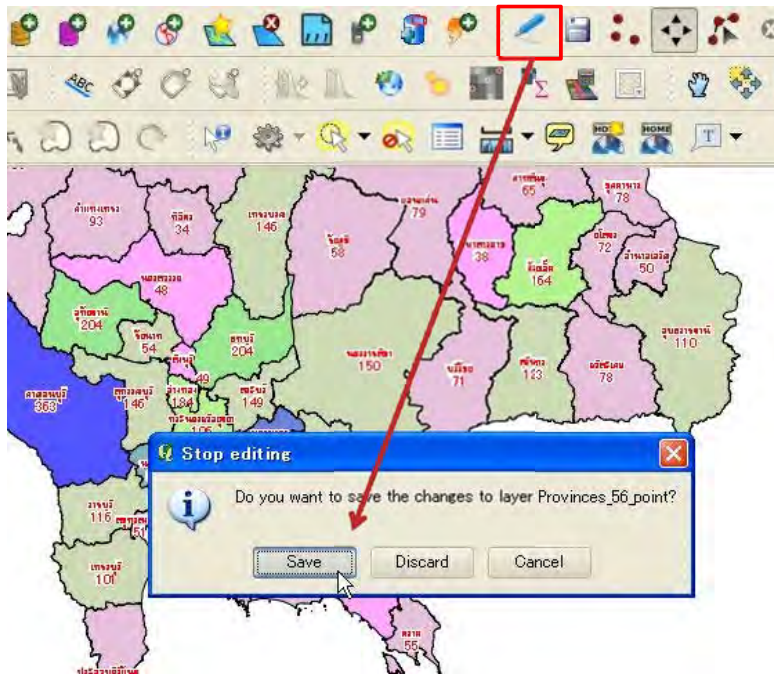
4.2.4 Labels



4. Making Inventory Maps (CBDRM)

4.2.4 Labels

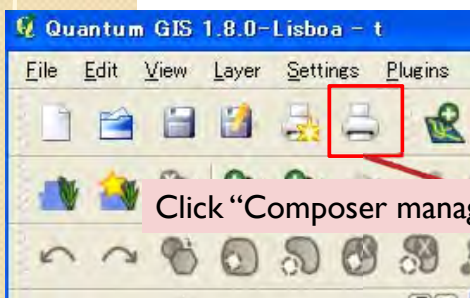
After you finish moving labels, re-click edit button and save changes. Then, the labels should be fixed at new position.



4. Making Inventory Maps (CBDRM)

4.2.5 Print composer

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

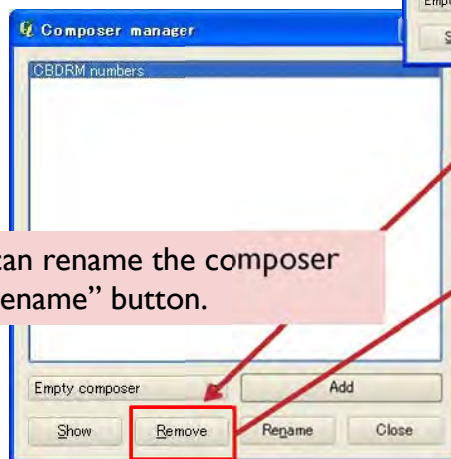


Click "Composer manager"

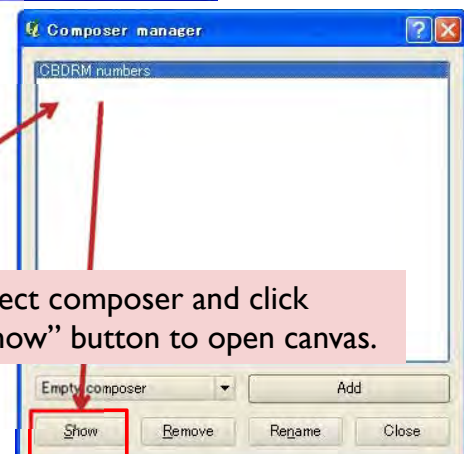


Click "Add" to make new composer

You can rename the composer by "Rename" button.



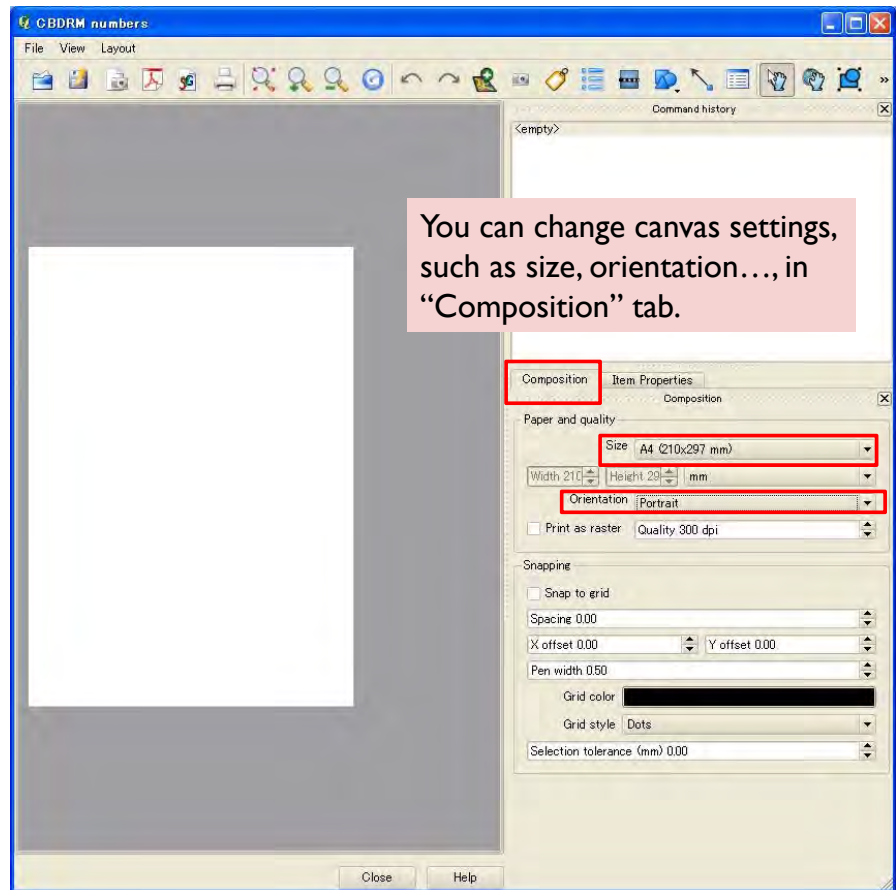
Select composer and click "Show" button to open canvas.



4. Making Inventory Maps (CBDRM)

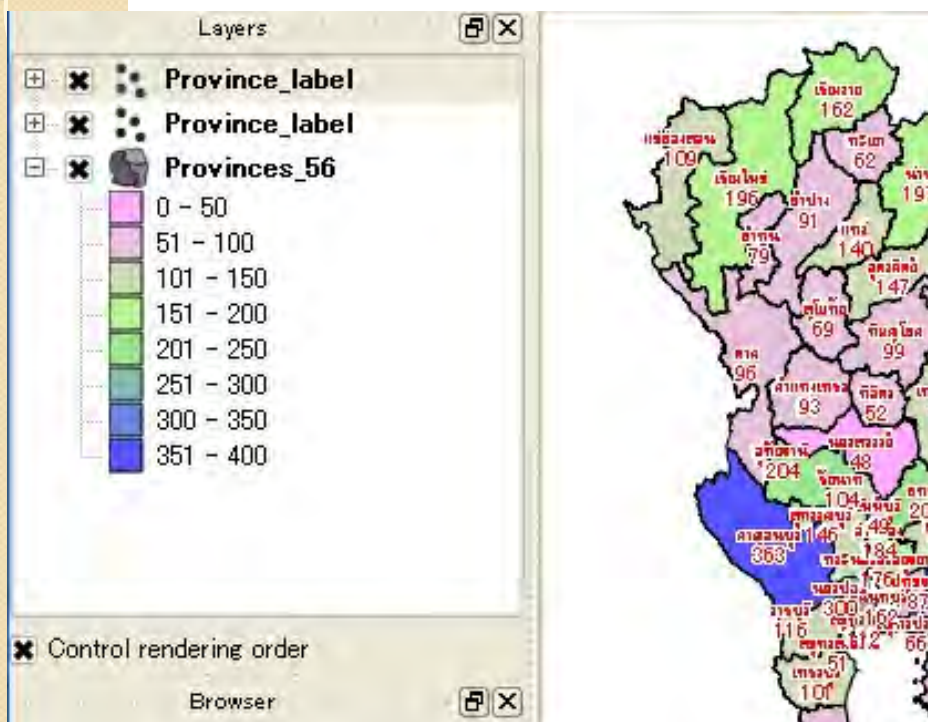
4.2.5 Print composer

This is Print Composer window.



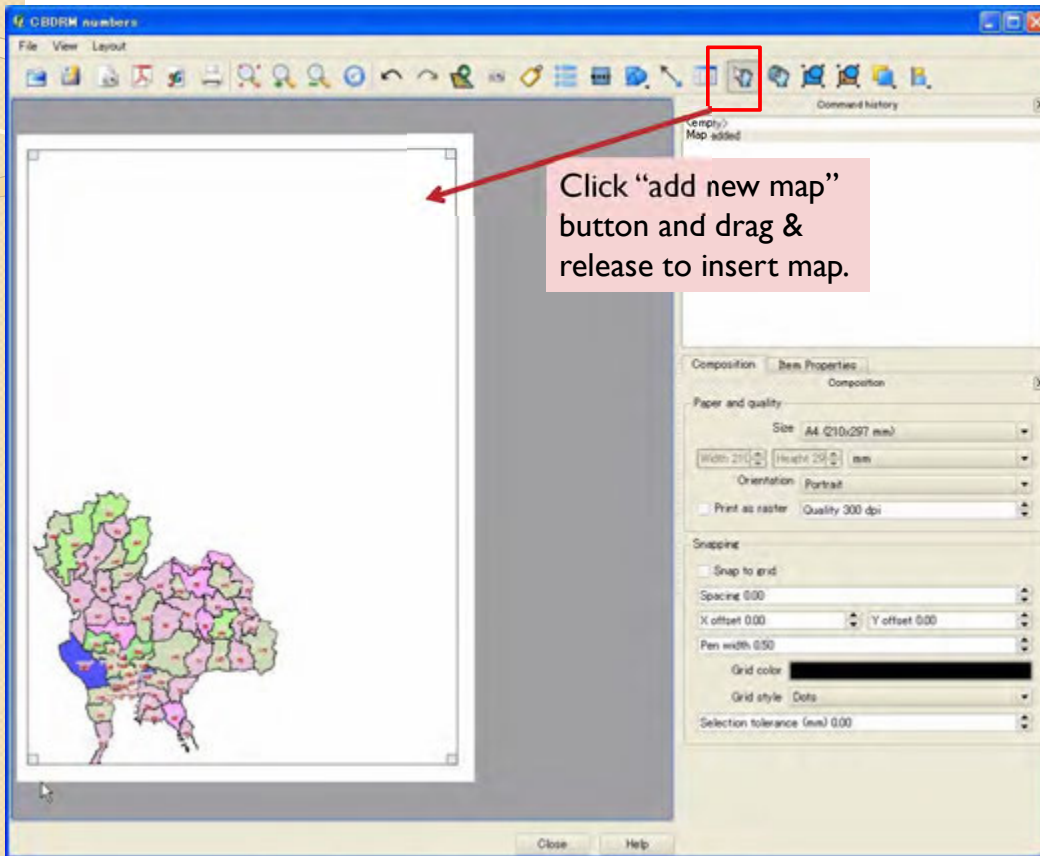
4. Making Inventory Maps (CBDRM)

4.2.5 Print composer



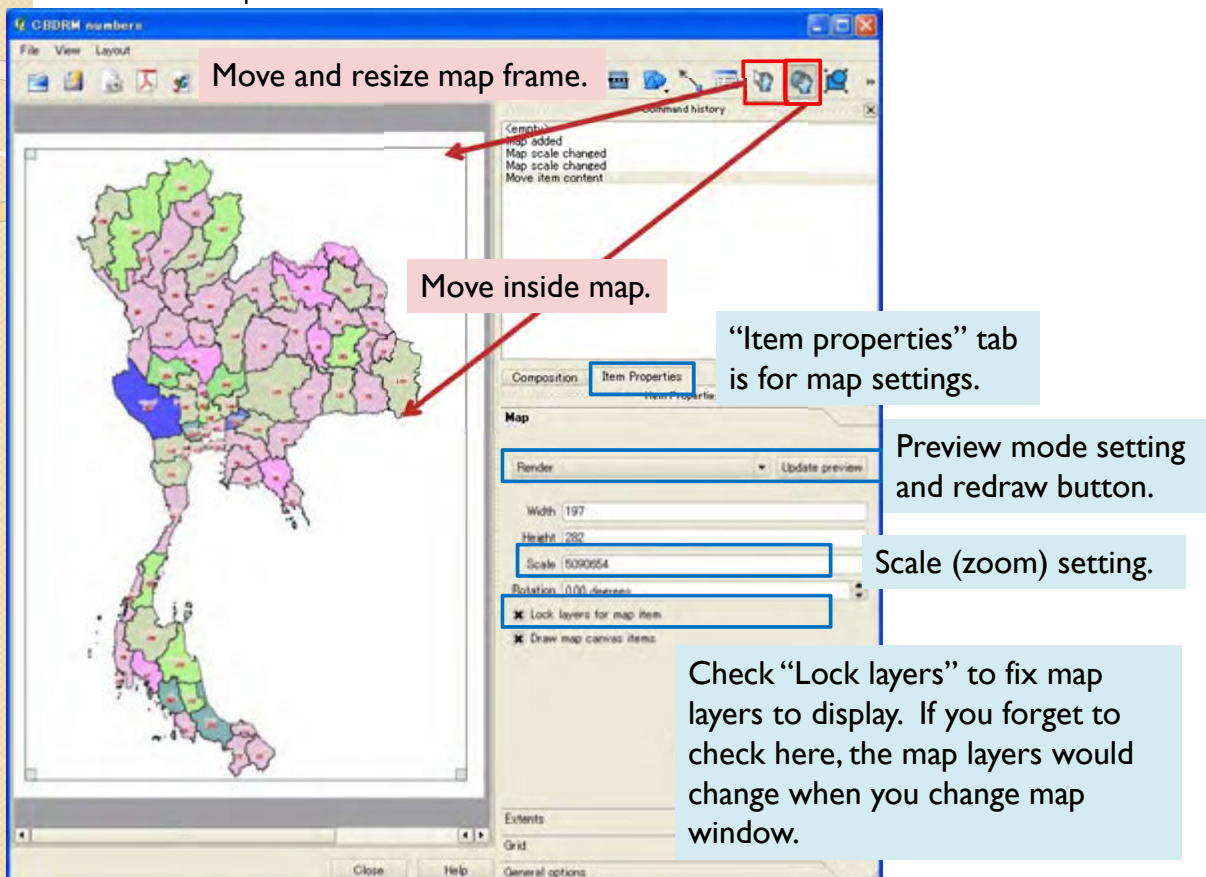
4. Making Inventory Maps (CBDRM)

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

Add label

Edit text

Font size and other settings

Command history:
Empty?
Map added
Map scale changed
Map scale changed
Move item content
Label added
Label text changed
Change item position
Change item position
Change item position
Change item position
Label alignment changed
Label alignment changed
Label font changed
Change item position
Label font changed
Change item position

Composition: **Item Properties**

Label

Conducted CBDRM number

Font

Font color...

Horizontal Alignment:
 Left Center Right

Vertical Alignment:
 Top Middle Bottom

Margin 1.00mm

General options

4. Making Inventory Maps (CBDRM)

4.2.5 Print composer

Add legend

“Item Properties” and “Legend items” tab

Unselect “Auto Update” to fix the legend items.

You can add, delete or rename legend items here.

Change order

Add or delete

Rename

Command history:
Map scale changed
Move item content
Label added
Label text changed
Change item position
Change item position
Change item position
Label alignment changed
Label alignment changed
Label font changed
Change item position
Label font changed
Change item position
Legend added
Change item position
Legend item removed
Legend item removed
Legend item edited
Change item position

Composition: **Item Properties**

General

Legend items

Auto Update

Conducted CBDRM

- 0 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- 251 - 300
- 300 - 350
- 351 - 400

Update All Add

4. Making Inventory Maps (CBDRM)

4.2.5 Print composer

It is able to export map to file.

Export as image file



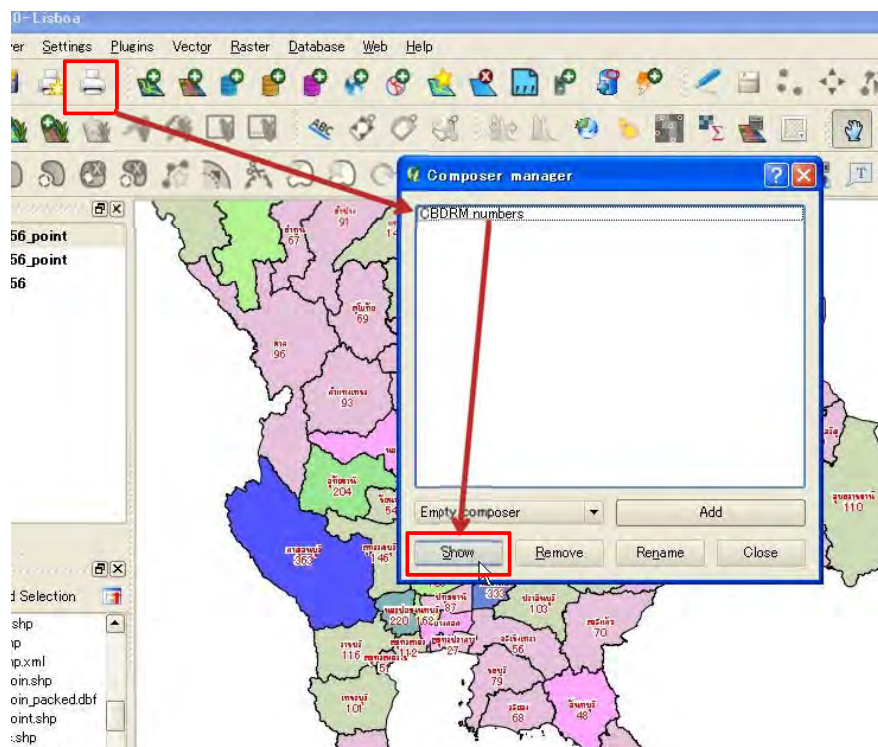
Export as pdf file

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. Making Inventory Maps (CBDRM)

4.3 Map of CBDRM conducting percentage in risk community

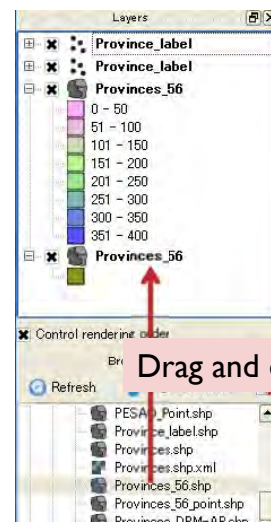
4.3.1 Data import

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.

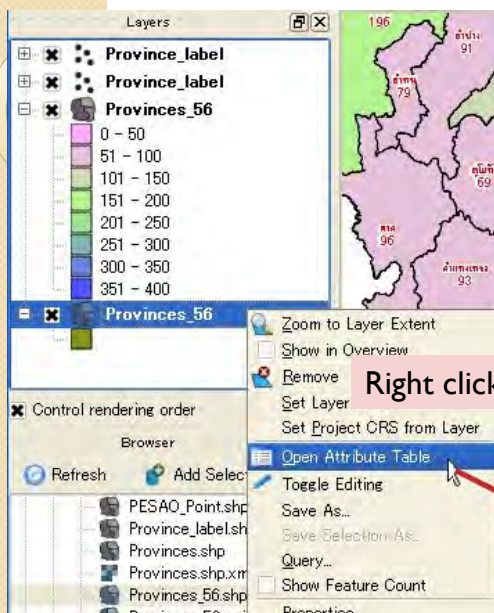
Following is explanation about making new column in attribute table and input the information.

At first, import "Province_56", one more.



4. Making Inventory Maps (CBDRM)

4.3.1 Data import



ID	PROV_NAME	PROV_RANK	population	RC_Code	pop_den	AREA	Num_RU	Num_PCV	Num_PCV2	Num_TOTRU	Province	ES
0	กรุงเทพมหานคร	กรุงเทพมหานคร	450114	RC01	4501	156325	0	0	0	0	กรุงเทพมหานคร	1
1	นนทบุรี	นนทบุรี	100441	RC02	1004	40714	0	0	0	0	นนทบุรี	2
2	ปทุมธานี	ปทุมธานี	139319	RC03	1393	634	0	0	214	214	ปทุมธานี	3
3	นครปฐม	นครปฐม	87849	RC04	8485	153391	0	139	0	139	นครปฐม	4
4	สุพรรณบุรี	สุพรรณบุรี	77277	RC05	2855	264746	0	1	521	521	สุพรรณบุรี	5
5	สิงห์บุรี	สิงห์บุรี	268445	RC06	2684	664407	0	301	346	214	สิงห์บุรี	6
6	อ่างทอง	อ่างทอง	54855	RC07	1146	662745	0	25	396	421	อ่างทอง	7
7	ลพบุรี	ลพบุรี	127396	RC08	2443	671037	0	0	165	165	ลพบุรี	8
8	ชัยนาท	ชัยนาท	360425	RC09	1435	255252	0	361	165	244	ชัยนาท	9
9	สุโขทัย	สุโขทัย	376265	RC10	1644	546171	407	122	246	674	สุโขทัย	10
10	กำแพงเพชร	กำแพงเพชร	134365	RC11	2463	450778	0	29	30	59	กำแพงเพชร	11
11	พิจิตร	พิจิตร	322131	RC12	14245	346236	38	25	750	111	พิจิตร	12
12	อุตรดิตถ์	อุตรดิตถ์	488564	RC13	7822	673241	0	347	63	139	อุตรดิตถ์	13
13	แพร่	แพร่	215445	RC14	763	289271	0	112	11	123	แพร่	14
14	น่าน	น่าน	58153	RC15	12236	119164	24	139	-11	134	น่าน	15
15	พะเยา	พะเยา	400702	RC16	3045	392227	3	180	194	284	พะเยา	16
16	เชียงราย	เชียงราย	241091	RC17	11235	234228	0	162	0	162	เชียงราย	17
17	แม่ฮ่องสอน	แม่ฮ่องสอน	48562	RC18	7674	684484	0	100	76	390	แม่ฮ่องสอน	18
18	เชียงใหม่	เชียงใหม่	265250	RC19	12326	2154467	0	102	554	656	เชียงใหม่	19
19	ลำปาง	ลำปาง	140355	RC20	14815	1307931	0	240	0	240	ลำปาง	20
20	ลำพูน	ลำพูน	132765	RC21	14631	884234	28	119	43	237	ลำพูน	21
21	ลำไย	ลำไย	148360	RC22	15713	860340	0	291	249	539	ลำไย	22
22	อุบลราชธานี	อุบลราชธานี	159141	RC23	1824	1502136	0	421	21	442	อุบลราชธานี	23

4. Making Inventory Maps (CBDRM)

4.3.1 Data import

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

New column name

Name: GT_Specifi

Type: Whole number (integer)

Width: 5

Precision: integer

OK

Click OK

Start Edit

Add new column

Width (length of number)

Type (integer)

PROV_CODE	PROV_NAM_T	PROV_NAM_E	population	RC03
10	กรุงเทพมหานคร	Bangkok	6355144	NULL
11	สมุทรปราการ	Changwat Sam...	1028401	RC03
12	นนทบุรี	Changwat Nont...	816614	RC01
13	ปทุมธานี	Changwat Path...	677649	RC01
14	พระนครศรีอยุธยา	Changwat Phra...	727277	RC01
15	อ่างทอง	Changwat Ang ...	269419	RC16
16	ลพบุรี	Changwat Lopburi	745506	RC16
17	สิงห์บุรี	Changwat Sing...	232766	RC16
18	ชัยนาท	Changwat Chainat	359820	RC16
19	สระบุรี	Changwat Sara...	57501	RC16
20	ชลบุรี	Changwat Chon...	1040860	RC17
21	ระยอง	Changwat Rayong	522133	RC17
22	ฉะเชิงเทรา	Changwat Chac...	635153	RC03
23	ปราจีนบุรี	Changwat Prac...	406732	RC03
24	นครนายก	Changwat Nakh...	241081	RC03
25	สระแก้ว	Changwat Srak...	485632	RC03
26	นครราชสีมา	Changwat Nakh...	2556260	RC05
27	บุรีรัมย์	Changwat Buri...	1493359	RC05
28	สุรินทร์	Surin	1000000	RC05
29	ศรีสะเกษ	Sisaket	1000000	RC05
30	อุบลราชธานี	Changwat Ubon...	1091471	RC13

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.

Dummy2	Old_GT	Num_TotVil	CBDRMperTV	RiskOperTV	GT_Specifi
NULL	NULL	NULL	NULL	NULL	NULL
0	27	88	4.5	15.6	95
0	162	214	44.3	34.7	30
0	87	139	21.5	18.7	66
0	106	524	12.6	33.6	89
0	184	218	40.8	40.8	122
0	204	431	28.3	36.7	41
0	49	165	24.8	43.8	65
0	54	264	24.6	49.3	226
0	149	973	23.2	91.4	9
0	79	59	15.5	6.4	13
0	68	111	11.7	20.9	32
0	48	179	17.8	23.8	33
0	55	128	25.7	47.9	17
0	56	182	9.3	19.7	63
0	103	284	22.1	38.9	125
0	333	163	76.6	39.9	49
0	70	389	12.6	50.6	73
0	150	696	10.4	17.9	27
0	71	286	9.4	11.7	34
0	123	233	14.5	10.8	55
0	78	690	7.9	25.7	54
0	110	447	12	15.6	

4. Making Inventory Maps (CBDRM)

4.3.1 Data import

Vil	CBDRMperTV	RiskOperTV	GT_Specifici	Risk_C
NULL	NULL	NULL	NULL	NULL
88	4.5	15.6	4	88
56	8.9	9.1	5	56
59	15.5	6.4	9	59
53	18.8	37.9	10	53
111	11.7	20.9	13	111
78	20.5	25.3	15	78
182	9.3	19.7	17	182
182	10.4	9.2	19	182
659	3.4	71.8	23	659
143	16	14.5	23	143
563	4.4	36.8	25	563
146	17.8	42.9	25	146
286	9.4	11.1	27	286
91	29.6	22.6	27	91
139	21.5	18.1	30	139
247	12.5	26.4	31	247
179	17.8	23.5	32	179
128	25.7	47.9	33	128
103	32	16.2	33	103
233	14.5	10.8	34	233
554	6.1	59.6	34	554
122	27.8	34.1	34	122

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

4. Making Inventory Maps (CBDRM)

4.3.1 Data import

Vil	CBDRMperTV	RiskOperTV	GT_Specifici	Risk_C
NULL	NULL	NULL	NULL	NULL
88	4.5	15.6	4	88
56	8.9	9.1	5	56
59	15.5	6.4	9	59
53	18.8	37.9	10	53
111	11.7	20.9	13	111
78	20.5	25.3	15	78
182	9.3	19.7	17	182
182	10.4	9.2	19	182
659	3.4	71.8	23	659
143	16	14.5	23	143
563	4.4	36.8	25	563
146	17.8	42.9	25	146
286	9.4	11.1	27	286
91	29.6	22.6	27	91
139	21.5	18.1	30	139
247	12.5	26.4	31	247
179	17.8	23.5	32	179
128	25.7	47.9	33	128
103	32	16.2	33	103
233	14.5	10.8	34	233
554	6.1	59.6	34	554
122	27.8	34.1	34	122

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

Type is "Decimal number"

Set Width and Precision

Click OK

Add new column button

4. Making Inventory Maps (CBDRM)

4.3.1 Data import

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

The screenshot shows the ArcGIS Field Calculator dialog box overlaid on a data table. The table has columns: RiskOperTV, GT_Specifici, Risk_C, and Percentage. The dialog box has the following elements:

- Only update selected features:** Checked (indicated by a red box and arrow).
- Update existing field:** Checked (indicated by a red box and arrow).
- Output field name:** Percentage (indicated by a red box and arrow).
- Output field type:** Percentage (indicated by a red box and arrow).
- Function List:** A list of functions including Total_54, LS_65, Other55, etc. (indicated by a red box and arrow).
- Expression:** $100.0 * "GT_Specifici" / "Risk_C"$ (indicated by a red box and arrow).
- OK button:** Located at the bottom right (indicated by a red box and arrow).

Annotations include:

- Check these box and select "Percentage"** (pointing to the checked boxes and the field type dropdown).
- Push field calculator button** (pointing to the calculator icon in the bottom toolbar).
- Input formula** (pointing to the expression text box).

4. Making Inventory Maps (CBDRM)

4.3.1 Data import

The screenshot shows the ArcGIS Attribute Table for 'Provinces_56'. The table has columns: ID, Num_TotVil, CBDRMperTV, RiskOperTV, GT_Specifici, Risk_C, and Percentage. A 'Stop editing' dialog box is open, asking: 'Do you want to save the changes to layer Provinces_56?'. The dialog box has 'Save', 'Discard', and 'Cancel' buttons. The 'Save' button is highlighted with a red box and arrow. The 'Percentage' column is highlighted with a red box. The 'Edit' button in the bottom toolbar is also highlighted with a red box and arrow.

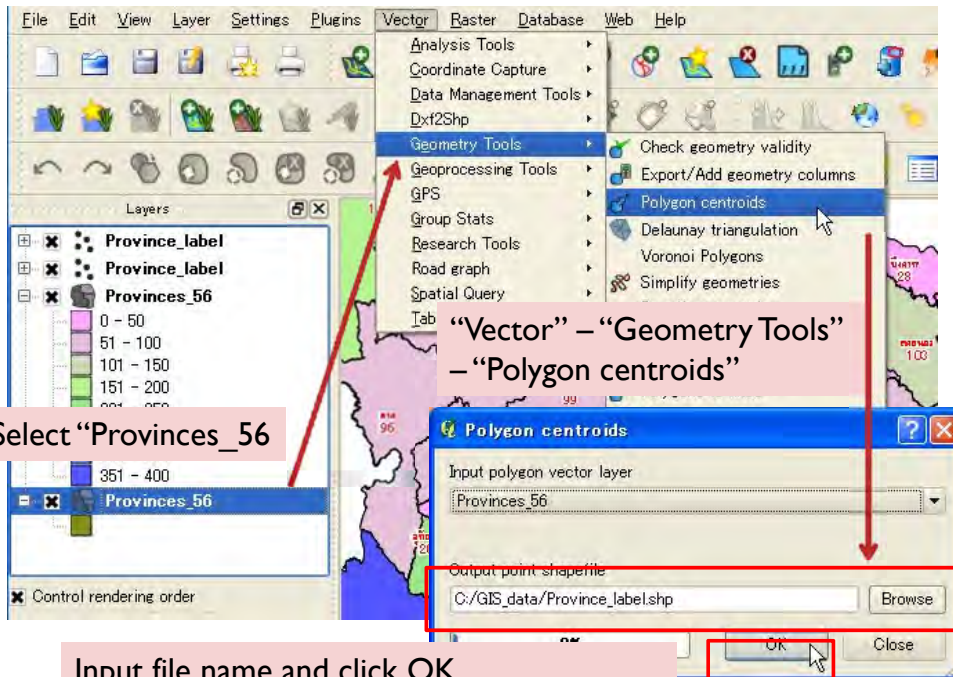
Annotations include:

- After you calculate percentage, re-click edit button to terminate edit and save.** (pointing to the 'Edit' button in the toolbar and the 'Save' button in the dialog box).

4. Making Inventory Maps (CBDRM)

4.3.1 Data import

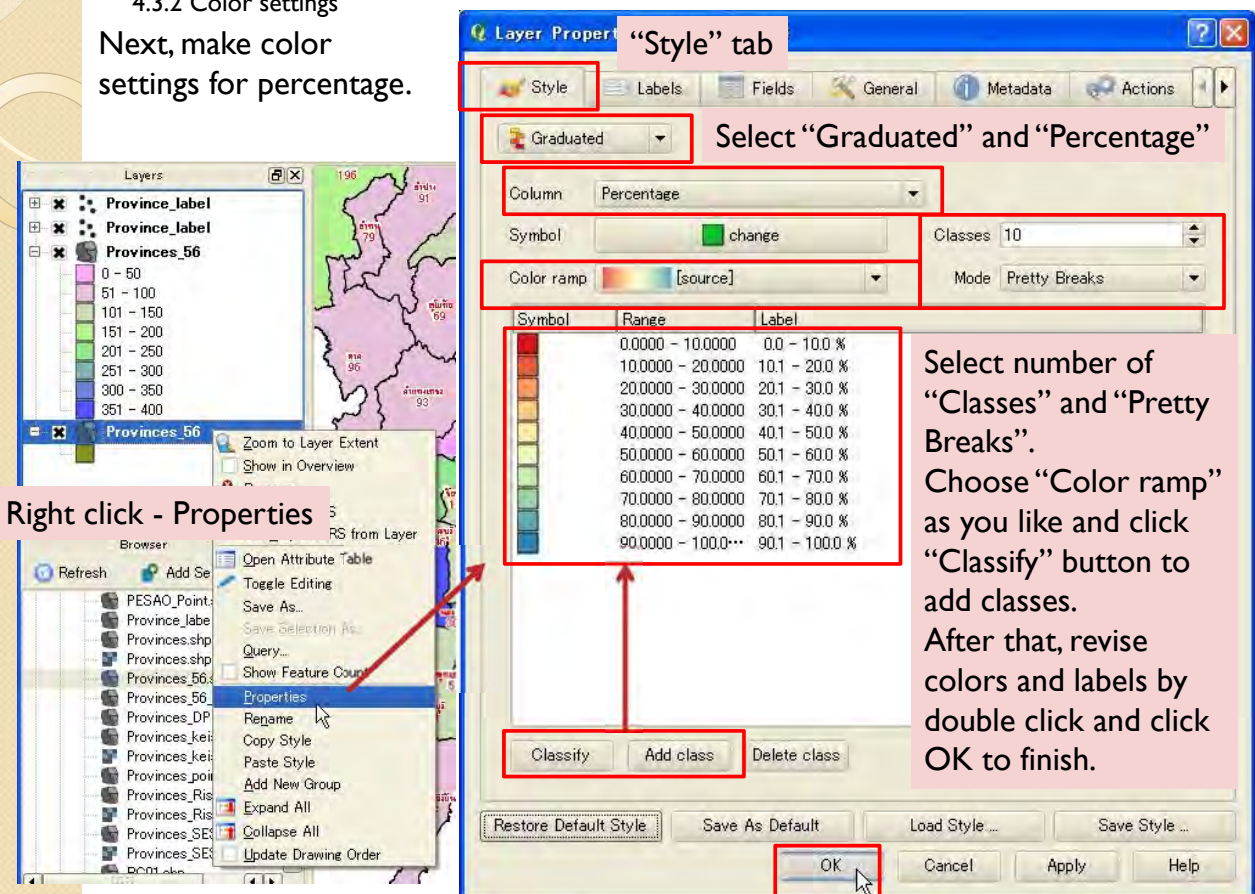
Next, make point data for labels same as 4.2.2



4. Making Inventory Maps (CBDRM)

4.3.2 Color settings

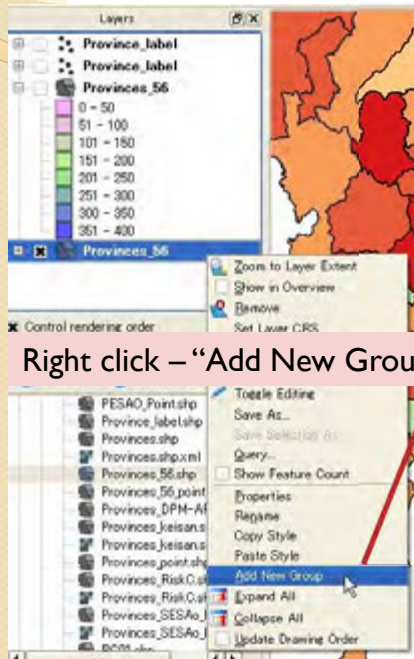
Next, make color settings for percentage.



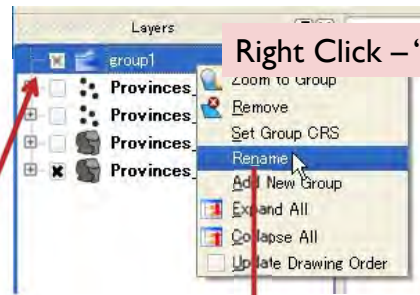
4. Making Inventory Maps (CBDRM)

4.3.3 Group

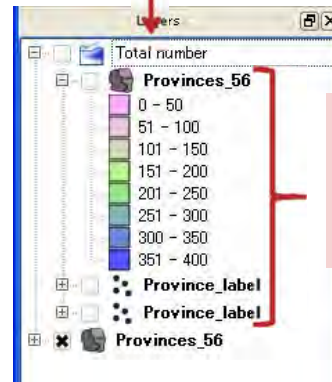
In order to separate total and specific map, add group to the layer.



Right click – “Add New Group”



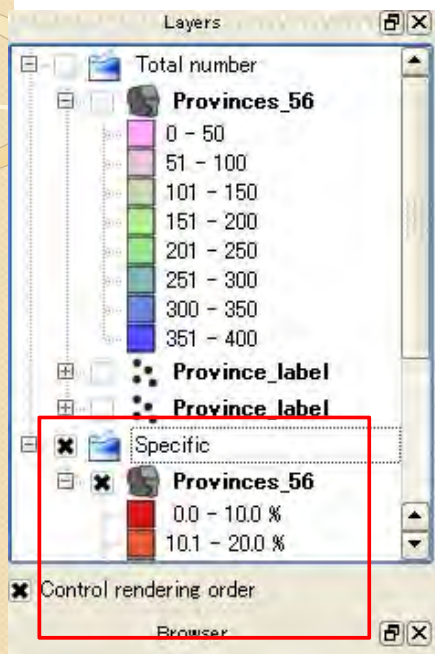
Right Click – “Rename”



Move these layers to under the group

4. Making Inventory Maps (CBDRM)

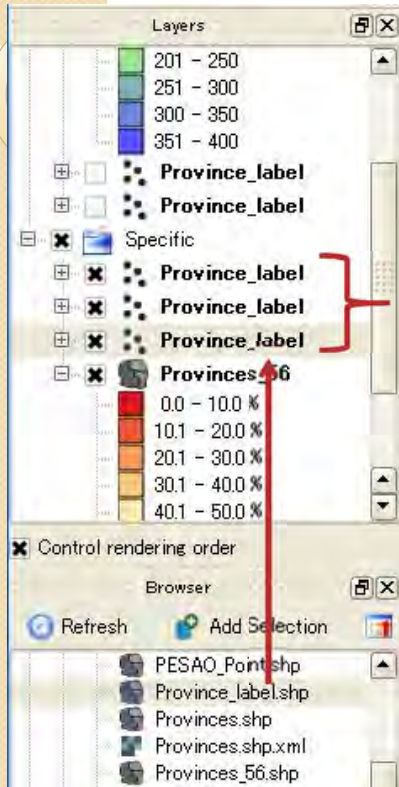
4.3.3 Group



Make Specific group by same process.

4. Making Inventory Maps (CBDRM)

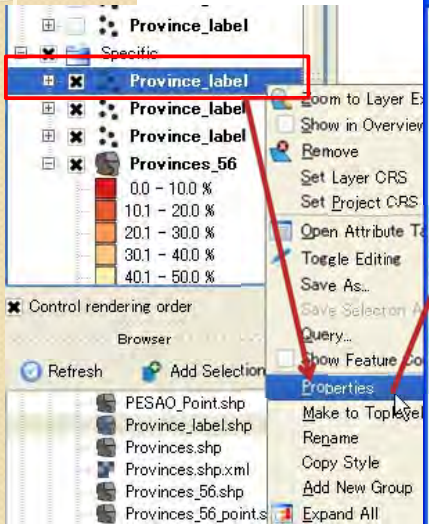
4.3.4 Label settings



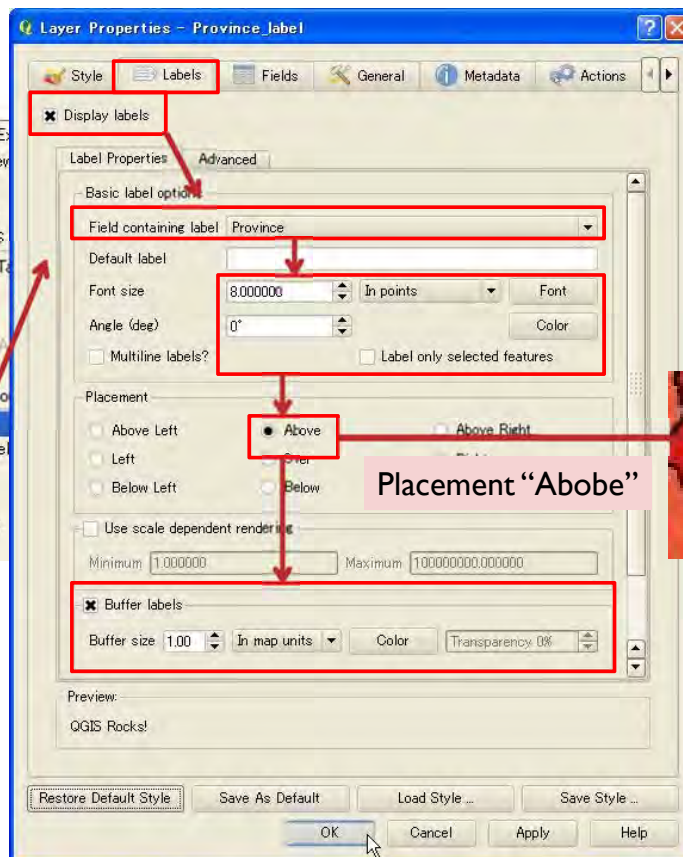
In order to make label, import three layers for label you made in 4.3.1.

4. Making Inventory Maps (CBDRM)

4.3.4 Label settings



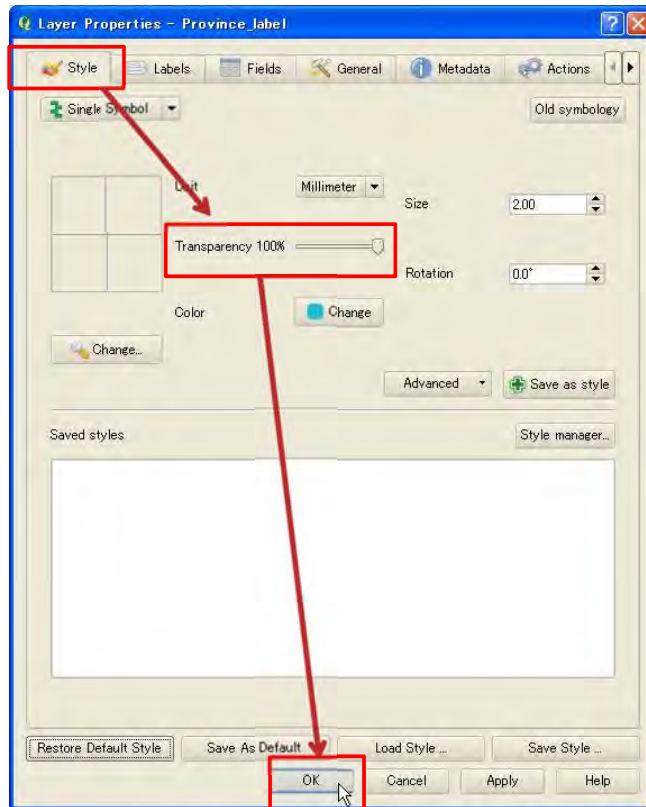
Set first layer for province name label same as 4.2.3.



Placement "Abobe"

4. Making Inventory Maps (CBDRM)

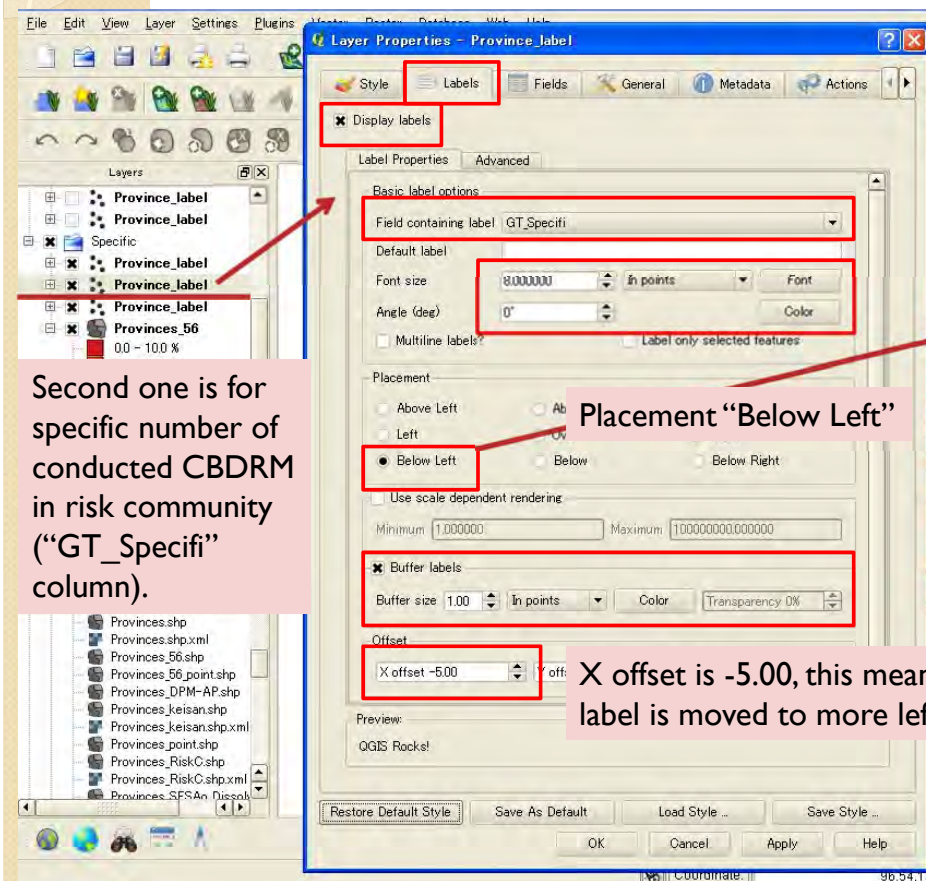
4.3.4 Label settings



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).

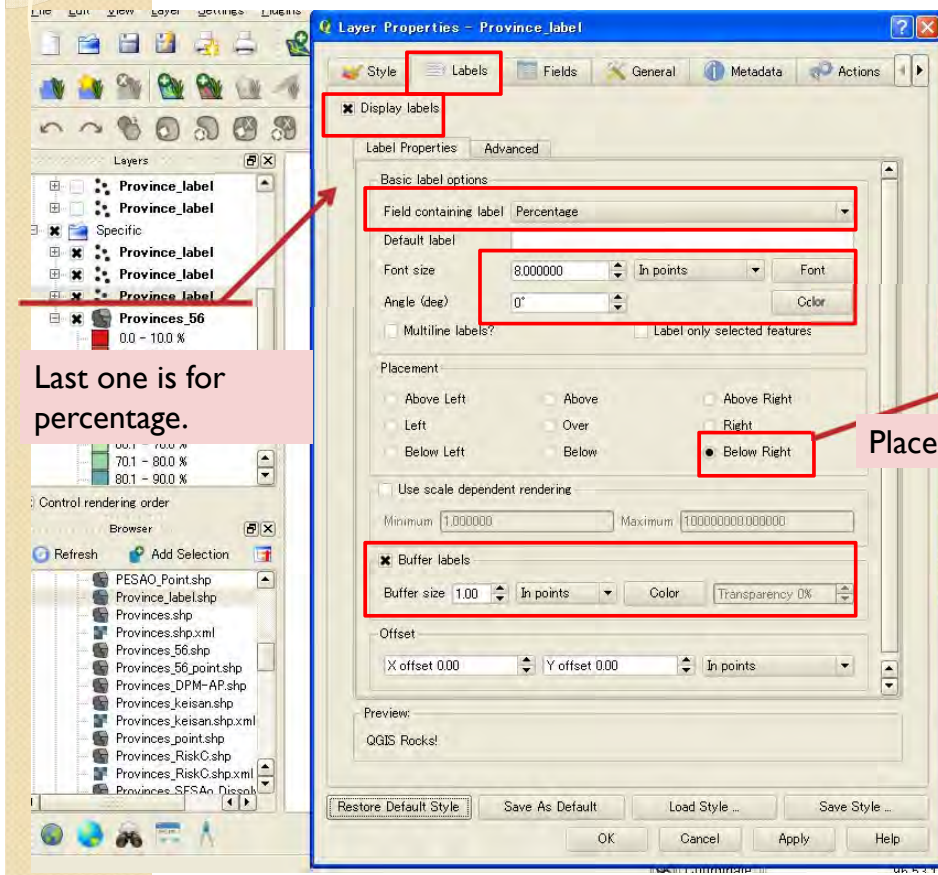
Placement "Below Left"

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.

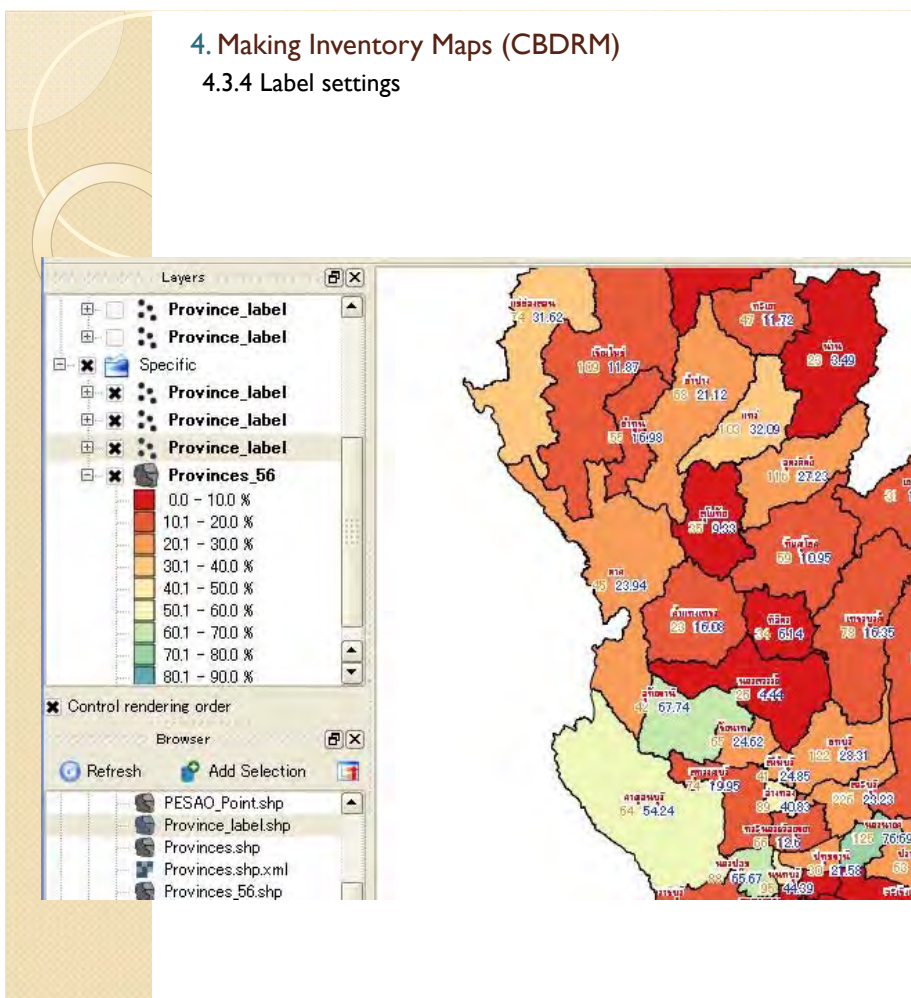
4. Making Inventory Maps (CBDRM)

4.3.4 Label settings



4. Making Inventory Maps (CBDRM)

4.3.4 Label settings



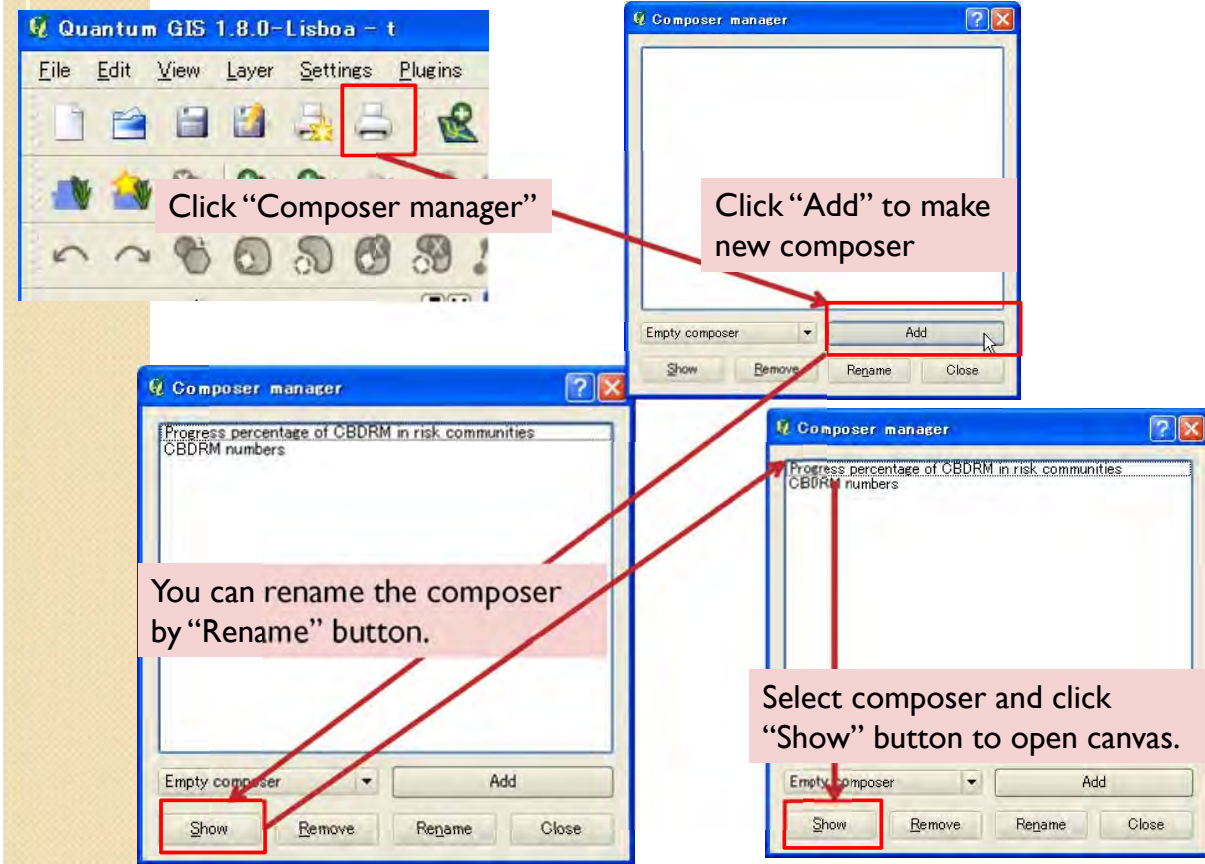
Then, you can see the progress percentage map for CBDRM in risk communities.

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

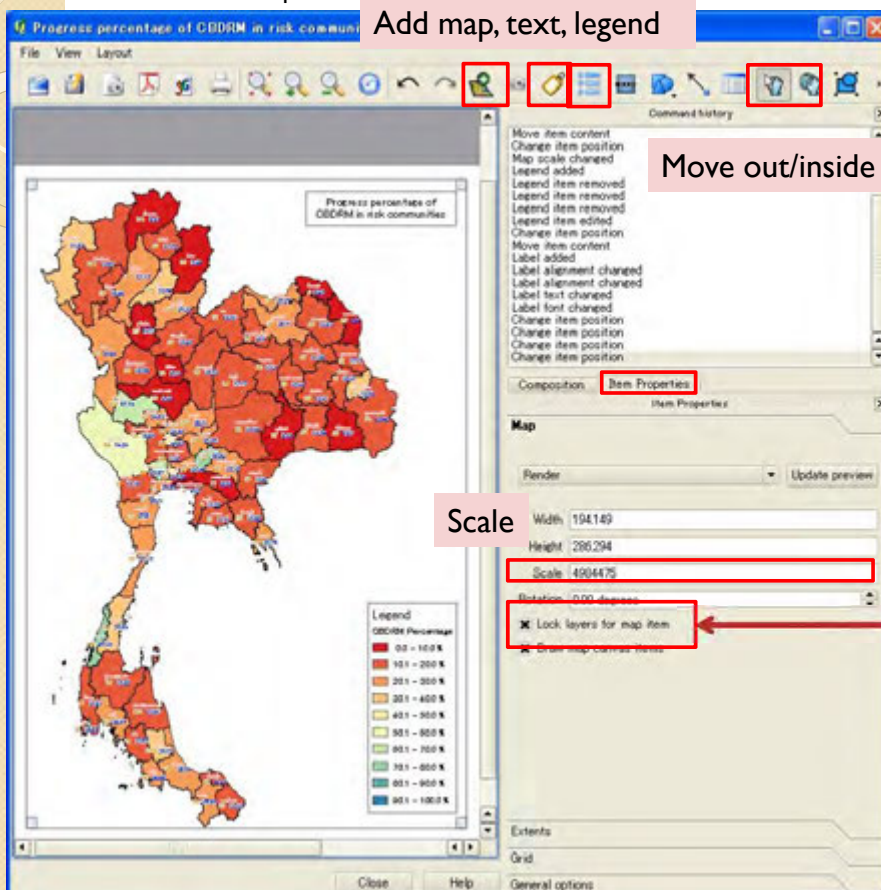
Make print composer to print the map.



4. Making Inventory Maps (CBDRM)

4.3.5 Print Composer

Add map, text, legend



4. Making Inventory Maps (CBDRM)

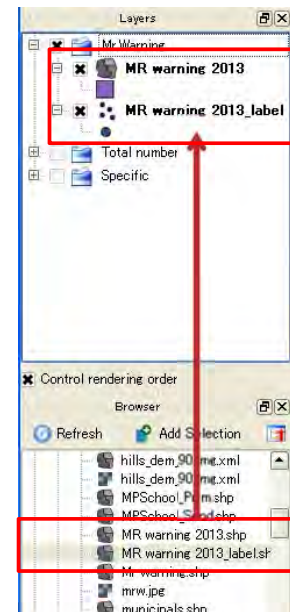
4.4 Mr.Warning map

4.4.1 Data import

When you would make inventory map for Mr.Warning, you can make shape file from excel file (4.1.2) or direct input (4.3.1). Please refer to these chapters.

Point data file is also able to be made by method 4.2.2.

After you finish input data, import files to the map.



4. Making Inventory Maps (CBDRM)

4.4.1 Data import

	PROV.CODE	PROV.NAM.E	RC.Code	Province	TotalRiskC	RCNum_wMr	RCNum_woMr	Num_Mr_LS	Num_Mr_Oth	Num_Mr_GT	dummy1
0	10	Bangkok	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1	11	Changwat Saen...	RC03	สงขลา	NULL	NULL	NULL	NULL	NULL	NULL	NULL
2	12	Changwat Non...	RC01	นนทบุรี	NULL	NULL	NULL	NULL	NULL	NULL	NULL
3	13	Changwat Path...	RC01	ปทุมธานี	NULL	NULL	NULL	NULL	NULL	NULL	NULL
4	14	Changwat Phra...	RC01	พระนครศรีอยุธยา	NULL	NULL	NULL	NULL	NULL	NULL	NULL
5	15	Changwat Ang...	RC16	อ่างทอง	NULL	NULL	NULL	NULL	NULL	NULL	NULL
6	16	Changwat Lopburi	RC16	ลพบุรี	11	0	11	0	229	229	0
7	17	Changwat Sing...	RC16	สิงห์บุรี	NULL	NULL	NULL	NULL	NULL	NULL	NULL
8	18	Changwat Chai...	RC16	ชัยนาท	NULL	NULL	NULL	NULL	NULL	NULL	NULL
9	19	Changwat Sara...	RC01	สระบุรี	NULL	NULL	NULL	NULL	NULL	NULL	NULL
10	20	Changwat Chon...	RC17	ชลบุรี	NULL	NULL	NULL	NULL	NULL	NULL	NULL
11	21	Changwat Rayong	RC17	ระยอง	11	2	9	2	5	7	0
12	22	Changwat Char...	RC17	ตราด	56	19	37	31	11	42	0
13	23	Changwat Trat	RC17	ตราด	11	1	10	2	8	10	0
14	24	Changwat Chac...	RC03	ฉะเชิงเทรา	NULL	NULL	NULL	NULL	NULL	NULL	NULL
15	25	Changwat Phra...	RC03	ปราจีนบุรี	7	3	4	6	128	134	0
16	26	Changwat Nakh...	RC03	นครราชสีมา	NULL	NULL	NULL	NULL	NULL	NULL	NULL
17	27	Changwat Sak...	RC03	สุรินทร์	27	15	12	29	4	33	0
18	30	Changwat Nakh...	RC05	นครราชสีมา	44	1	43	2	6	10	0
19	31	Changwat Bur...	RC05	บุรีรัมย์	NULL	NULL	NULL	NULL	NULL	NULL	NULL
20	32	Changwat Sur...	RC05	สุรินทร์	NULL	NULL	NULL	NULL	NULL	NULL	NULL
21	33	Changwat Sisak...	RC13	ศรีสะเกษ	7	0	7	0	18	18	0
22	34	Changwat Ubon...	RC13	อุบลราชธานี	3	2	1	3	1841	1844	0

Attribute table contains information about Mr.Warning.

“TotalRiskC” : Total numbers of risk community

“RCNum_wMr” : Numbers of risk community with Mr.Warning

“RCNum_woMr” : Numbers of risk community without Mr.Warning

“Num_Mr_LS” : Numbers of MrWarning for land Slide

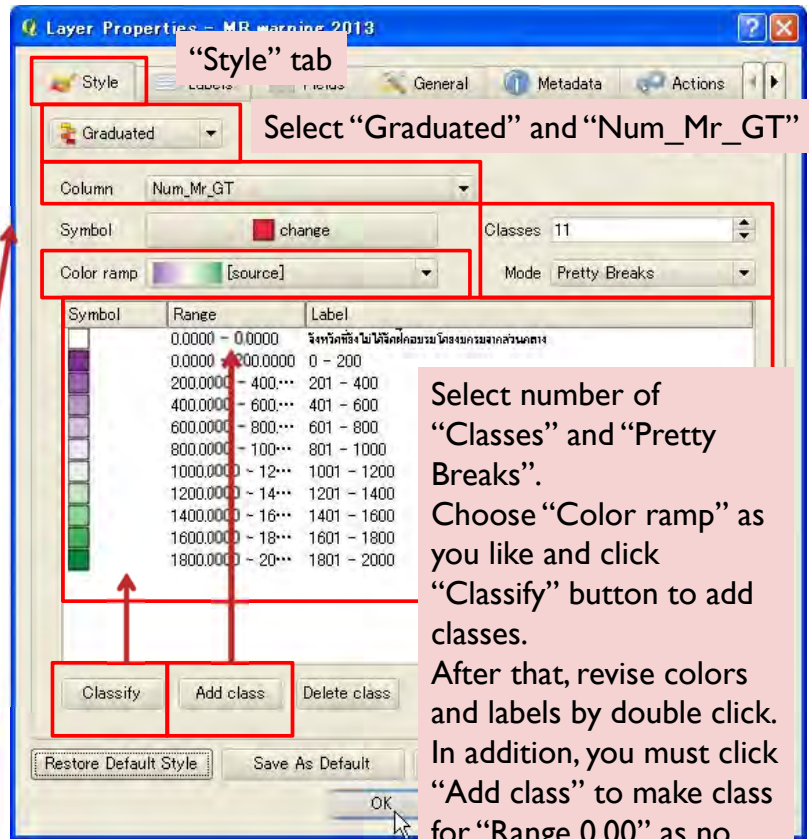
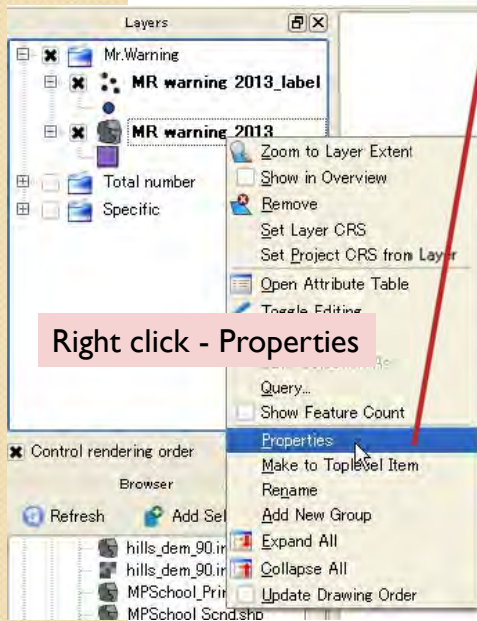
“Num_Mr_Oth” : Numbers of MrWarning for other disasters

“Num_Mr_GT” : Total numbers of MrWarning

4. Making Inventory Maps (CBDRM)

4.4.2 Color settings

Set up color for total number of Mr.Warning.



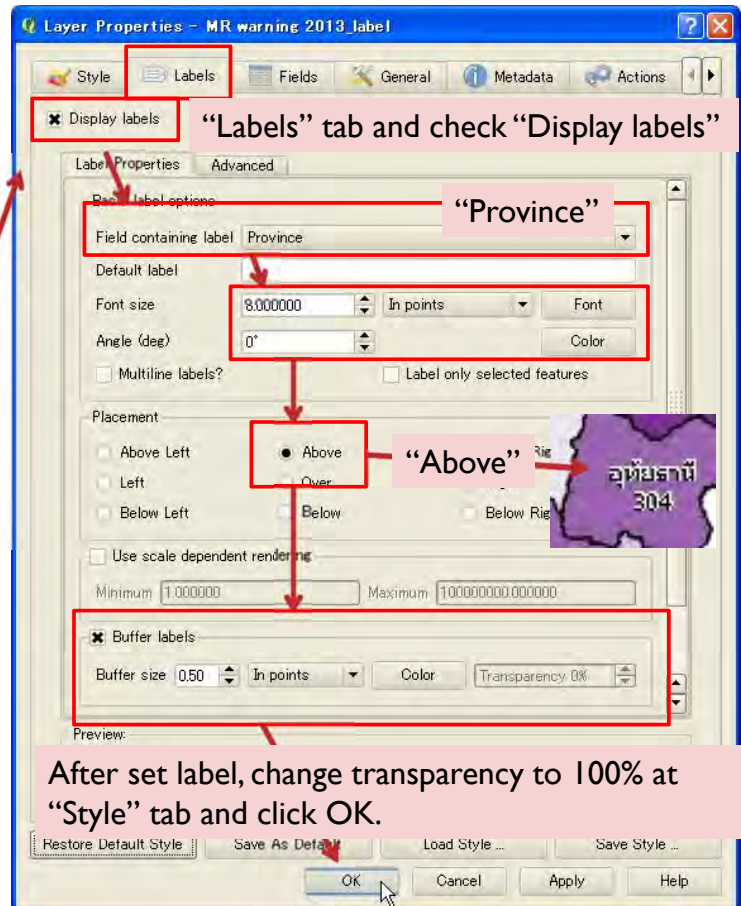
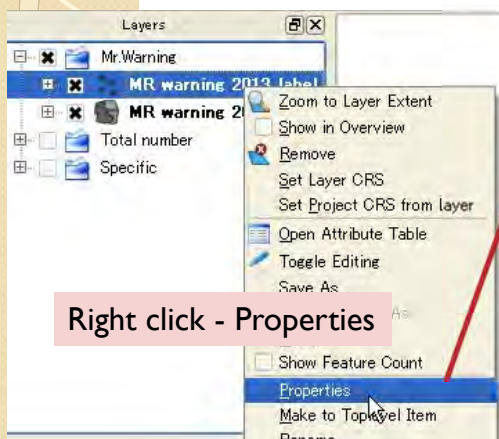
Select number of “Classes” and “Pretty Breaks”. Choose “Color ramp” as you like and click “Classify” button to add classes.

After that, revise colors and labels by double click. In addition, you must click “Add class” to make class for “Range 0.00” as no budget provinces.

4. Making Inventory Maps (CBDRM)

4.4.3 Label settings

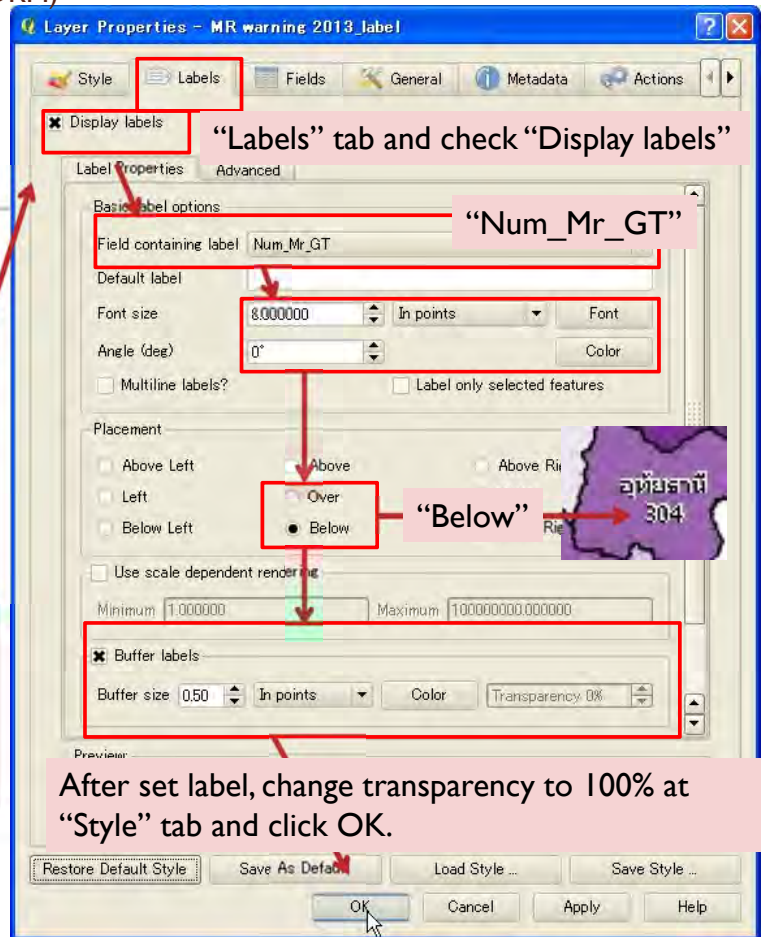
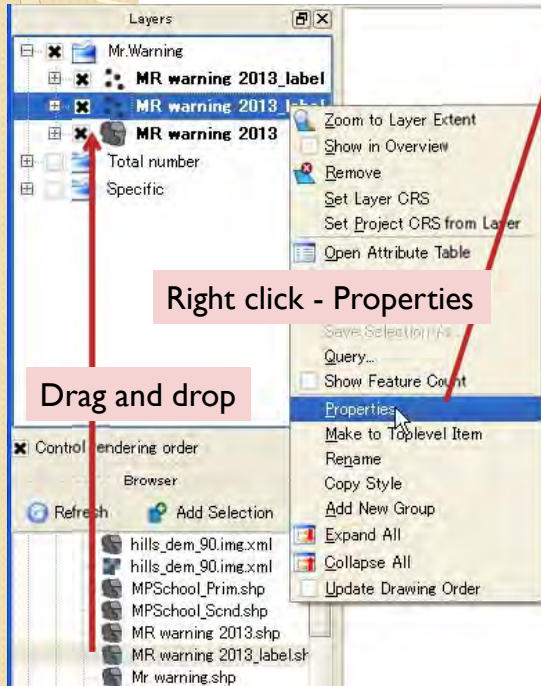
Make province name label setting.



4. Making Inventory Maps (CBDRM)

4.4.3 Label settings

Import one more layer and make total number label setting.

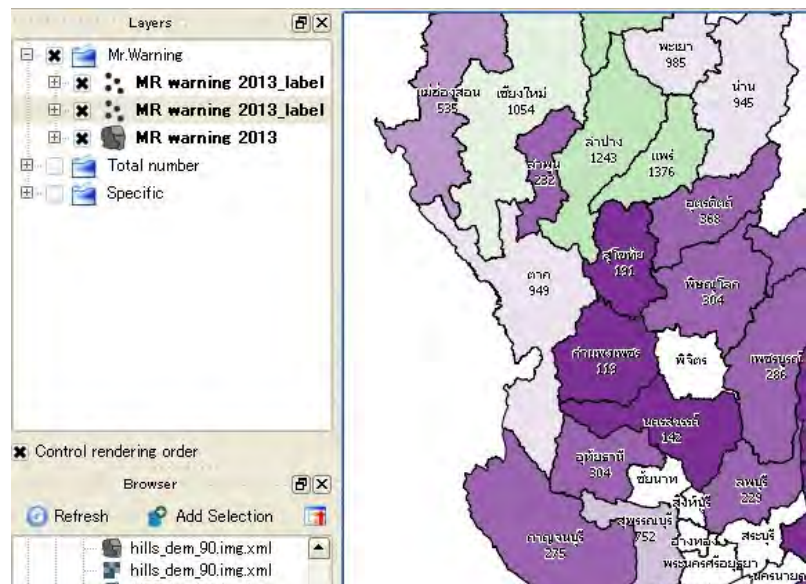


4. Making Inventory Maps (CBDRM)

4.4.3 Label settings

Then, you can see Mr.Warning number map.

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



4. Making Inventory Maps (CBDRM)

4.4.4 Pie chart

Next, make pie chart for risk community with/without Mr.Warning.

The screenshot shows the QGIS interface. On the left, the 'Layers' panel has a right-click context menu open over the 'MR warning 2013' layer. A pink callout box says 'Right click - Properties' with an arrow pointing to the 'Properties' option in the menu. Another pink callout box says 'Drag and drop' with an arrow pointing to the 'MR warning 2013' layer in the Layers panel. On the right, the 'Layer Properties' dialog is open, with the 'Diagrams' tab selected. A pink callout box says 'Select "Diagrams" tab' with an arrow pointing to the 'Diagrams' tab.

4. Making Inventory Maps (CBDRM)

4.4.4 Pie chart

Check "Display diagrams" and select "Pie Chart"

Use "Fixed size" and "Map Units"

Add "RCNum_wMr" and "RCNum_woMr" here

Double click to change color

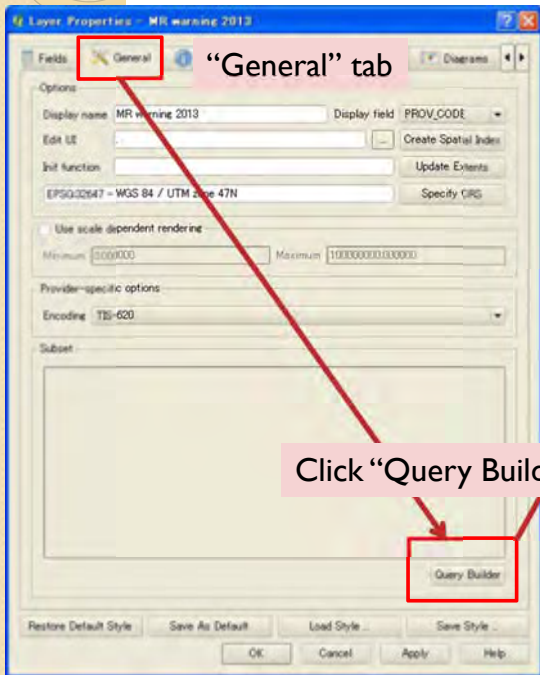
The screenshot shows the 'Layer Properties' dialog box for 'MR warning 2013' with the 'Diagrams' tab selected. Several elements are highlighted with red boxes and arrows pointing to pink callout boxes:

- The 'Display diagrams' checkbox is checked, and the 'Diagram type' is set to 'Pie chart'. A pink callout box says 'Check "Display diagrams" and select "Pie Chart"'. An arrow points from this box to the 'Diagram type' dropdown.
- The 'Fixed size' checkbox is checked, with a value of '50000.00' and 'Size units' set to 'Map units'. A pink callout box says 'Use "Fixed size" and "Map Units"'. An arrow points from this box to the 'Fixed size' input field.
- The 'Attributes' dropdown is set to 'RCNum_wMr'. A pink callout box says 'Add "RCNum_wMr" and "RCNum_woMr" here'. An arrow points from this box to the 'Attributes' dropdown.
- The 'Color' column in the attribute table is highlighted with a red box. A pink callout box says 'Double click to change color'. An arrow points from this box to the 'Color' column.

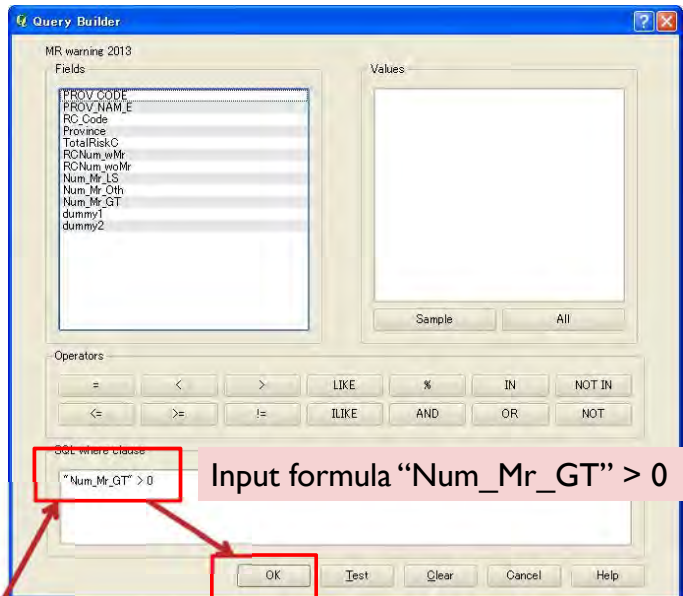
4. Making Inventory Maps (CBDRM)

4.4.4 Pie chart

In this case, it is necessary to display only number of Mr.Warning is not 0 because of data blank. Thus, we use "Query Builder".



Click "Query Builder"

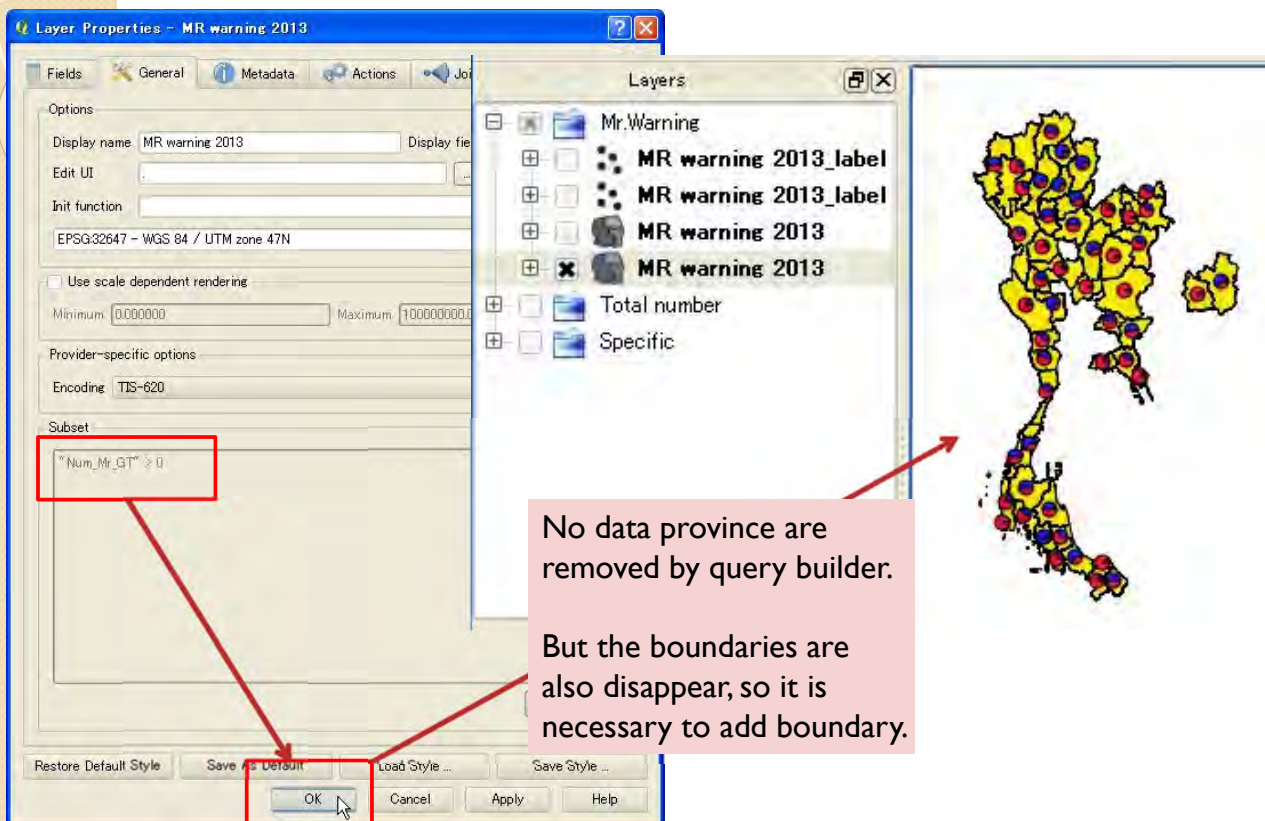


Input formula "Num_Mr_GT" > 0

Click OK

4. Making Inventory Maps (CBDRM)

4.4.4 Pie chart



No data province are removed by query builder.

But the boundaries are also disappear, so it is necessary to add boundary.

4. Making Inventory Maps (CBDRM)

4.4.4 Pie chart

The screenshot shows the ArcGIS interface. On the left, the 'Layers' panel lists several layers, including 'MR warning 2013'. A red arrow points to the 'Add one more layer for boundary' text. A context menu is open over the 'MR warning 2013' layer, with 'Properties' selected. A red arrow points from the 'Properties' menu item to the 'Layer Properties - MR warning 2013' dialog box. The dialog box has the 'Style' tab selected. The 'Color' property is set to 'White', and the 'Change' button is highlighted. A red arrow points from the 'Change' button to the 'OK' button at the bottom of the dialog box.

Add one more layer for boundary

Right Click - Properties

“Style” tab

“White”

OK

4. Making Inventory Maps (CBDRM)

4.4.4 Pie chart

The screenshot shows the ArcGIS interface with the 'Layers' panel on the left. The map view on the right displays a map of Cambodia with province boundaries and pie charts. The 'Layers' panel lists several layers, including 'MR warning 2013' and 'Total number'. The 'Control rendering order' checkbox is checked at the bottom of the panel.

Then, province boundaries should appear.

4. Making Inventory Maps (CBDRM)

4.4.5 Print composer

Add map, text, legend

Move out/inside map

Lock layers for map item

You can make map by same process in 4.2.4.

Don't forget check "Lock layers".

4. Making Inventory Maps (CBDRM)

4.4.5 Print composer

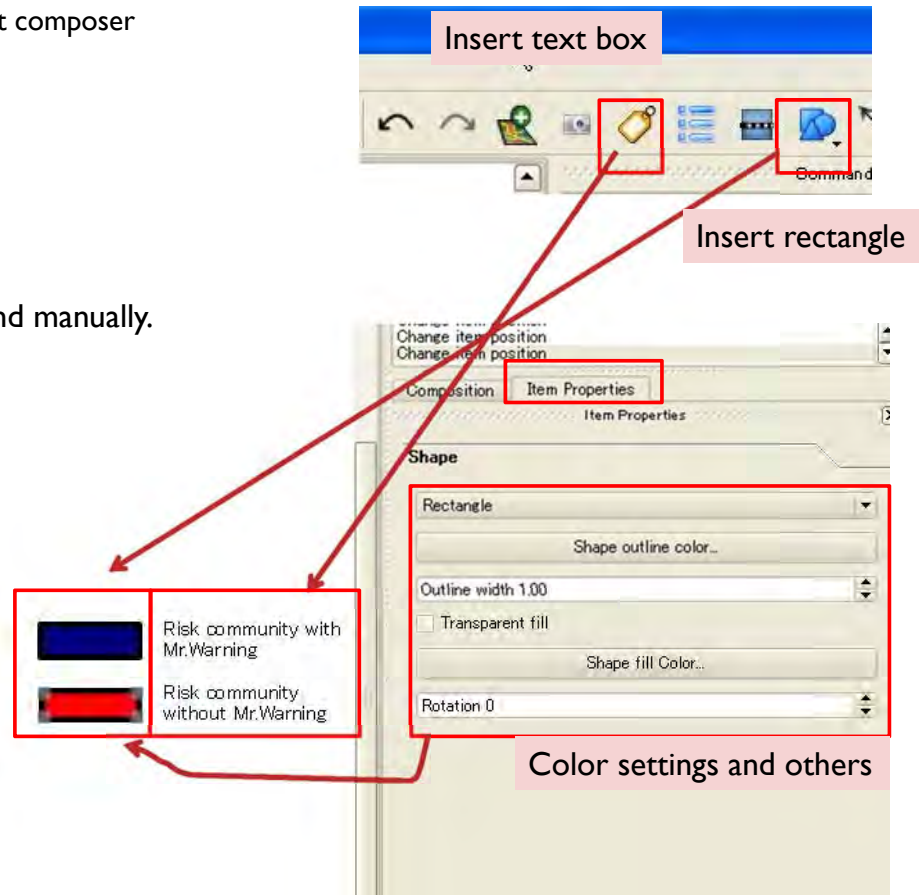
You can make map by same process in 4.2.4.

In the pie chart map, legend function does not work, so it is necessary to make legend manually.

4. Making Inventory Maps (CBDRM)

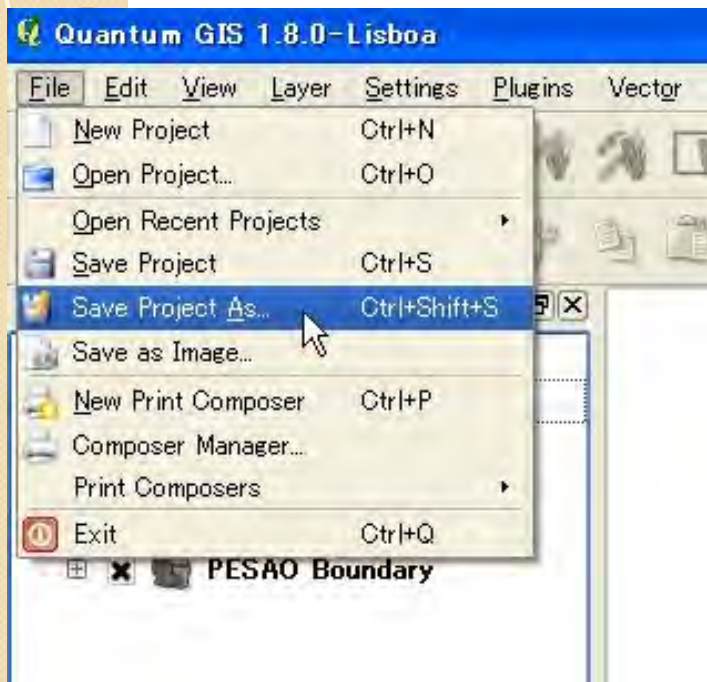
4.4.5 Print composer

Add legend manually.



4. Making Inventory Maps (CBDRM)

4.5 Save project



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

4. Making Inventory Maps (CBDRM)

4.6 Update data 4.6.1 Direct Input

If you want to change/update attribute table directory, you have to edit both map (polygon) file and label (point) file.

Source file for label (point) is one file, therefore it is OK to edit only one of these file.

Source file for map (polygon) is one file, therefore it is OK to edit only one of these file.

Mr.Warning map also needs to edit one point file and one polygon file.

After you update data, open print canvas and

4. Making Inventory Maps (CBDRM)

4.6.1 Direct Input

When you change/update attribute table directory, you can edit by following function.

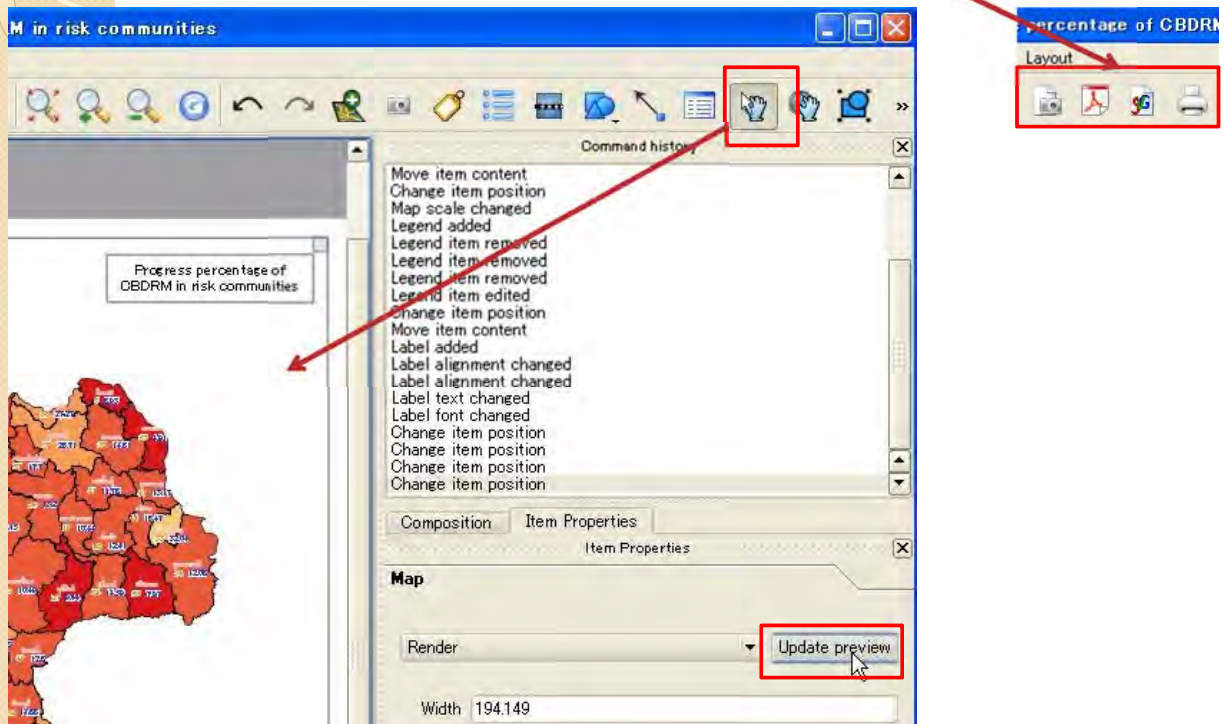
	Total_55	LS_56	Other56	Total_56	Total_LS	Total_Orth	Grand_Tota
0	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1	3	0	0	0	0	27	27
2	113	0	15	15	0	162	162
3	8	0	6	6	0		
4	12	0	0	0	0		
5	78	0	6	6	0	184	184
6	54	0	0	0			
7	3	0	12	12			
8	3	0	0	0			
9	4	0	16	16			
10	5	0	0	0			
11	7	0	0	0			
12	3	0	0	0			
13	3		10	10			
14	6		12	12			
15	3	0	10	10			
16	291	0					
17					40	30	70
18	12				0	150	150
19	6	0	12	12	21	50	71

1. Open Attribute table from right click menu of layer
2. Click Start edit button
3. Double click to change value
4. If you need to calculate percentage, use field calculator button (see 4.3.1)
5. Click stop edit button and save

4. Making Inventory Maps (CBDRM)

4.6 Update data 4.6.1 Direct Input

After you update data, open print composer. Select map and click update preview. Then you can see new map. If you need to export new image file, use these button.



4. Making Inventory Maps (CBDRM)

4.6.2 Remake shape file

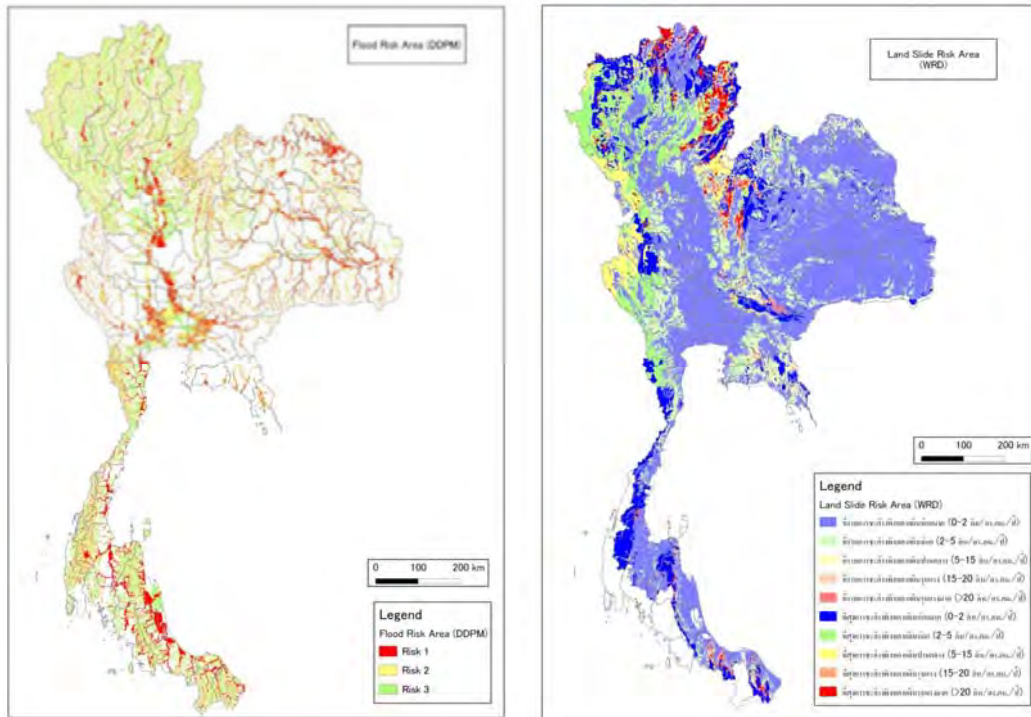
If updated data amount is large, it is better to update source excel file and remake shape file by process 4.1.

1. Make new table by Excel.
2. Save the table as CSV file.
3. Import the CSV file and save as Shape file.
4. Import the Shape file you made.
5. Join the Shape file and province Shape file.
6. Save as new file you join.
7. Import the new joined file.
8. Make point file for label from new polygon map file.
9. Display the data.

4. Making Inventory Maps (CBDRM)

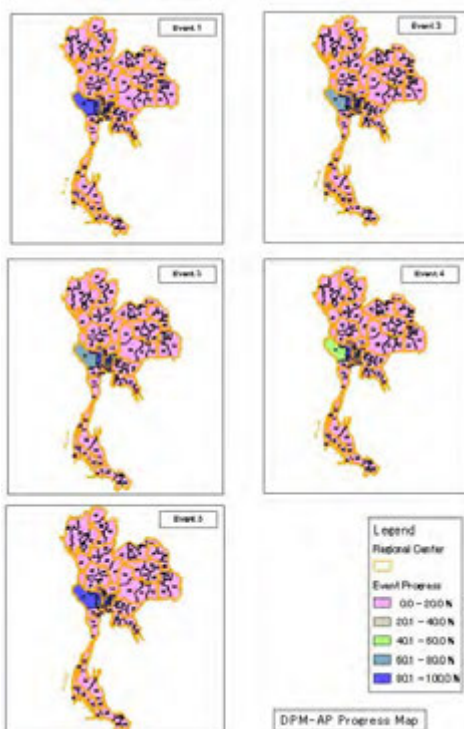
4.7 Risk area map

Please refer 3.5 and 3.10 for risk area map for risk community, flood and sediment disaster.



5. Making Inventory Maps (DPM-AP)

5.1 Import DPM-AP data



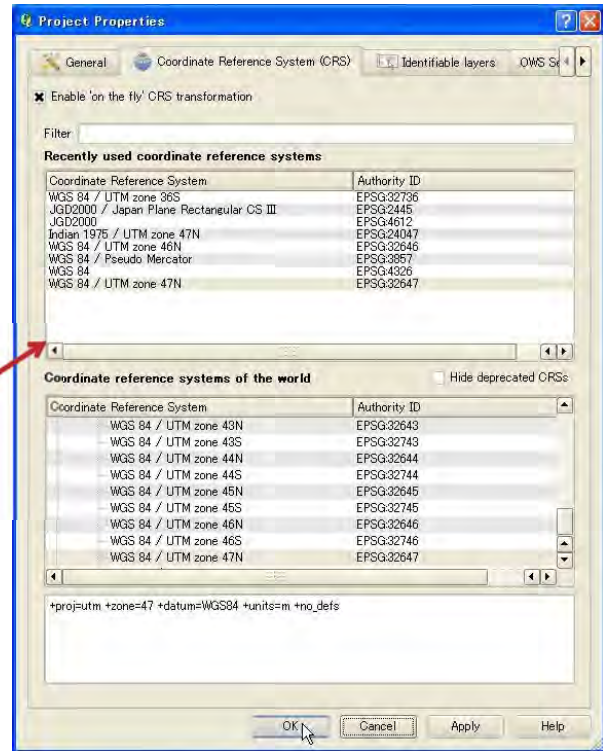
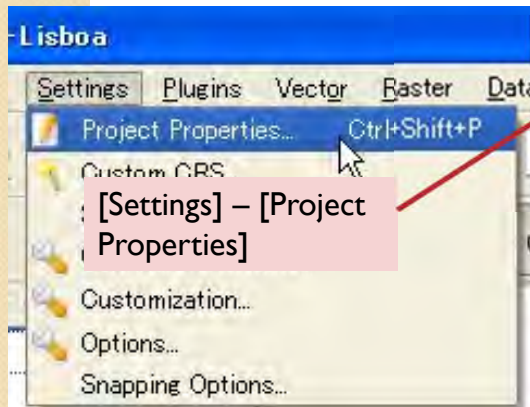
In this chapter, we make DPM-AP Map by using QGIS and Excel.

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

5. Making Inventory Maps (DPM-AP)

5.1.1 Import provinces file

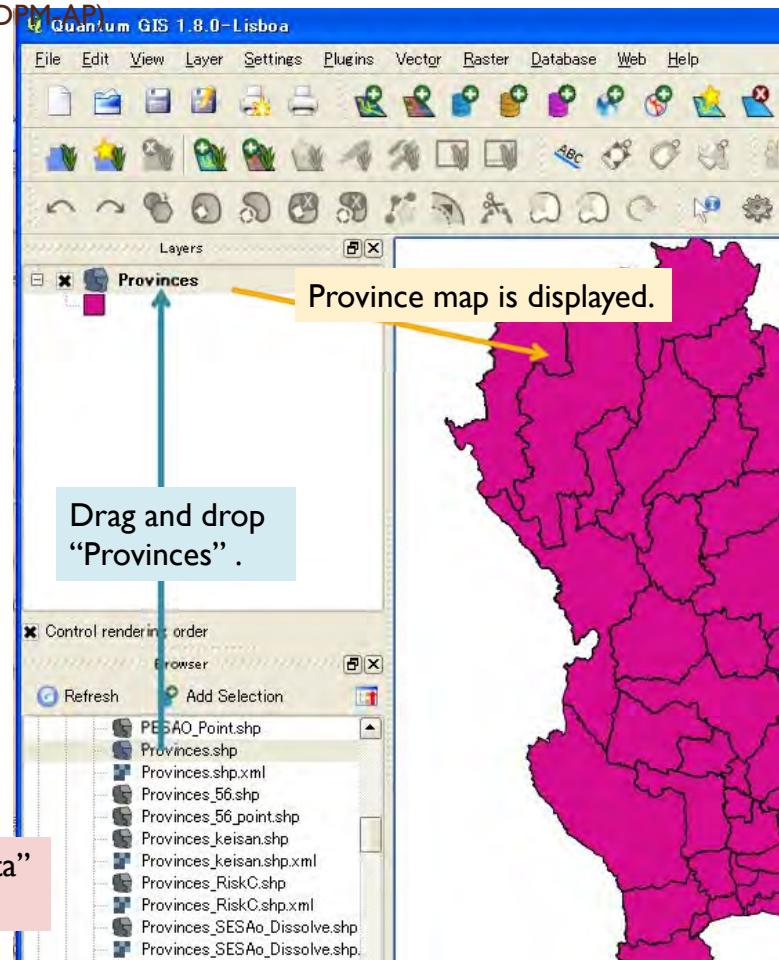
At first, make sure that Coordination Reference System (CRS) is set as WGS84 / UTM 47N and “Enable ‘on the fly’ CRS transformation” is checked.



5. Making Inventory Maps (DPM-AP)

5.1.1 Import provinces file

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



5. Making Inventory Maps (DPM-AP)

5.1.1 Import provinces file

Right click and select "Open Attribute Table"

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

PROV_NAME_T	PROV_NAME_E	population	RC_Code	pop_den	AREA	No_RV VII	No_RV VIII
Bangkok		6265144	NULL	4066.59	1556.622	0	0
Changwat Sam...		1028401	RC03	1063.37	967.116	0	5
Changwat Nont...		916614	RC01	1263.18	686.4	0	0
Changwat Path...		673649	RC01	445.59	1520.881	0	139
Changwat Phra...		727277	RC01	295.5	2547.348	0	1
Changwat An...		269419	RC16	269.45	950.497	0	50
Changwat Lop...		740306	RC16	1146.6	650.716	6	25
Changwat Sing...		232766	RC16	204.9	817.007	0	0
Changwat Chan...		359629	RC16	143.63	2505.263	0	99
Changwat Sar...		678283	RC01	164.86	3488.177	461	177
Changwat Cho...		104065	RC17	230.9	4507.781	0	29
Changwat Phay...		522133	RC17	142.45	3665.289	36	25
Changwat Chum...		480064	RC17	76.32	6373.261	0	88
Changwat Trat...		219345	RC17	76.5	2367.27	0	117
Changwat Cha...		635153	RC03	122.86	5169.624	21	139
Changwat Pro...		406732	RC08	90.83	5032.227	0	180
Changwat Nakh...		241081	RC03	112.59	2141.291	0	163
Changwat Sak...		495262	RC03	70.74	6964.566	0	233
Changwat Nakh...		2556260	RC05	123.28	20734.987	0	162
Changwat Bur...		1482853	RC06	145.16	10029.31	0	293

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

5. Making Inventory Maps (DPM-AP)

5.1.2 Import DPM-AP data from Excel file

Title

Data field

Columns of Percentage of Event progress

Province	Prov.Code	RC_Code	Total.LAO	Event_1	Event_2	Event_3	Event_4	Event_5	Event_1P	Event_2P	Event_3P	Event_4P	Event_5P	No_Event1	No_Event2
Samut Prakan	11	RC06	48	0	0	0	0	0	0	0	0	0	0	0	0
Nonthaburi	12	RC06	45	39	33	24	14	7	86.7	73.3	53.3	31.1	15.6	6	12
Pathum Thani (RC, Ac)	13	RC06	95	65	92	52	47	22	100.0	95.4	80.0	72.3	33.8	0	3
Phra Nakhon Si Ayutthaya	14	RC06	158	158	150	143	125	110	100.0	94.9	80.5	78.1	69.6	0	8
Ang Thong	15	RC06	64	0	0	0	0	0	0	0	0	0	0	64	64
Lop Buri	16	RC16	125	0	0	0	0	0	0	0	0	0	0	125	125
Sing Buri	17	RC16	41	0	0	0	0	0	0	0	0	0	0	41	41
Chaiwat (RC)	18	RC16	60	0	0	0	0	0	0	0	0	0	0	60	60
Saraburi	19	RC01	108	108	104	84	7	0	100.0	96.3	77.8	6.5	0	0	4
Chon Buri	20	RC17	98	0	0	0	0	0	0	0	0	0	0	98	98
Rayong	21	RC17	67	0	0	0	0	0	0	0	0	0	0	67	67
Oran Thaburi (RC)	22	RC17	81	0	0	0	0	0	0	0	0	0	0	81	81
Trat	23	RC17	49	0	0	0	0	0	0	0	0	0	0	49	49
Chachoengsao	24	RC08	108	0	0	0	0	0	0	0	0	0	0	108	108
Prachin Buri (RC, Ac)	25	RC03	70	0	0	0	0	0	0	0	0	0	0	70	70
Nakhon Nayok	26	RC03	46	0	0	0	0	0	0	0	0	0	0	46	46
Sa Kaeo	27	RC03	67	0	0	0	0	0	0	0	0	0	0	67	67
Nakhon Ratchasima (RC)	30	RC08	333	0	0	0	0	0	0	0	0	0	0	333	333
Buri Ram	31	RC05	201	0	0	0	0	0	0	0	0	0	0	201	201
Surin	32	RC06	173	0	0	0	0	0	0	0	0	0	0	173	173
Si Sa Ket	33	RC06	217	0	0	0	0	0	0	0	0	0	0	217	217
Ubon Ratchathani (RC)	34	RC06	238	0	0	0	0	0	0	0	0	0	0	238	238
Yasothorn	35	RC06	142	0	0	0	0	0	0	0	0	0	0	142	142
Chaiyachumpe	36	RC06	64	0	0	0	0	0	0	0	0	0	0	64	64
Amnat Charoen	37	RC13	64	0	0	0	0	0	0	0	0	0	0	64	64
Nong Bua Lam Phu	39	RC14	67	0	0	0	0	0	0	0	0	0	0	67	67
Khon Kaen (RC, Ac)	40	RC06	223	0	0	0	0	0	0	0	0	0	0	223	223
Udon Thani (RC)	41	RC14	181	0	0	0	0	0	0	0	0	0	0	181	181
Loei	42	RC14	100	0	0	0	0	0	0	0	0	0	0	100	100
Nang Khai	43	RC14	127	0	0	0	0	0	0	0	0	0	0	127	127
Maha Sarakulom	44	RC06	142	0	0	0	0	0	0	0	0	0	0	142	142
Roi Et	45	RC06	202	0	0	0	0	0	0	0	0	0	0	202	202
Kalasin	46	RC06	150	0	0	0	0	0	0	0	0	0	0	150	150
Sakon Nakhon (RC)	47	RC07	140	0	0	0	0	0	0	0	0	0	0	140	140

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)”, “-”, “,”, ...

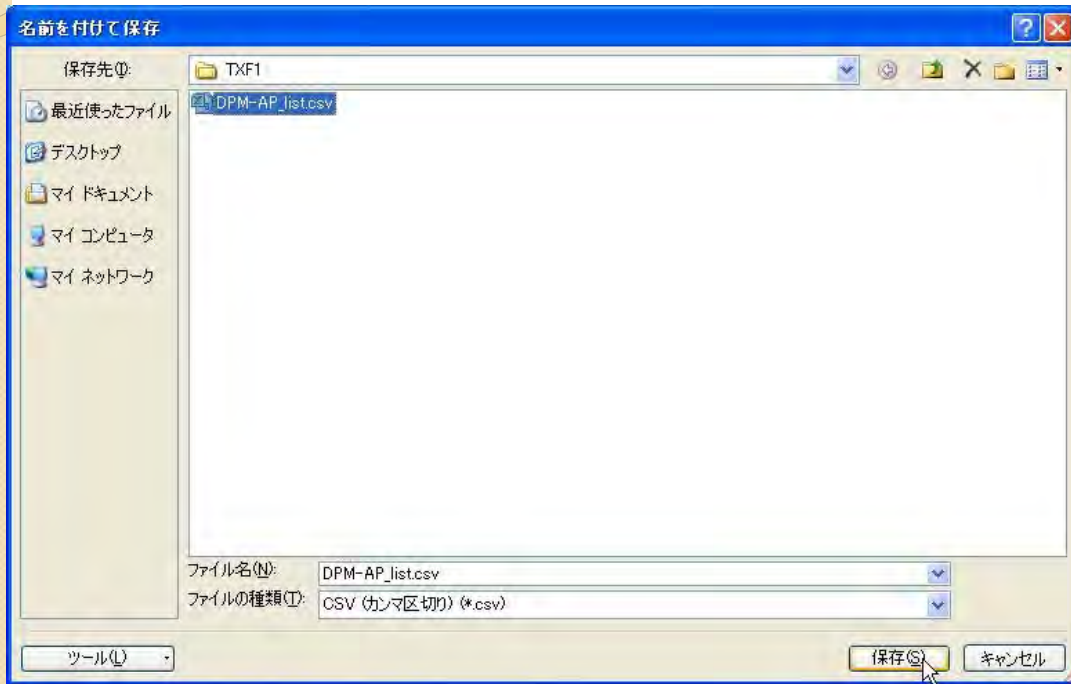
Data field is below. Do not use “,”.

The last two columns are dummy column filled by “0”.

5. Making Inventory Maps (DPM-AP)

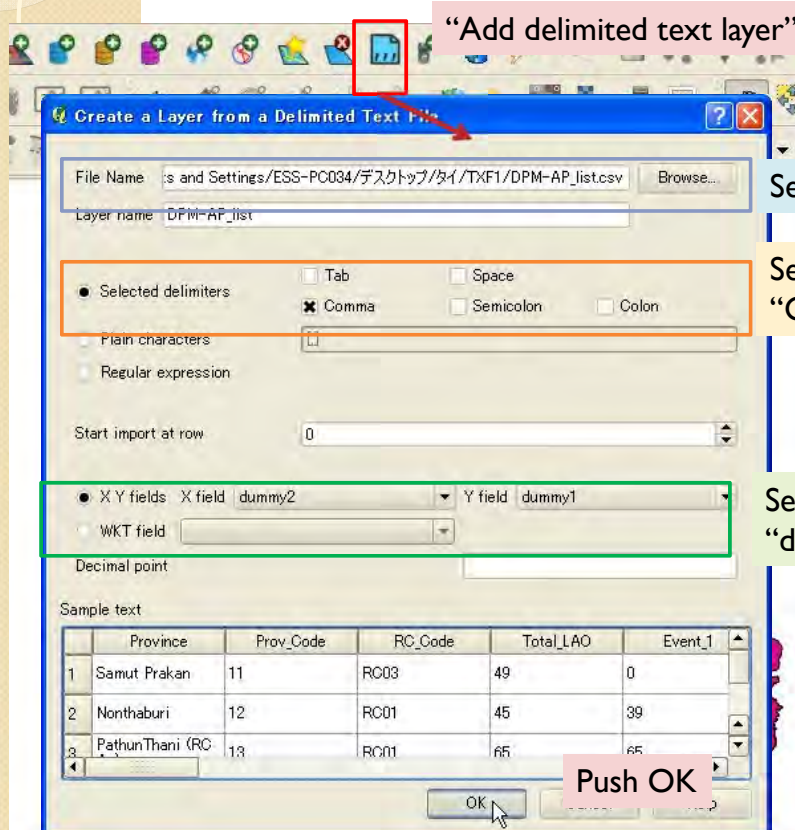
5.1.2 Import DPM-AP data from Exccel file

Save the data sheet as “DPM-AP_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.



5. Making Inventory Maps (DPM-AP)

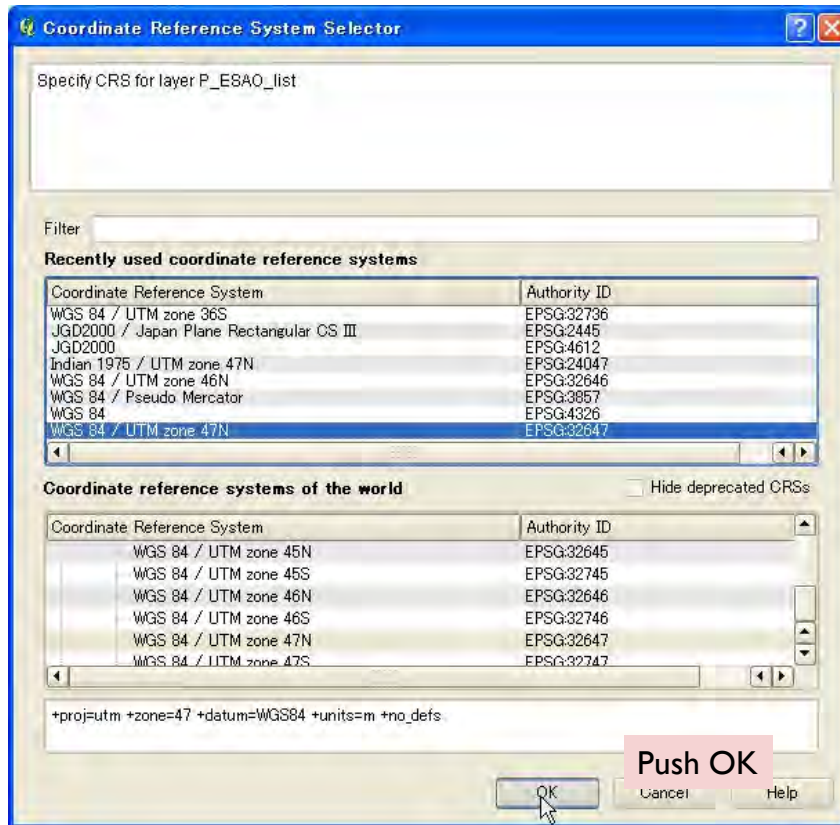
5.1.2 Import DPM-AP data from Exccel file



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

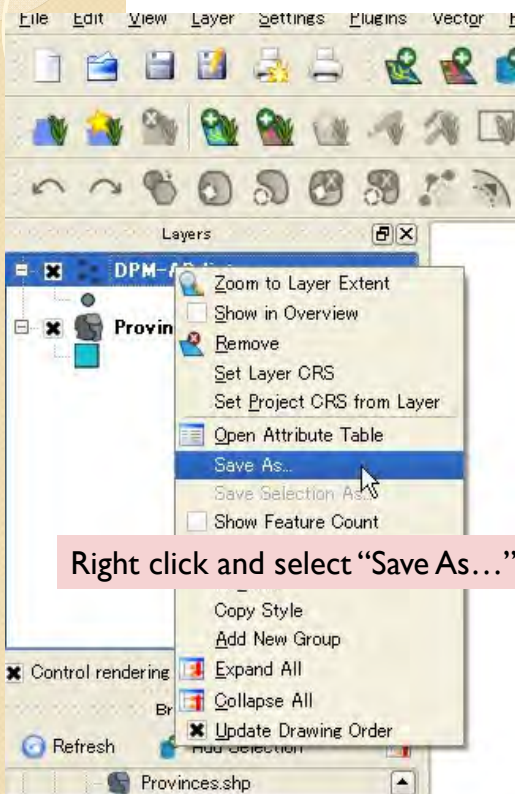
5. Making Inventory Maps (DPM-AP)

5.1.2 Import DPM-AP data from Excel file



5. Making Inventory Maps (DPM-AP)

5.1.2 Import DPM-AP data from Excel file

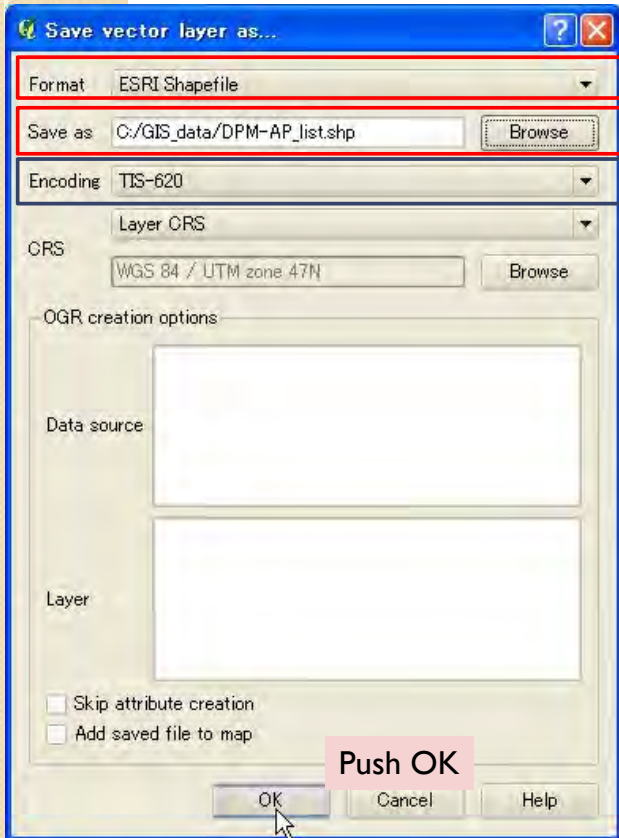


Then, the data will imported.

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

5. Making Inventory Maps (DPM-AP)

5.1.2 Import DPM-AP data from Excel file

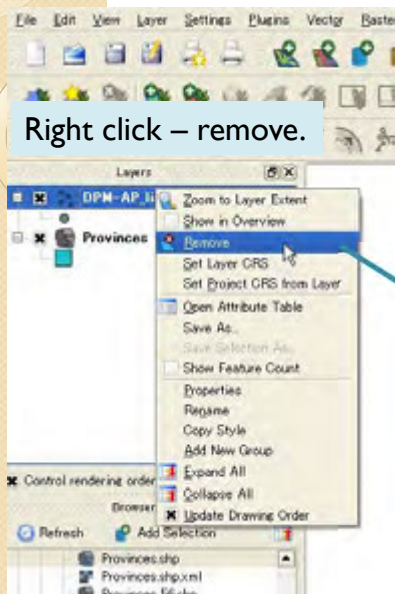


Select format and file name.

Select "Encoding" as "TIS-620".

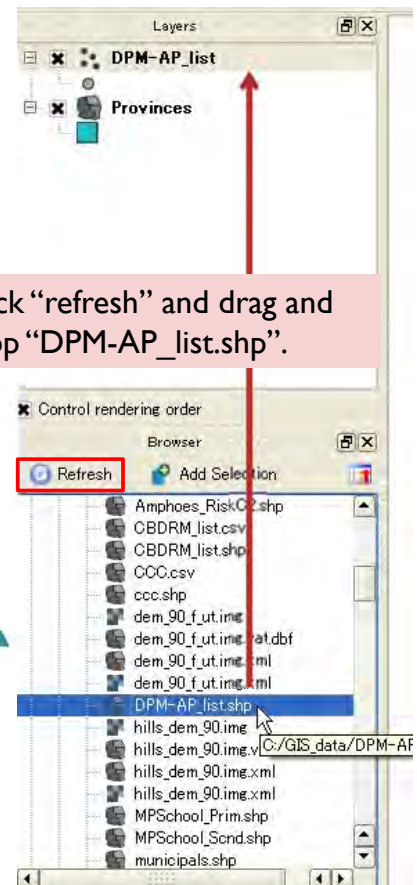
5. Making Inventory Maps (DPM-AP)

5.1.2 Import DPM-AP data from Excel file



Remove the temporary layer.

Click "Refresh" button of "Browser" field, and drag and drop "DPM-AP_list.shp" into "Layer" field.



5. Making Inventory Maps (DPM-AP)

5.1.2 Import DPM-AP data from Excel file

The attribution table of this shape file contains DPM-AP information you imported from Excel file.

Right click – “Open Attribute Table”

You can see the DPM-AP data.

Province	Prov_Code	RC_Code	Total_LAO	Event_1	Event_2	Event_3	Event_4	Event_5	Event_1P	Event_2P	Event_3P	Event_4P	Event_5P
Samut Prakan	11	RC03	49	0	0	0	0	0	0	0	0	0	0
Nonthaburi	12	RC01	45	39	33	24	14	7	66.7	73.9	53.3	35.3	53.3
PathunThani (R...	13	RC01	65	65	62	52	47	22	100	95.4	80	80	80
Phra Nakhon Si...	14	RC01	158	158	143	143	125	110	100	94.9	90.5	90.5	90.5
Ang Thong	15	RC16	64	0	0	0	0	0	0	0	0	0	0
Lop Buri	16	RC16	125	0	0	0	0	0	0	0	0	0	0
Sing Buri	17	RC16	41	0	0	0	0	0	0	0	0	0	0
Chonaburi (RC)	18	RC16	60	0	0	0	0	0	0	0	0	0	0
Saraburi	19	RC01	108	108	104	84	7	0	100	96.3	71.9	71.9	71.9
Chon Buri	20	RC17	98	0	0	0	0	0	0	0	0	0	0
Rayong	21	RC17	67	0	0	0	0	0	0	0	0	0	0
Chanthaburi (RC)	22	RC17	67	0	0	0	0	0	0	0	0	0	0
Trat	23	RC17	43	0	0	0	0	0	0	0	0	0	0
Chachoengsao	24	RC03	108	0	0	0	0	0	0	0	0	0	0
Prachin Buri (R...	25	RC03	70	0	0	0	0	0	0	0	0	0	0
Nakhon Nayok	26	RC03	46	0	0	0	0	0	0	0	0	0	0
Ja Kaeo	27	RC03	67	0	0	0	0	0	0	0	0	0	0
Nakhon Ratcha...	30	RC05	333	0	0	0	0	0	0	0	0	0	0
Buri Ram	31	RC05	201	0	0	0	0	0	0	0	0	0	0
Surin	32	RC05	173	0	0	0	0	0	0	0	0	0	0
Si Sa Ket	33	RC13	217	0	0	0	0	0	0	0	0	0	0
Udon Ratchabur...	34	RC13	238	0	0	0	0	0	0	0	0	0	0
Vacchaburi	35	RC13	93	0	0	0	0	0	0	0	0	0	0

5. Making Inventory Maps (DPM-AP)

5.1.3 Join attribute table

In next step, attribute table of “DPM-AP_list” will be joined into “Provinces” layers.

Attribute Table (DPM-AP_list layer)

Attribute Table (Provinces layer)

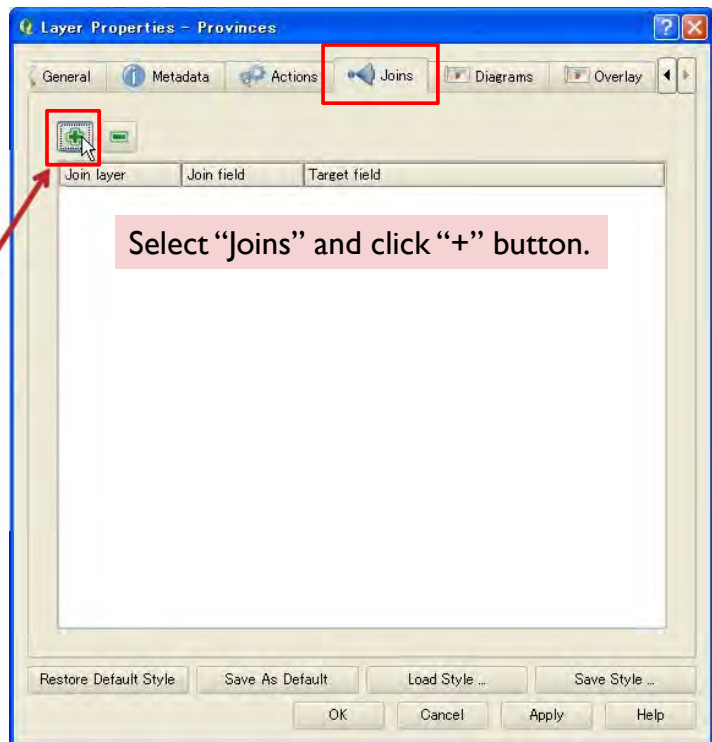
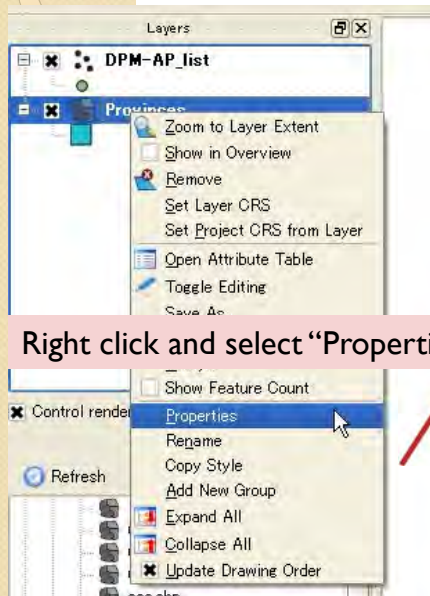
Join

PROV_CODE	PROV_NAM_T	Province	Prov_Code	RC_Code	Total_LAO	Event_1	Event_2	Event_3
10	กรุงเทพมหานคร	Samut Prakan	11	RC03	49	0	0	0
11	สมุทรปราการ	Nonthaburi	12	RC01	45	39	33	24
12	นนทบุรี	PathunThani (R...	13	RC01	65	65	62	52
13	นนทบุรี	Phra Nakhon Si...	14	RC01	158	158	143	143
14	พระนครศรีอยุธยา	Ang Thong	15	RC16	64	0	0	0
15	อ่างทอง	Lop Buri	16	RC16	125	0	0	0
16	สมุทรบุรี	Sing Buri	17	RC16	41	0	0	0
17	สมุทรบุรี	Chonaburi (RC)	18	RC16	60	0	0	0
18	สุพรรณบุรี	Saraburi	19	RC01	108	108	104	84
19	สุพรรณบุรี	Chon Buri	20	RC17	98	0	0	0
20	สุพรรณบุรี	Rayong	21	RC17	67	0	0	0
21	สุพรรณบุรี	Chanthaburi (RC)	22	RC17	67	0	0	0
22	สุพรรณบุรี	Trat	23	RC17	43	0	0	0
23	สุพรรณบุรี	Chachoengsao	24	RC03	108	0	0	0
24	สุพรรณบุรี	Prachin Buri (R...	25	RC03	70	0	0	0
25	สุพรรณบุรี	Nakhon Nayok	26	RC03	46	0	0	0
26	สุพรรณบุรี	Ja Kaeo	27	RC03	67	0	0	0
27	สุพรรณบุรี	Nakhon Ratcha...	30	RC05	333	0	0	0
28	สุพรรณบุรี	Buri Ram	31	RC05	201	0	0	0
29	สุพรรณบุรี	Surin	32	RC05	173	0	0	0

5. Making Inventory Maps (DPM-AP)

5.1.3 Join attribute table

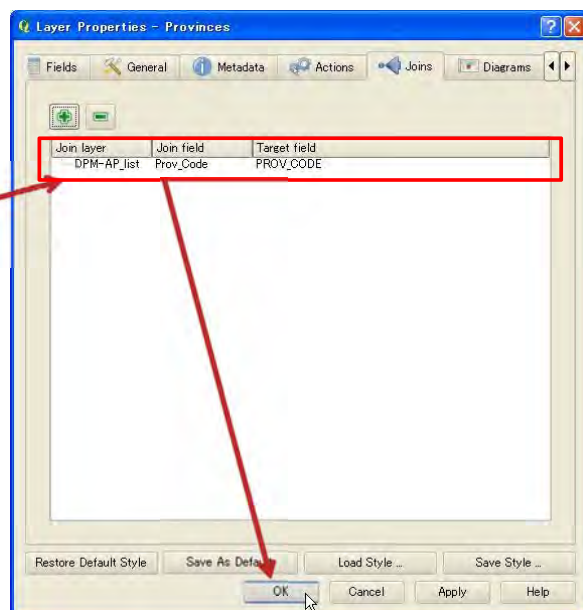
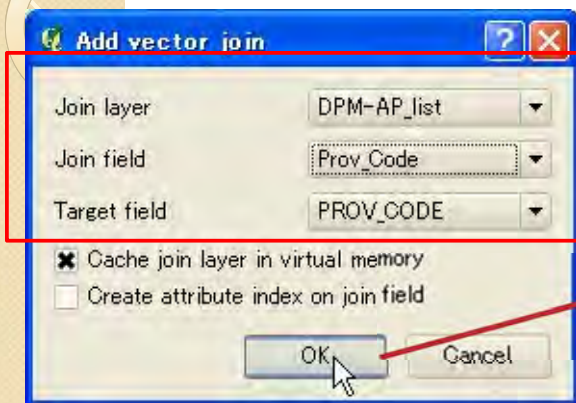
Open “Properties” window and select “Join” tab.



5. Making Inventory Maps (DPM-AP)

5.1.3 Join attribute table

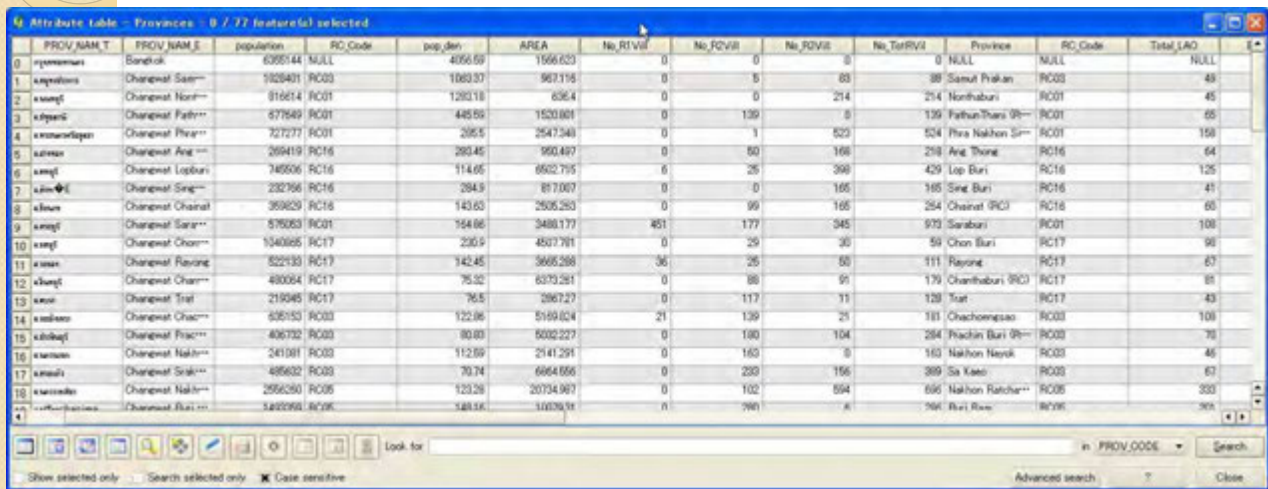
Select “Join layer”, “Join field” and “Target field”.



5. Making Inventory Maps (DPM-AP)

5.1.3 Join attribute table

Then, attribute table should be joined.



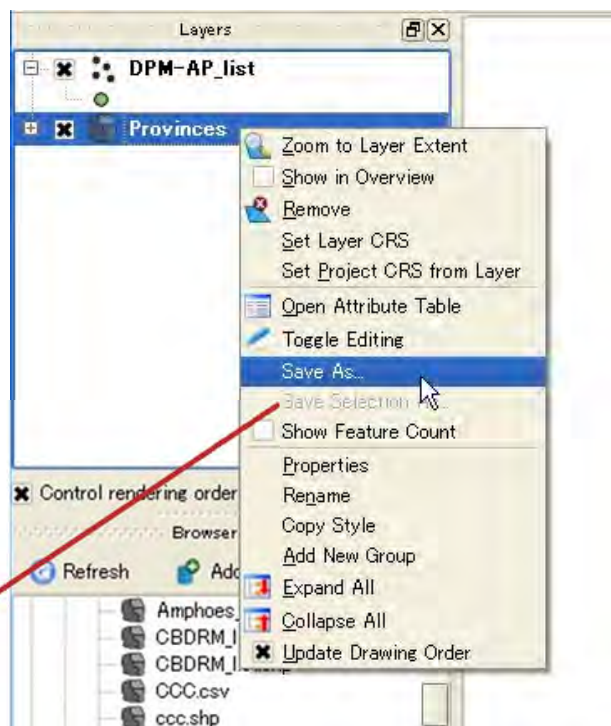
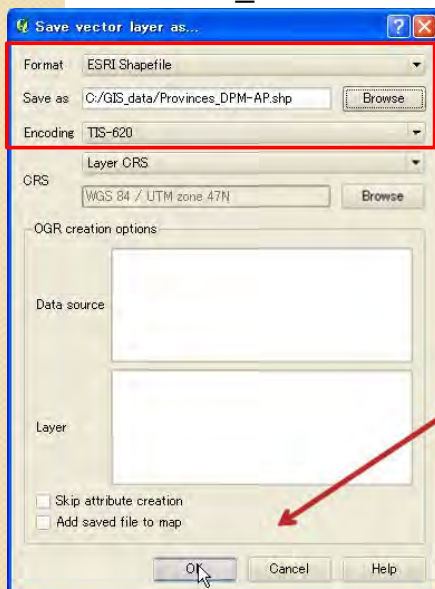
PROV_NAME	PROV_NAME	population	RC_Code	pop_dens	AREA	No_RV01	No_RV02	No_RV03	No_RV04	Province	RC_Code	Total_LAO
0	Bangkok	6355144	NULL	4556.59	1556.023	0	0	0	0	NULL	NULL	NULL
1	Changwat Saen	1125401	RC03	1860.37	967.195	0	5	63	38	Saen Phakan	RC03	43
2	Changwat Nong	916614	RC01	1202.18	636.4	0	0	214	214	Nongburi	RC01	45
3	Changwat Pathum	577549	RC01	445.59	1520.801	0	139	5	139	Pathum Thani 01	RC01	65
4	Changwat Phra	327277	RC01	265.5	2547.348	0	1	523	524	Phra Nakhon Si	RC01	158
5	Changwat Ang	269419	RC16	283.45	950.487	0	50	166	218	Ang Thong	RC16	64
6	Changwat Lopburi	745006	RC16	114.65	652.735	6	25	368	429	Lop Buri	RC16	125
7	Changwat Sing	232766	RC16	284.5	817.007	0	0	165	165	Sing Buri	RC16	41
8	Changwat Chant	369629	RC16	143.65	2585.253	0	99	165	254	Chantaburi	RC16	60
9	Changwat Sarab	578053	RC01	754.86	3488.177	451	177	345	973	Saraburi	RC01	108
10	Changwat Chon	1340665	RC17	230.5	4517.781	0	29	35	59	Chon Buri	RC17	98
11	Changwat Rayong	522133	RC17	742.45	3685.268	36	25	50	111	Rayong	RC17	67
12	Changwat Chacho	490054	RC17	75.32	6373.261	0	88	91	179	Chanthaburi	RC17	81
13	Changwat Trat	219045	RC17	76.5	2867.27	0	117	11	128	Trat	RC17	43
14	Changwat Chac	635153	RC03	122.86	5169.024	21	139	25	181	Chachoengsao	RC03	108
15	Changwat Phra	406732	RC03	80.80	5002.227	0	180	104	284	Phra Nakhon Si	RC03	70
16	Changwat Nakh	241081	RC03	112.89	2141.291	0	163	5	163	Nakhon Nayok	RC03	46
17	Changwat Sak	485632	RC03	70.74	6864.656	0	233	156	389	Sa Kaeo	RC03	67
18	Changwat Nakh	2856250	RC05	123.28	20734.987	0	102	594	696	Nakhon Ratchas	RC05	333
19	Changwat Bur	3402958	RC06	148.16	10039.51	0	380	6	386	Buri Ram	RC06	304

5. Making Inventory Maps (DPM-AP)

5.1.3 Join attribute table

The joined attribute table is re-separable.

To make the joined attribute table permanent, save the "Provinces as "Provinces_DPM-AP".



5. Making Inventory Maps (DPM-AP)

5.2 Making DPM-AP map

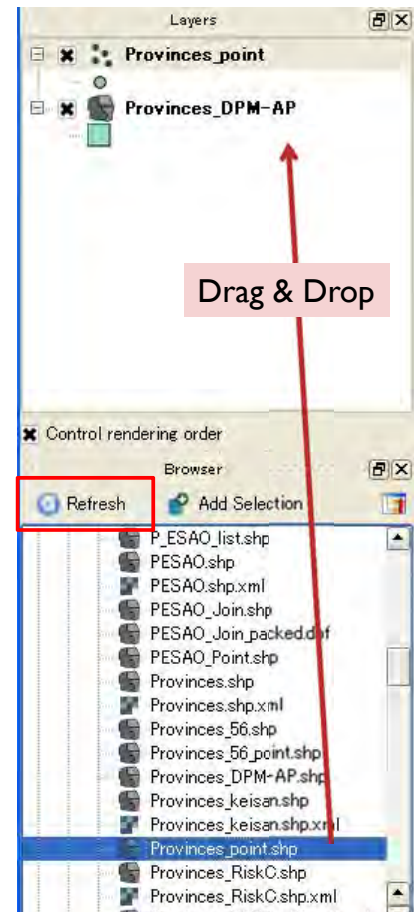
5.2.1 Import data

Click “Refresh”, and drag and drop
“Provinces_DPM-AP.shp” and
“Provinces_point.shp”.

“Provinces_point.shp” is for label indication.

After you made joined shape files, “provinces_DPM-AP.shp”, once, it is not necessary to remake these shape file. You can use these file directly to make inventory maps.

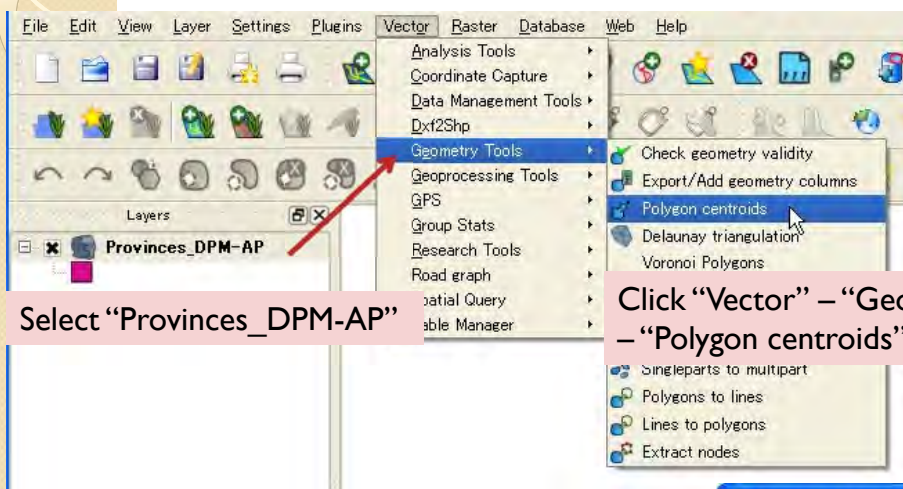
In case you want to update the data, it is required to remake or edit these files.



5. Making Inventory Maps (DPM-AP)

5.2.1 Import data

If you couldn't find “Provinces_point.shp”, you can make this file by yourself.
This file is point data of the province shape file.



Select “Provinces_DPM-AP”

Click “Vector” – “Geometry Tools”
– “Polygon centroids”

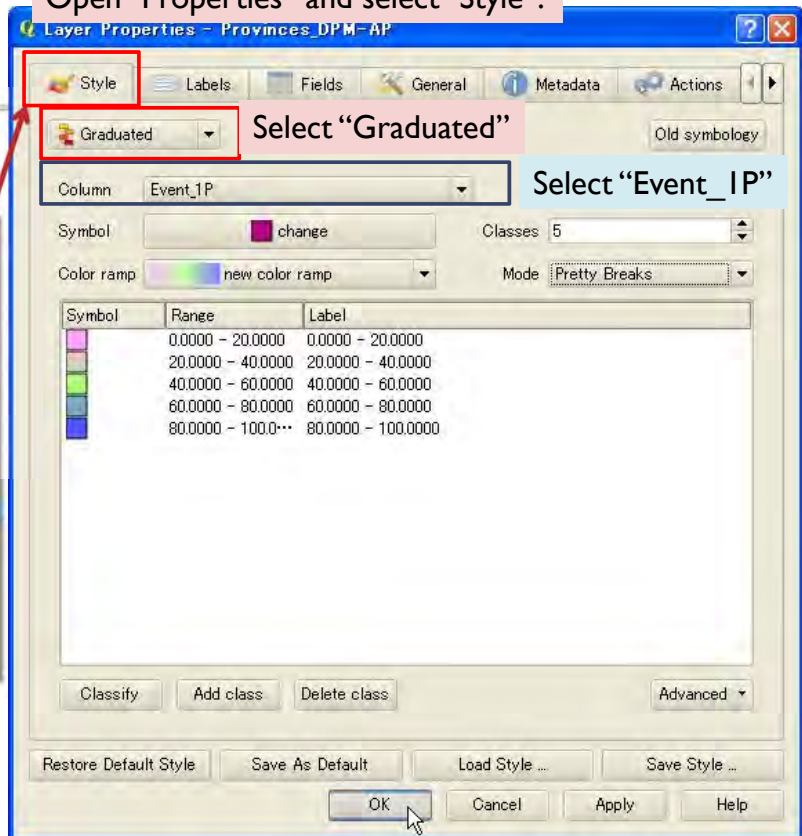
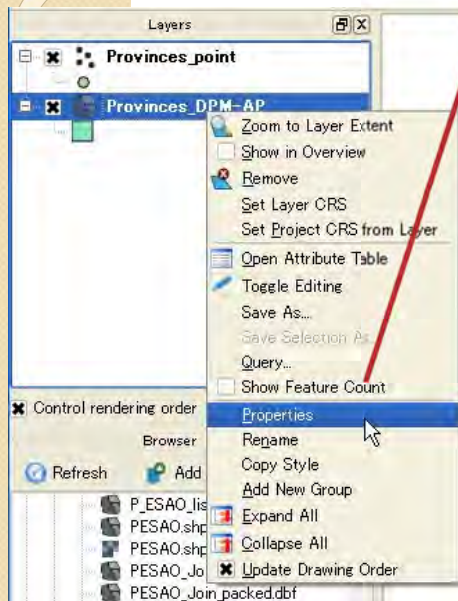


5. Making Inventory Maps (DPM-AP)

5.2.2 Color setting

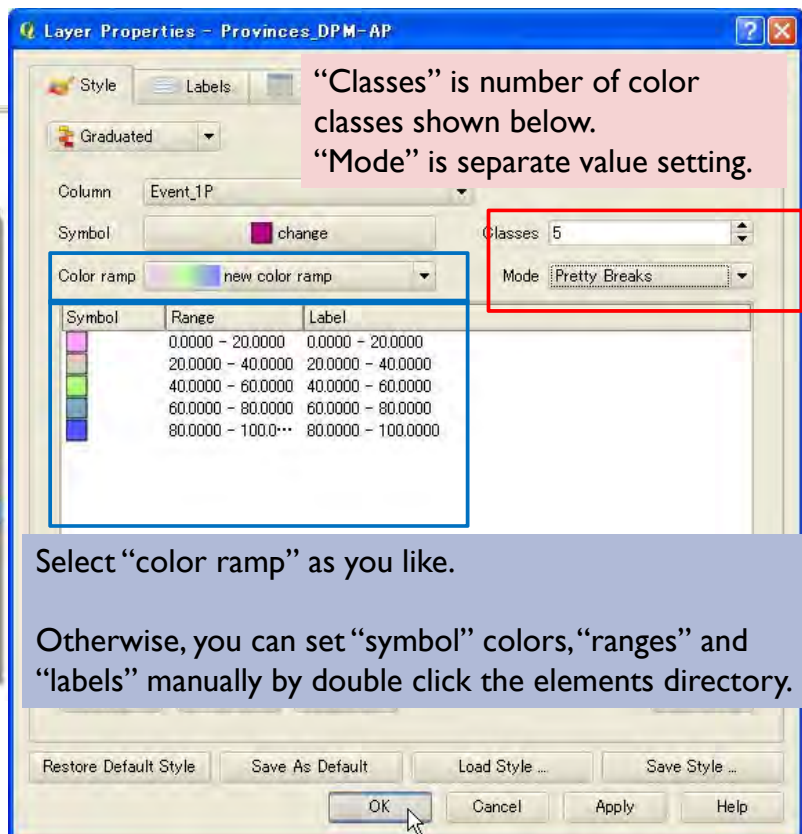
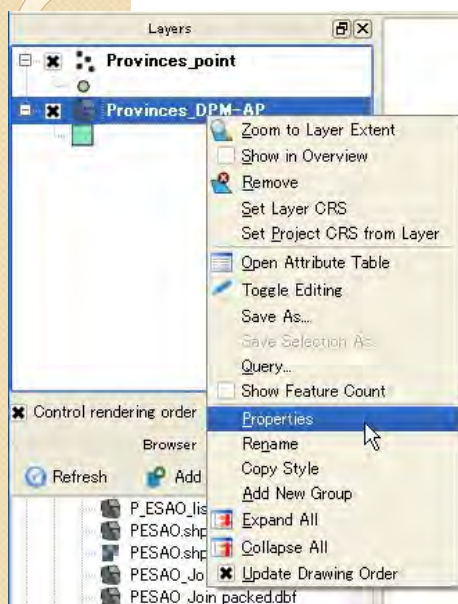
Next, make color settings.

Open "Properties" and select "Style".



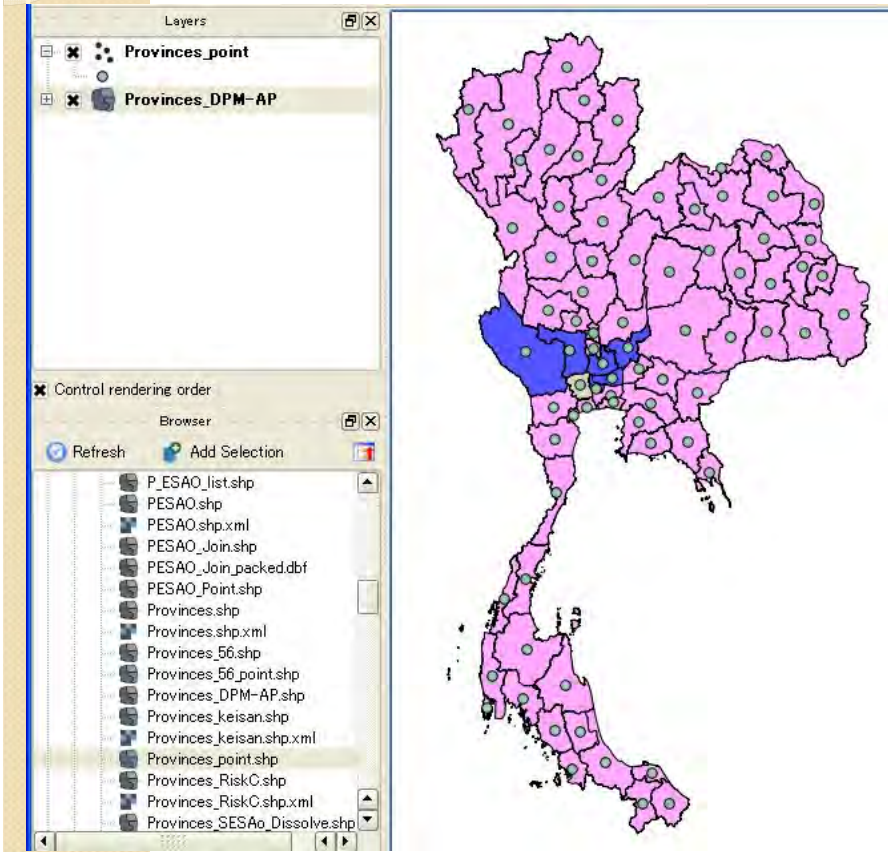
5. Making Inventory Maps (DPM-AP)

5.2.2 Color setting



5. Making Inventory Maps (DPM-AP)

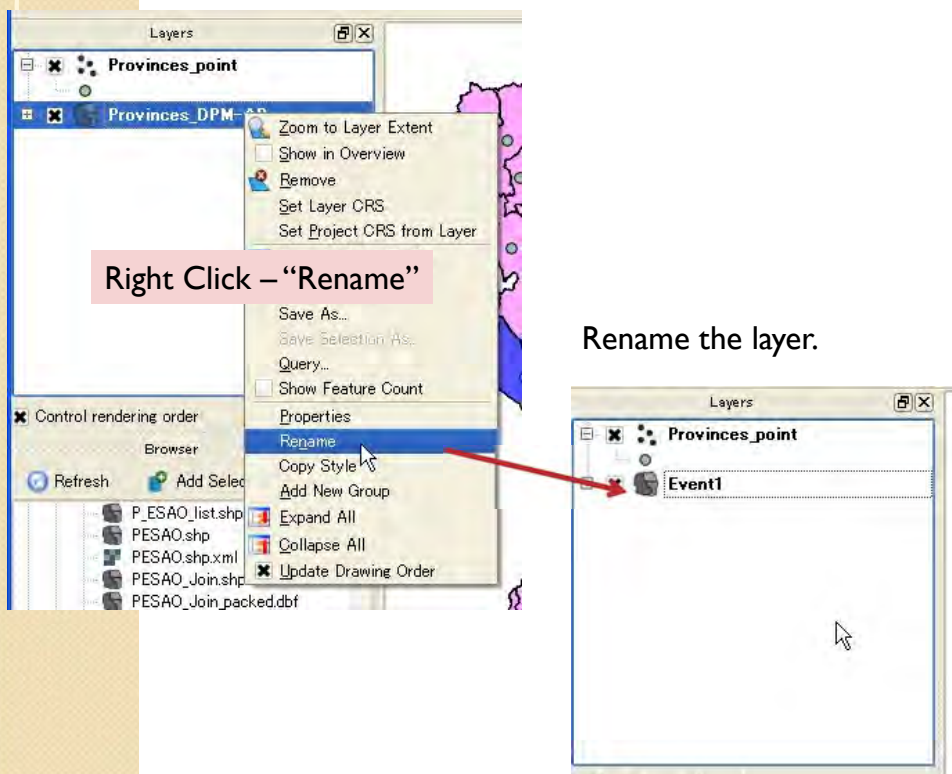
5.2.2 Color setting



Then, you can see the colored map of Event I progress percentage.

5. Making Inventory Maps (DPM-AP)

5.2.2 Color setting



Right Click – “Rename”

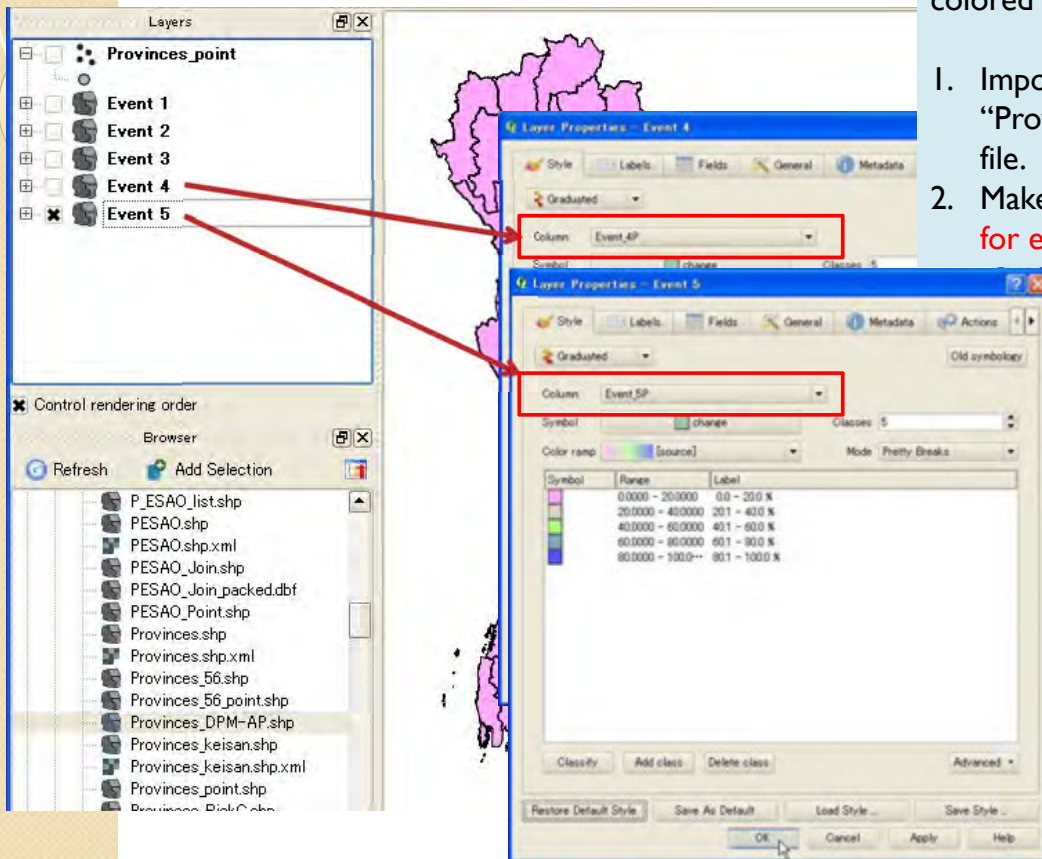
Rename the layer.

5. Making Inventory Maps (DPM-AP)

5.2.2 Color setting

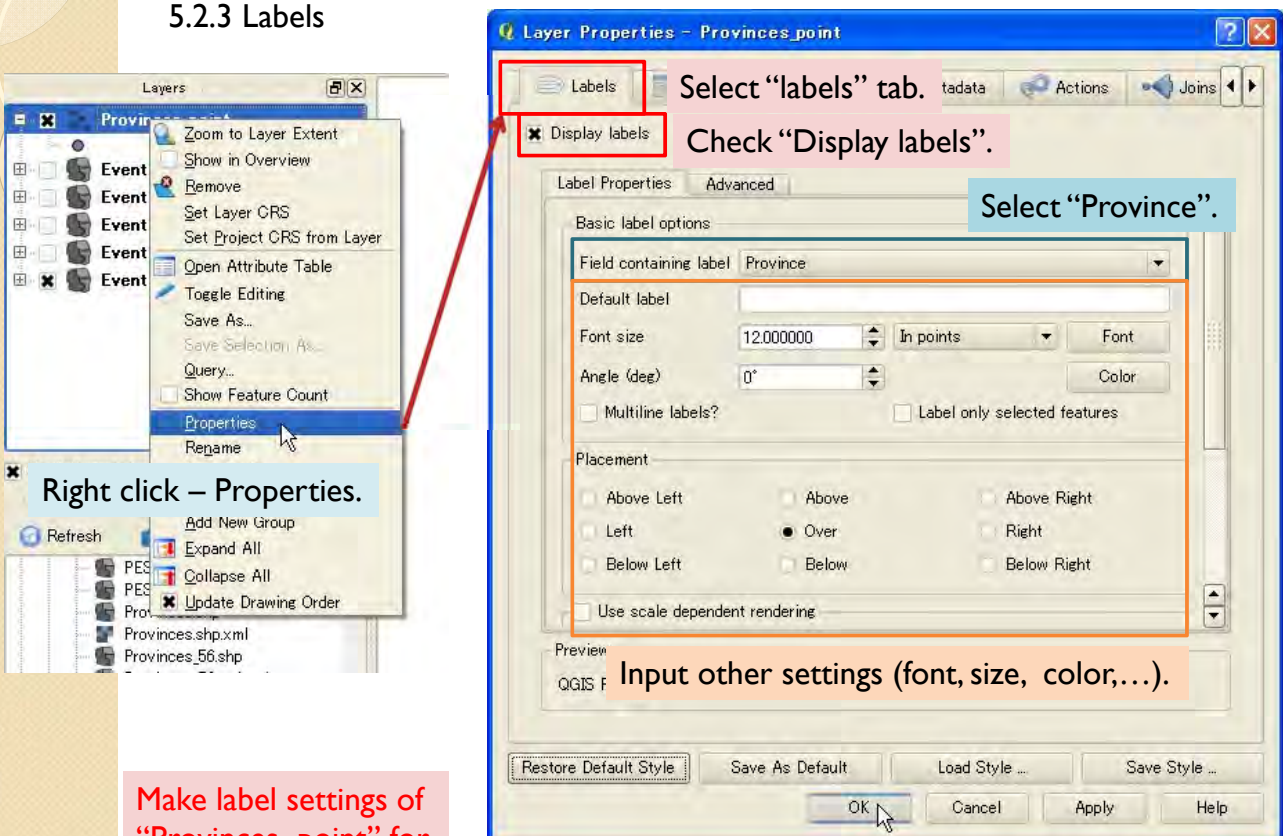
By using same process, make Event 2 to 5 colored layers.

1. Import "Provinces_DPM-AP" file.
2. Make color settings for each event.



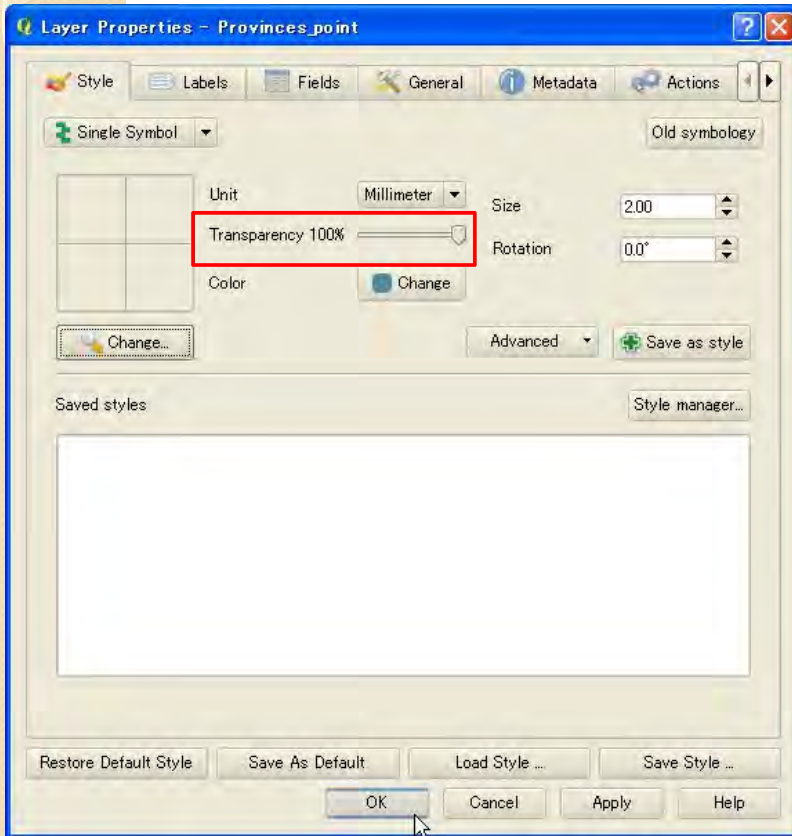
5. Making Inventory Maps (DPM-AP)

5.2.3 Labels



5. Making Inventory Maps (DPM-AP)

5.2.3 Labels



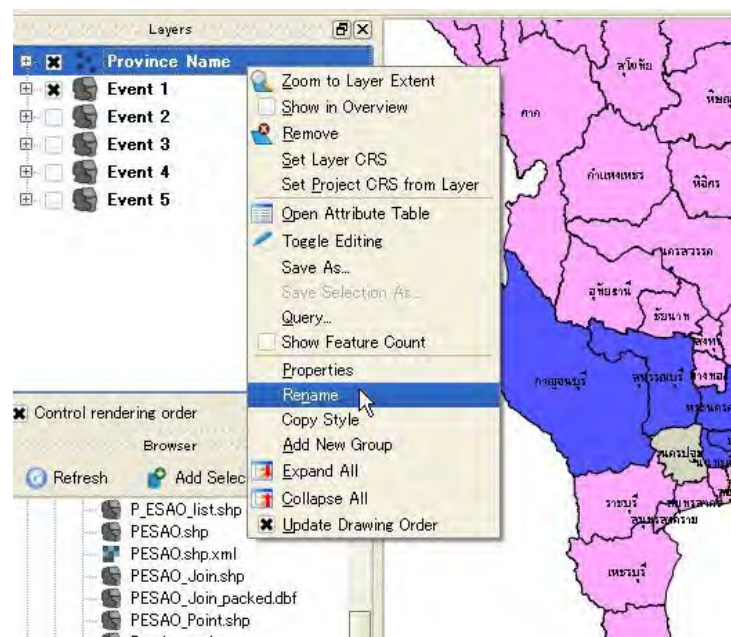
Set "Transparency" to 100 % to remove point symbols.

5. Making Inventory Maps (DPM-AP)

5.2.3 Labels

Then, the province names are displayed in the map.

Rename the "Provinces_point" to "Province Name"



5. Making Inventory Maps (DPM-AP)

5.2.3 Labels

5. Making Inventory Maps (DPM-AP)

5.2.3 Labels

Right click - Properties.

Drag & drop

Re-import and make province code labels.

Make label settings of "Provinces_point" for province code.

Select "labels" tab.

Check "Display labels".

Select "PROV_CODE".

Input other settings (font, size, color,...).

5. Making Inventory Maps (DPM-AP)

5.2.3 Labels

5. Making Inventory Maps (DPM-AP)

5.2.3 Labels

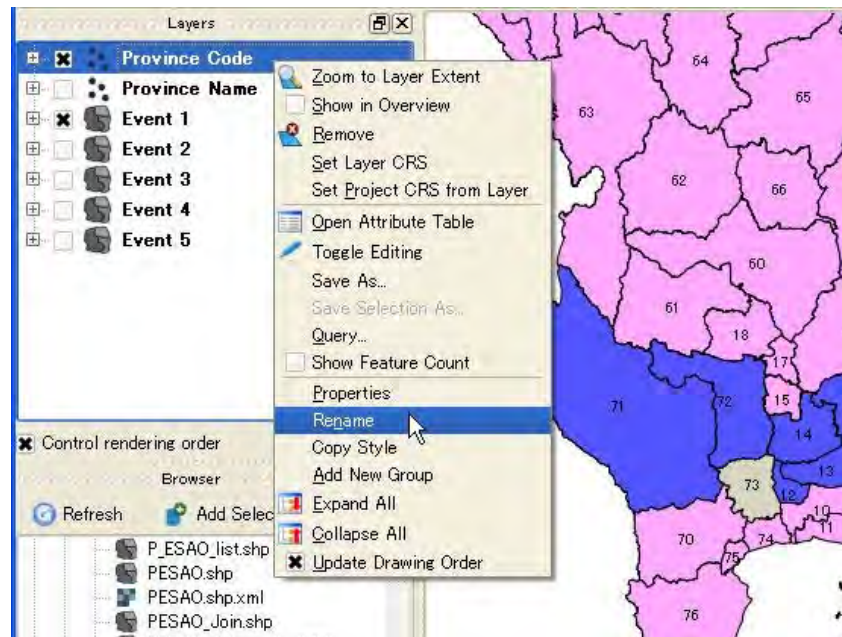
Set "Transparency" to 100 % to remove point symbols.

5. Making Inventory Maps (DPM-AP)

5.2.3 Labels

Then, the province codes are displayed in the map.

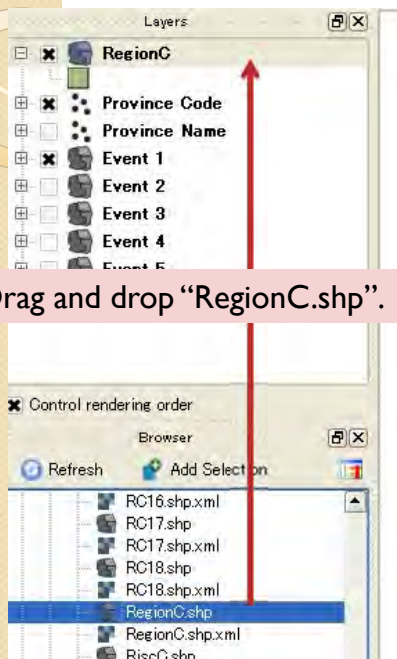
Rename the “Provinces_point” to “Province Code”



5. Making Inventory Maps (DPM-AP)

5.2.4 Regional center boundary

Drag and drop “RegionC.shp”.



In order to display regional center boundary, import regional center shape file into the map.

5. Making Inventory Maps (DPM-AP)

5.2.4 Regional center boundary

Select "Style" tab to color settings.

Right click - Properties

Click "Change" button.

The image shows a QGIS window with the 'Layer Properties' dialog for 'RegionC'. The 'Style' tab is selected, showing a 'Single Symbol' with a red square. A red box highlights the 'Style' tab, and another red box highlights the 'Change...' button. A context menu is open over the 'RegionC' layer in the Layers panel, with 'Properties' highlighted. A red arrow points from the 'Properties' menu item to the 'Style' tab. Another red arrow points from the 'Change...' button to the 'Change...' button in the 'Style' dialog.

5. Making Inventory Maps (DPM-AP)

5.2.4 Regional center boundary

Select "No Brush".

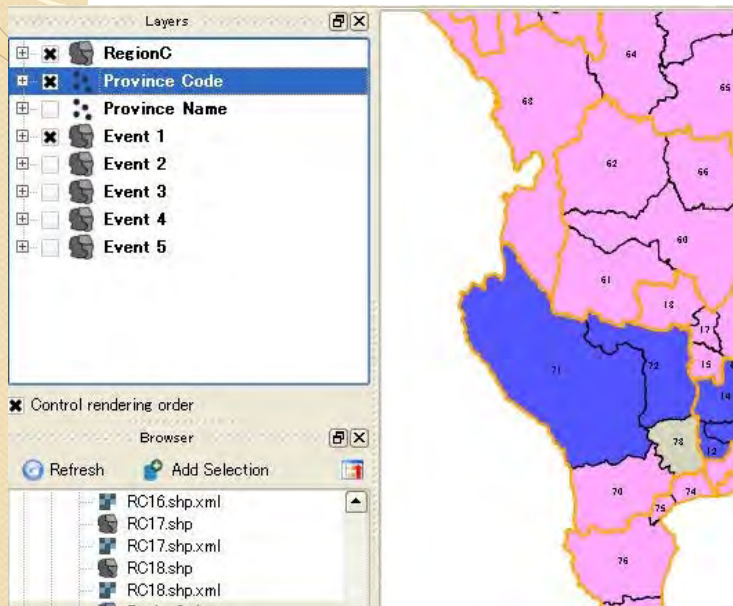
Set color, line style and line width.

Click "OK" to set color.

The image shows two QGIS dialog boxes. The 'Symbol properties' dialog for 'Simple fill' is open, with 'No Brush' selected in the 'Fill style' dropdown. A red box highlights the 'No Brush' option. A red arrow points from the 'No Brush' option to the 'OK' button. The 'Layer Properties - RegionC' dialog is also open, showing the 'Style' tab with a yellow square symbol. A red arrow points from the 'OK' button in the 'Symbol properties' dialog to the 'OK' button in the 'Layer Properties' dialog.

5. Making Inventory Maps (DPM-AP)

5.2.4 Regional center boundary

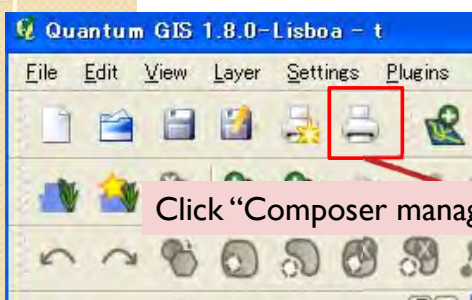


Then, the regional center borders appear.

5. Making Inventory Maps (DPM-AP)

5.2.5 Print composer

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



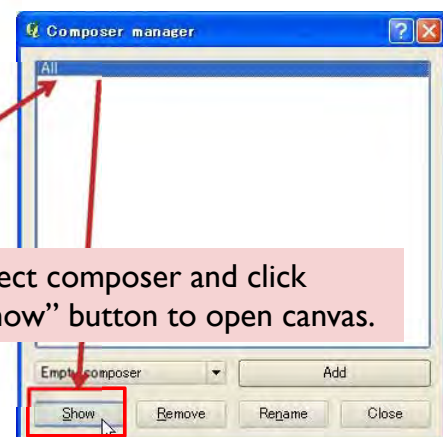
Click "Composer manager"



Click "Add" to make new composer



You can rename the composer by "Rename" button.

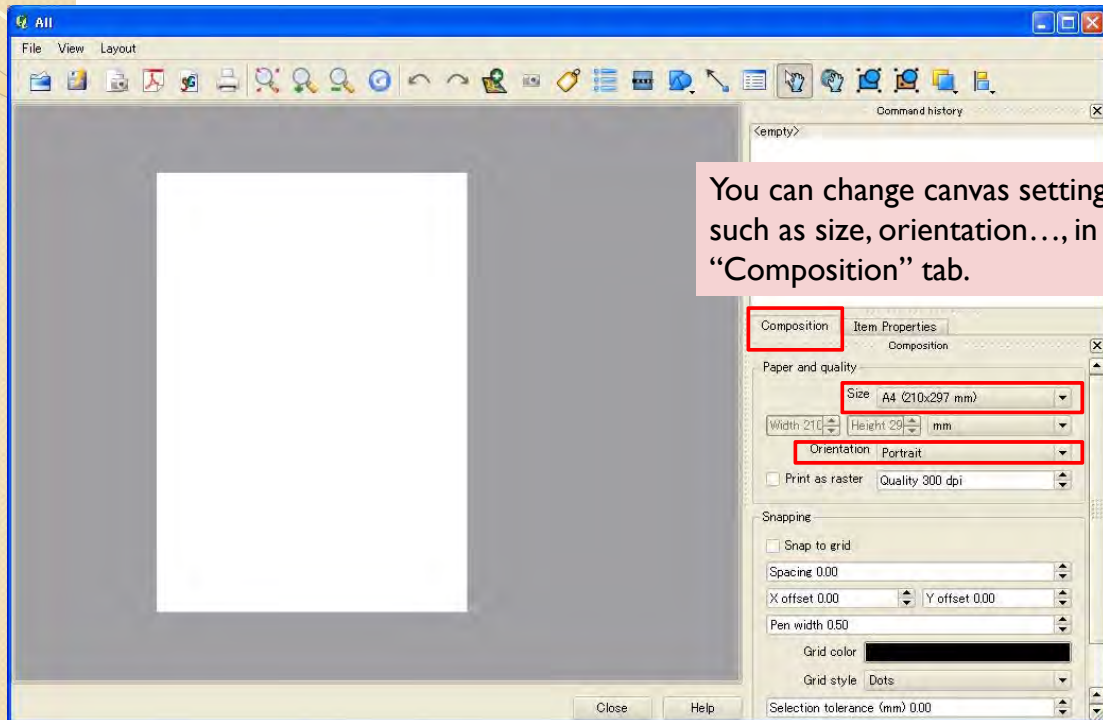


Select composer and click "Show" button to open canvas.

5. Making Inventory Maps (DPM-AP)

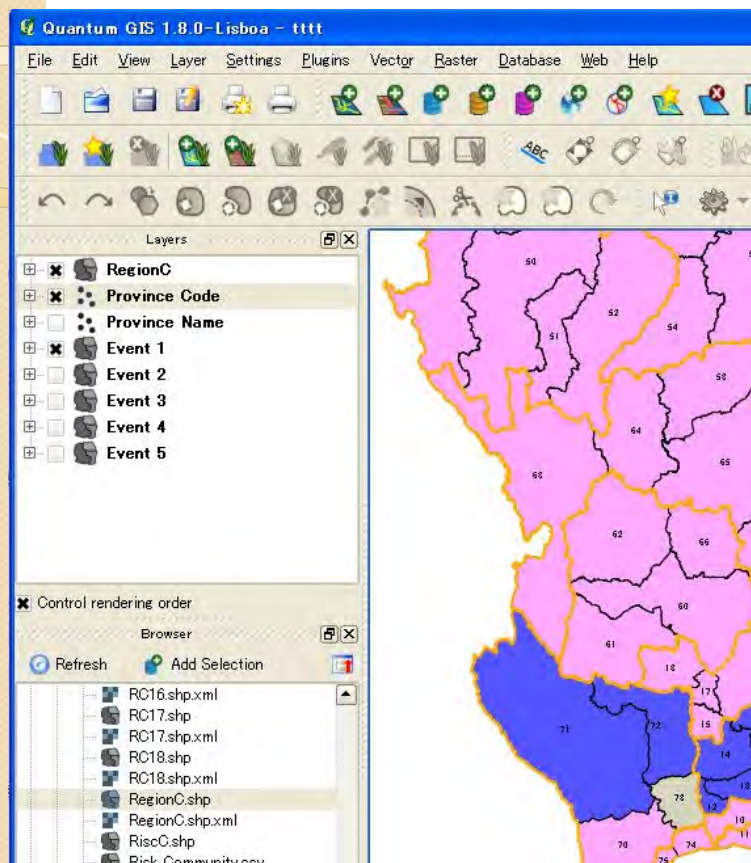
5.2.5 Print composer

This is Print Composer window.



5. Making Inventory Maps (DPM-AP)

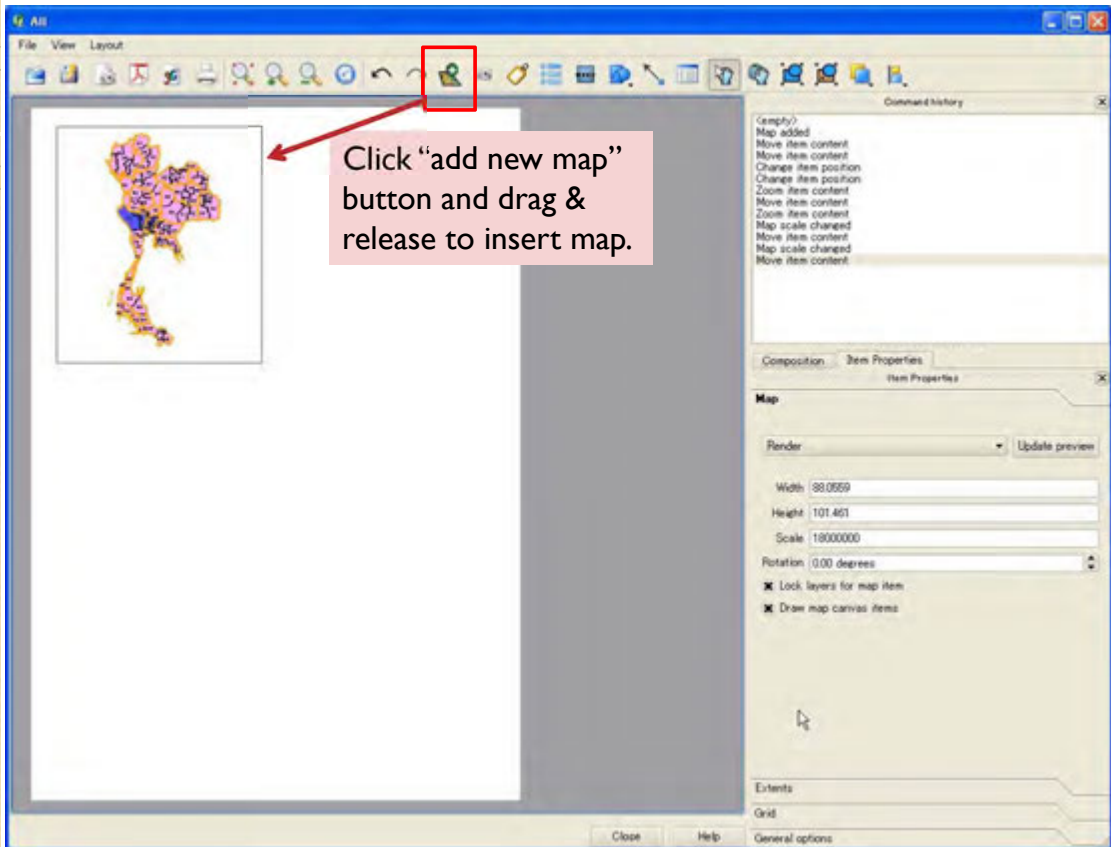
5.2.5 Print composer



To make inventory map of "Event 1", please display "Event 1" only in the QGIS map window.

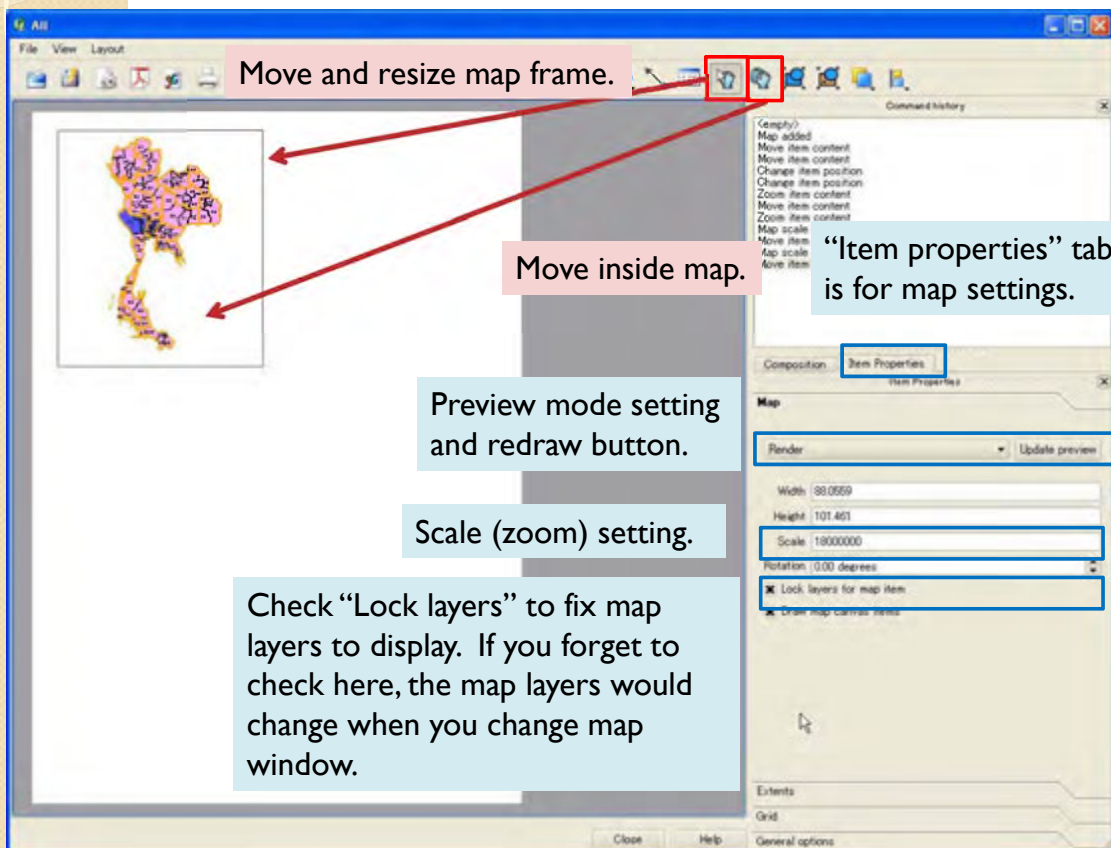
5. Making Inventory Maps (DPM-AP)

5.2.5 Print composer



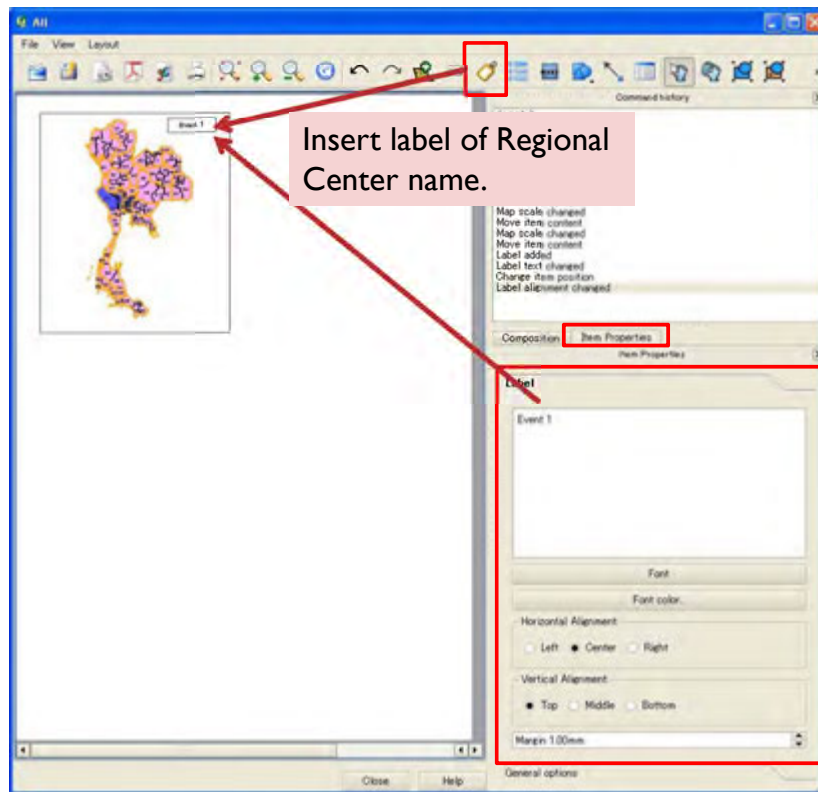
5. Making Inventory Maps (DPM-AP)

5.2.5 Print composer



5. Making Inventory Maps (DPM-AP)

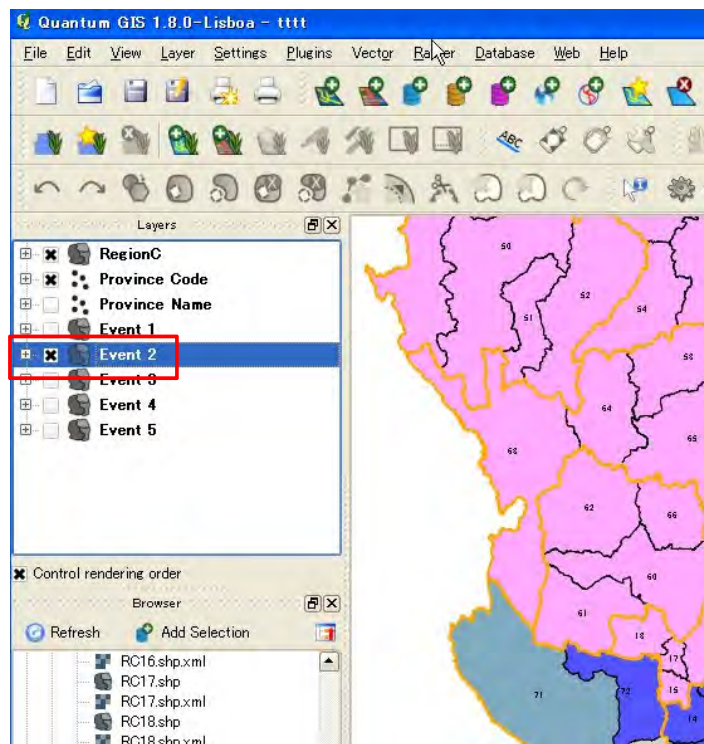
5.2.5 Print composer



5. Making Inventory Maps (DPM-AP)

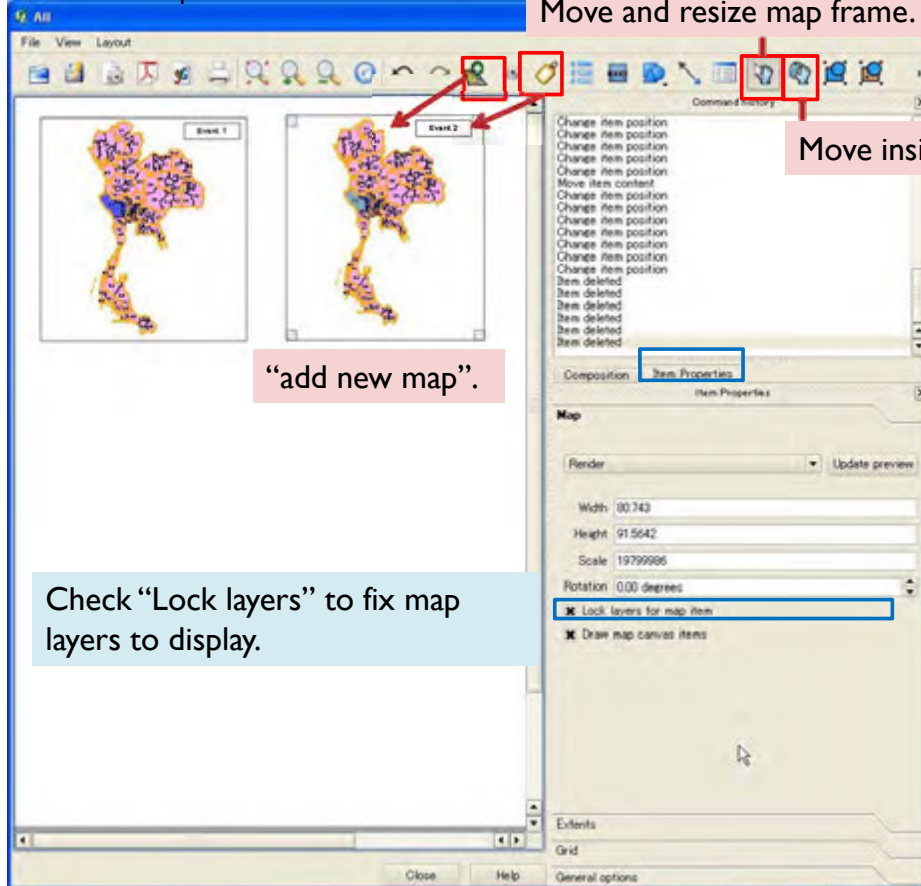
5.2.5 Print composer

At next step, change displayed Event at map window.



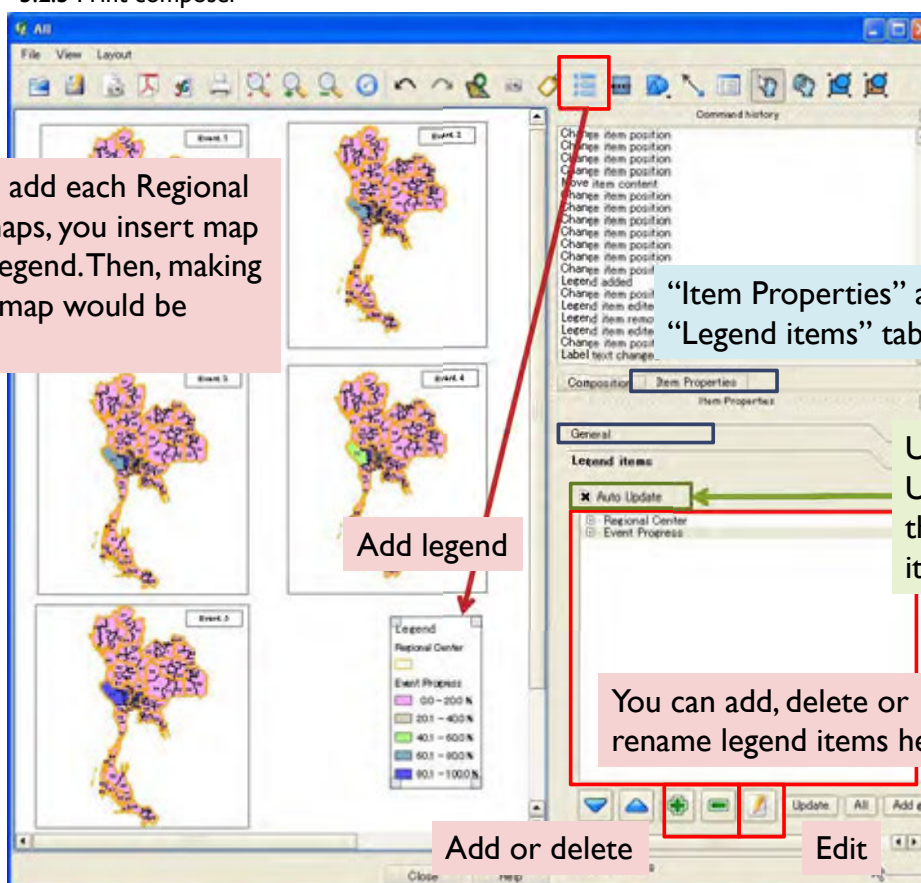
5. Making Inventory Maps (DPM-AP)

5.2.5 Print composer



5. Making Inventory Maps (DPM-AP)

5.2.5 Print composer



5. Making Inventory Maps (DPM-AP)

5.2.5 Print composer

It is able to export map to file.

Export as image file



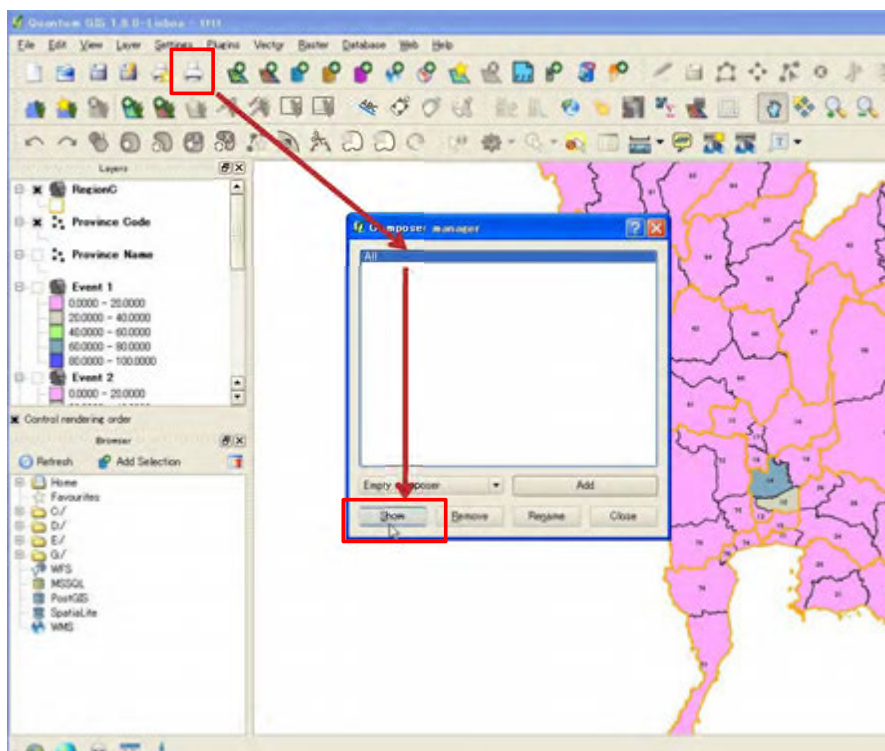
Export as pdf file

Print

5. Making Inventory Maps (DPM-AP)

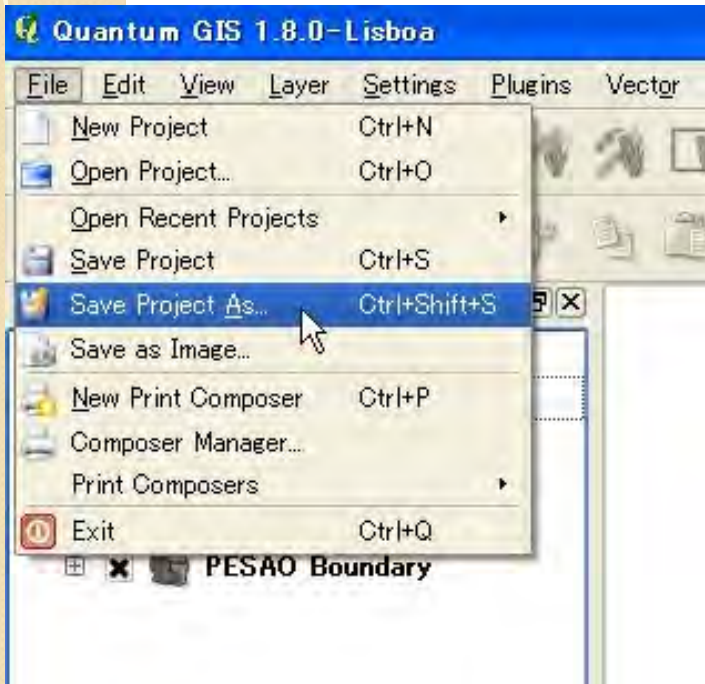
5.2.5 Print composer

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



5. Making Inventory Maps (DPM-AP)

5.2.6 Save project



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

5. Making Inventory Maps (DPM-AP)

5.3 Update data 5.3.1 Direct Input

If you want to change/update attribute table, you can edit by following function or remake the "Provinces_DPM-AP" file from excel.

The screenshot shows the 'Attribute table' window in Quantum GIS. The table has columns for Province, RC_Code_1, Total_LAO, Event_1, Event_2, Event_3, Event_4, and Event_5. The data is as follows:

	Province	RC_Code_1	Total_LAO	Event_1	Event_2	Event_3	Event_4	Event_5
0	NULL	NULL	NULL	NULL	NULL	NULL	NULL	N
1	Samut Prakan	NULL	49			0	0	
2	Nonthaburi	NULL	45			24	14	
3	PathunThani (R...	NULL	65	65	62	52	47	
4	Phra Nakhon Si...	NULL	158	158	150	143	125	
5	Ang Thong	NULL	64	0	0	0	0	
6	Lop Buri	NULL	125	0	0	0	0	
7	Sing Buri	NULL	41	0	0	0	0	
8	Chainat (RC)	NULL	60	0	0	0	0	
9	Saraburi	NULL	108	108	104	0	0	
10	Chon Buri	NULL	98	0	0	0	0	
11	Rayong	NULL	67	0	0	0	0	
12	Chanthaburi (RC)	NULL	31	0	0	0	0	
13	Trat	NULL	43	0	0	0	0	
14	Chachoengsao	NULL	108	0	0	0	0	
15	Prachin Buri (R...	NULL	70	0	0	0	0	
16	Nakhon	NULL	46	0	0	0	0	
17	Sa Kaei	NULL	67	0	0	0	0	
18	Nakhon Ratcha...	NULL	333	0	0	0	0	
19	Buri Ram	NULL	201	0	0	0	0	

Annotations on the screenshot include:

- 'Double click to edit' pointing to the 'Event_1' cell for row 4.
- 'Save edit' pointing to the 'Save edit' button in the toolbar.
- 'Start/stop edit' pointing to the 'Start edit' button in the toolbar.
- 'Add/delete column' pointing to the 'Add/delete column' button in the toolbar.

A list of steps is provided in a pink box:

1. Click start edit button
2. Double click and change data field
3. Click stop edit button and save.

5. Making Inventory Maps (DPM-AP)

5.3.2 Remake shape file

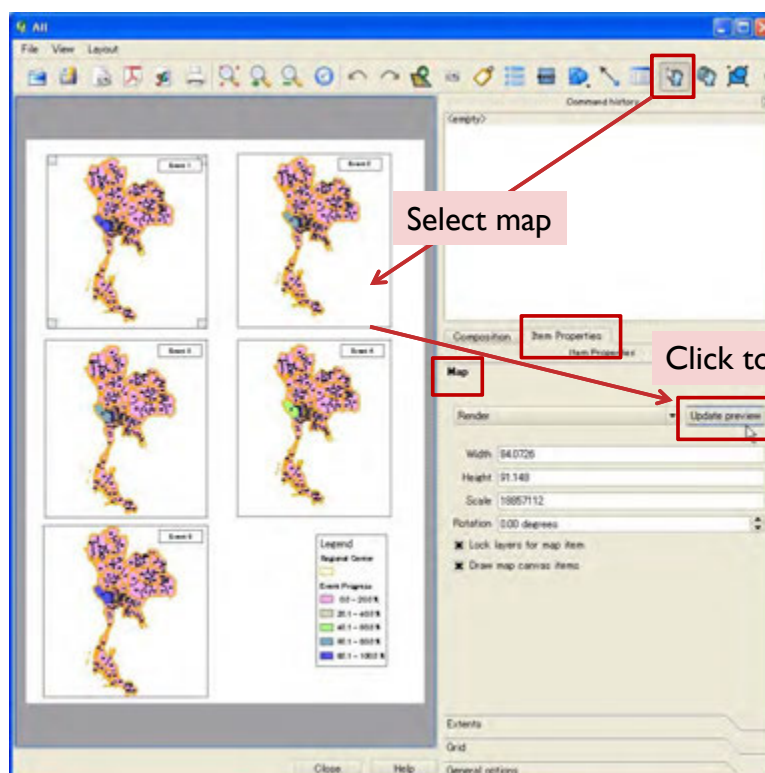
If updated data amount is large, it is better to update source excel file and remake shape file by process 5.1.

1. Make new table by Excel.
2. Save the table as CSV file.
3. Import the CSV file and save as Shape file.
4. Import the Shape file you made.
5. Join the Shape file and province Shape file.
6. Save as new file you join.
7. Import the new joined file.
8. Display the data.

5. Making Inventory Maps

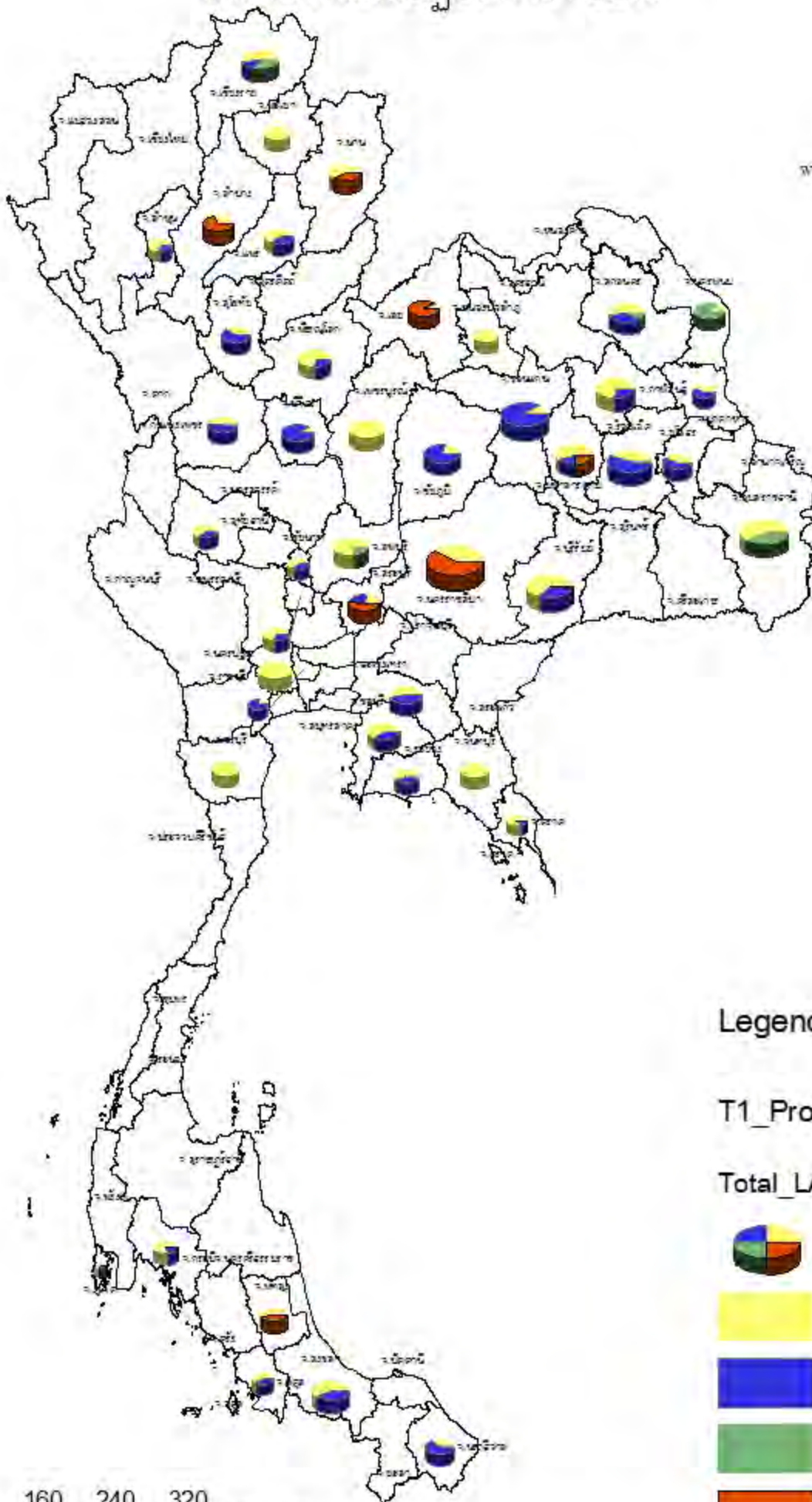
5.3.3 Update maps

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



Samples of inventory map

การจัดทำแผนปฏิบัติการ อปท.



Legend

T1_Provinces

Total_LAO



430

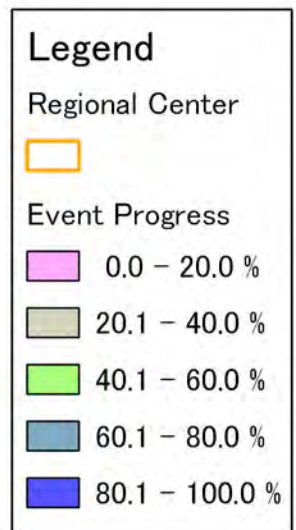
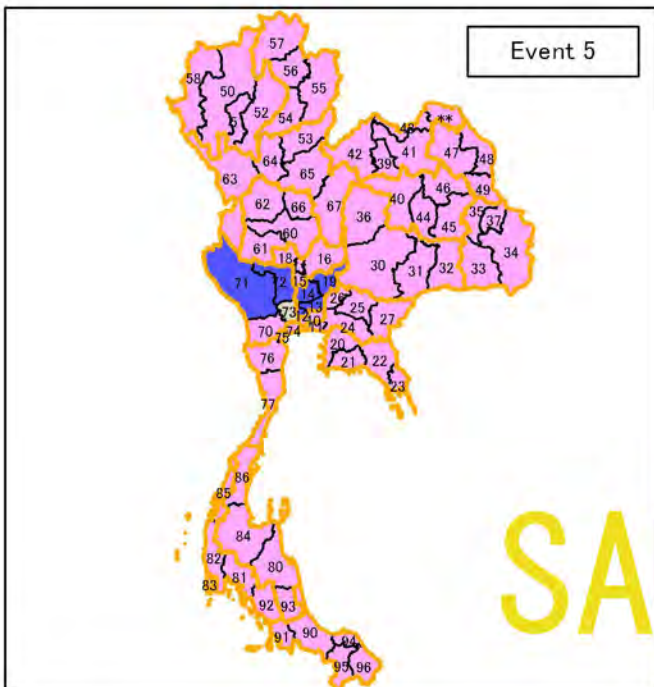
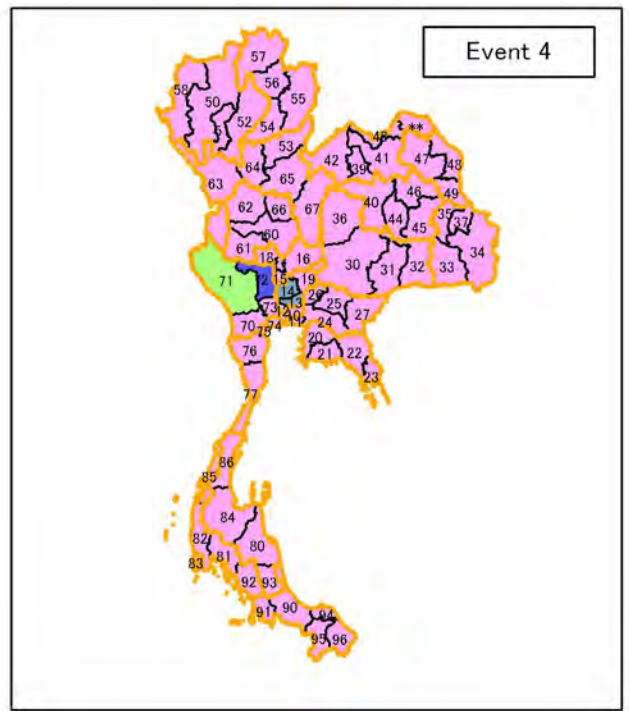
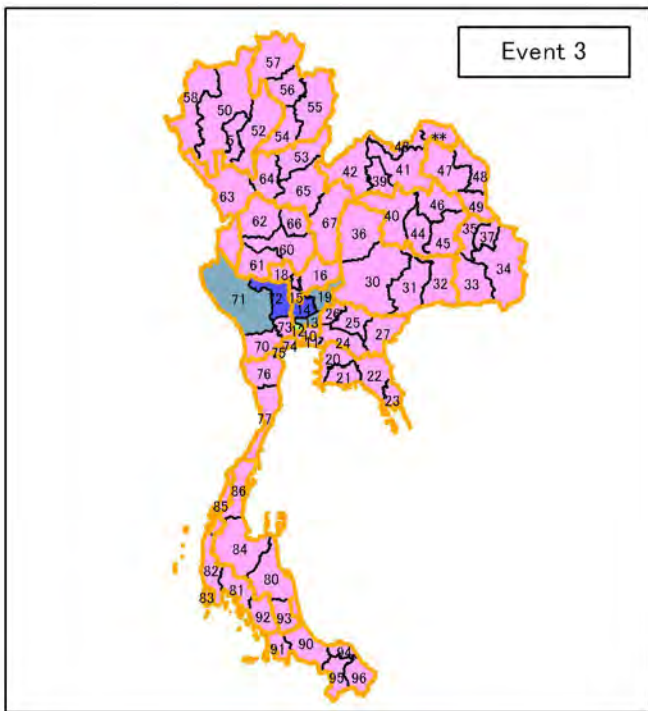
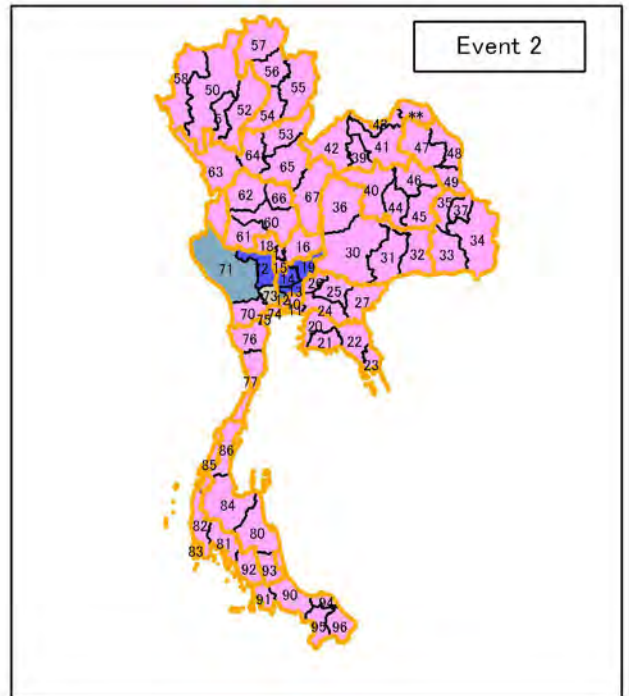
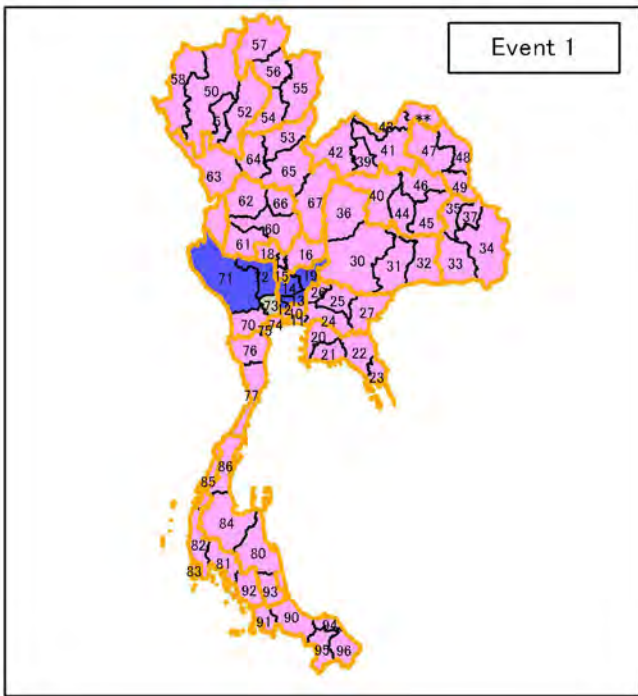
Finish

Process

Remark

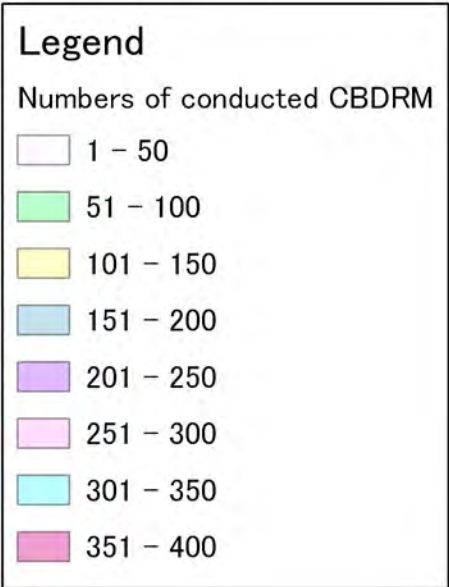
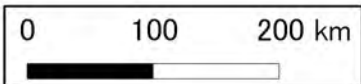
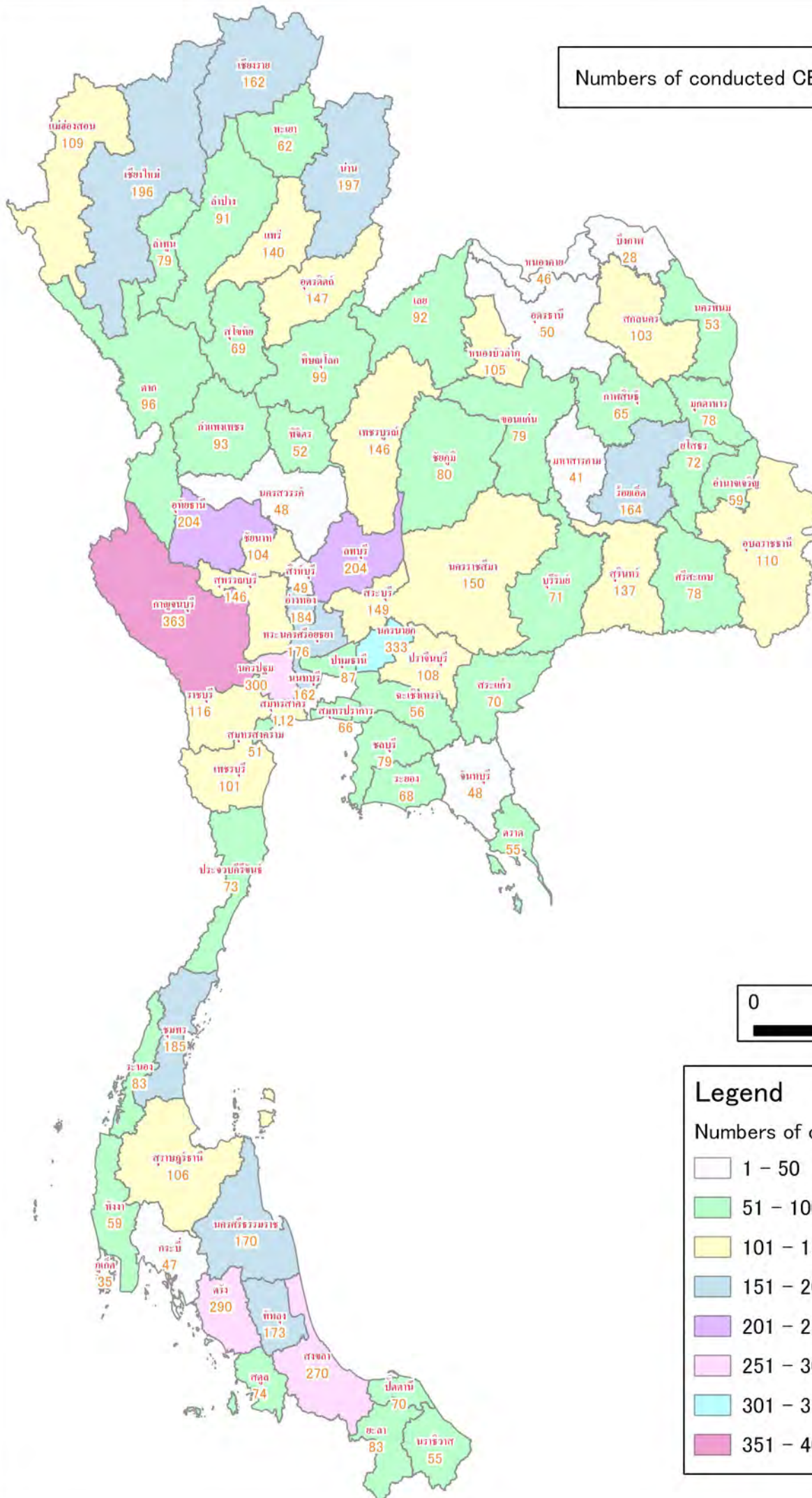
Not_Start

0 40 80 160 240 320 Kilometers

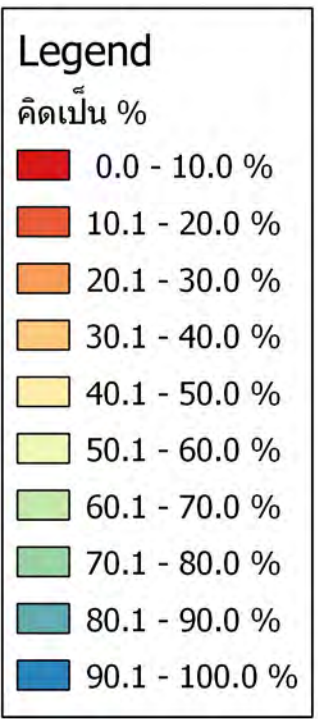
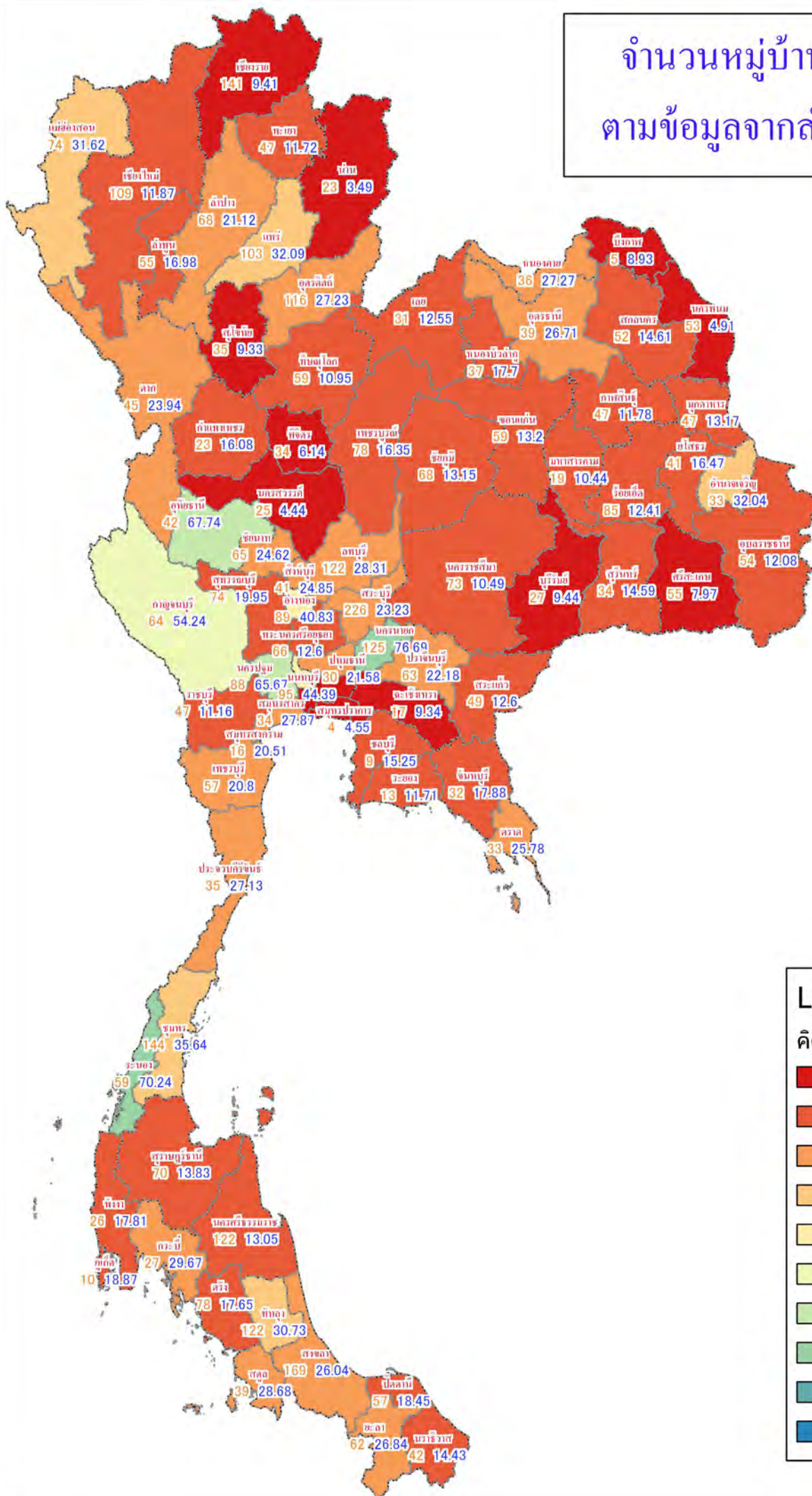


SAMPLE

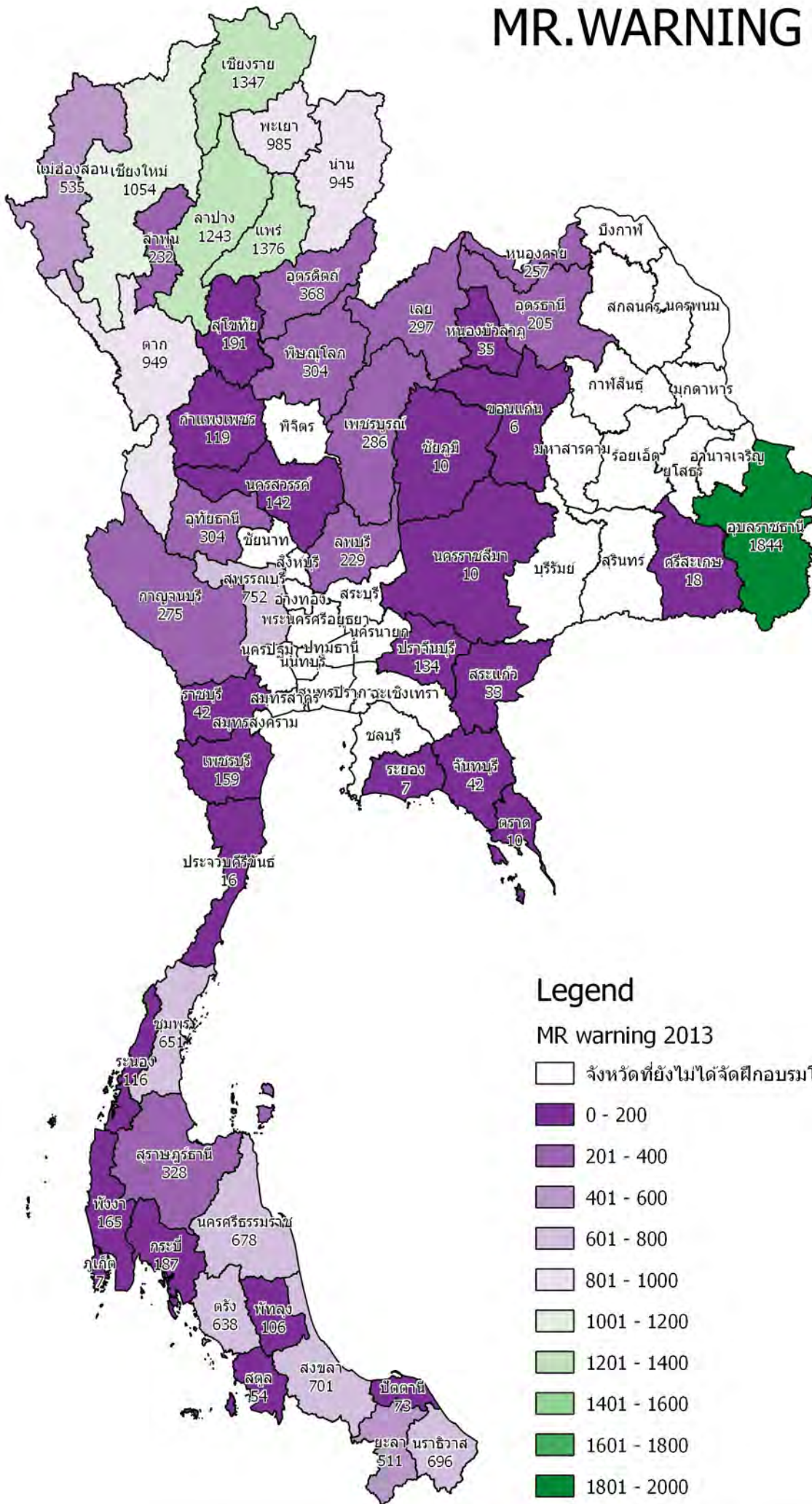
Numbers of conducted CBDRM Numbers



จำนวนหมู่บ้านเสี่ยงภัย
ตามข้อมูลจากสำนักวิจัยฯ



MR.WARNING MAP

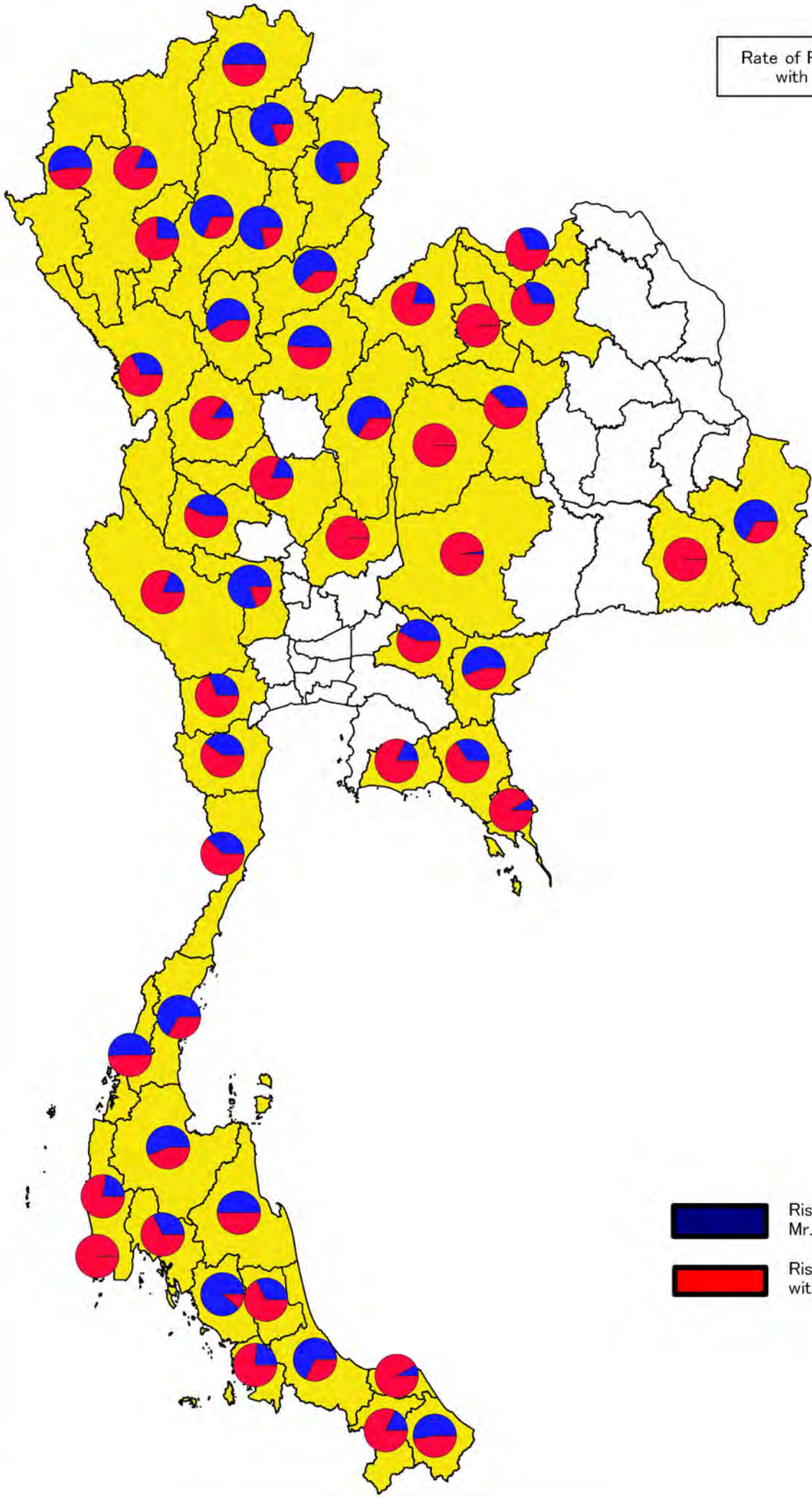


Legend

MR warning 2013

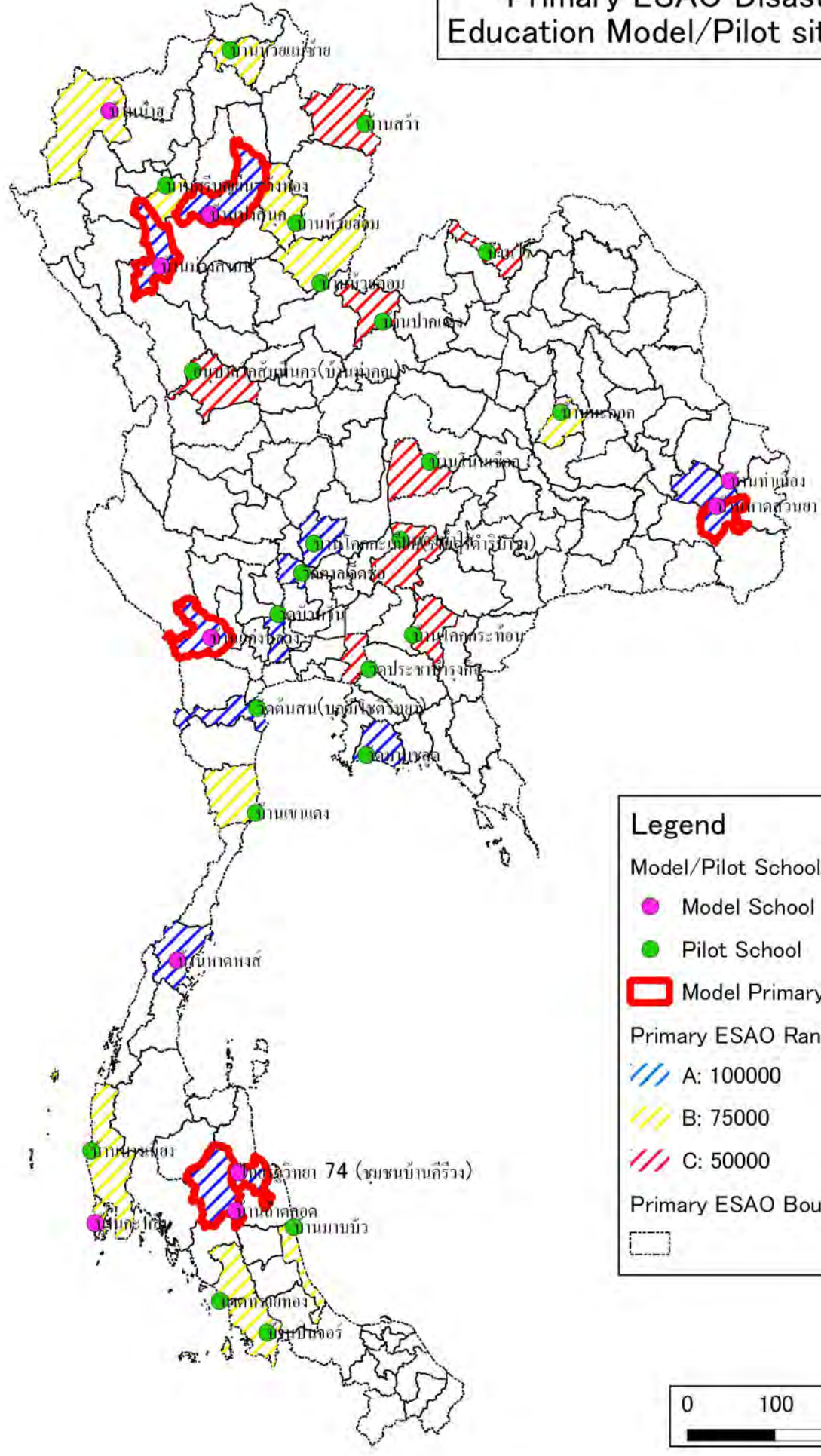
- จังหวัดที่ยังไม่ได้จัดฝึกอบรมโดยกรมจากส่วนกลาง
- 0 - 200
- 201 - 400
- 401 - 600
- 601 - 800
- 801 - 1000
- 1001 - 1200
- 1201 - 1400
- 1401 - 1600
- 1601 - 1800
- 1801 - 2000

Rate of Risk Community with Mr.Warning



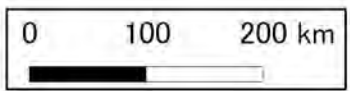
 Risk community with Mr.Warning
 Risk community without Mr.Warning

Primary ESAO Disaster Education Model/Pilot site map

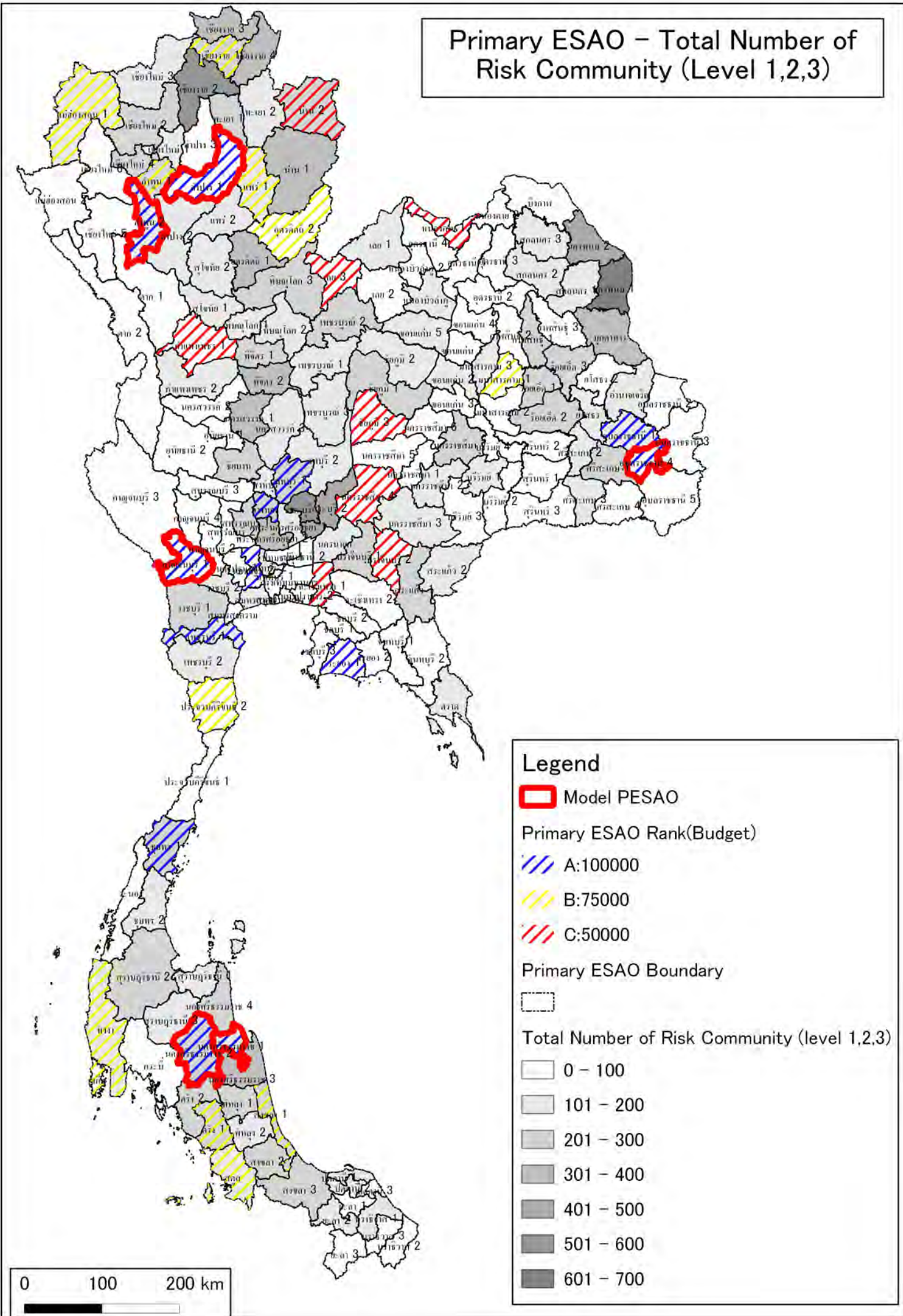


Legend

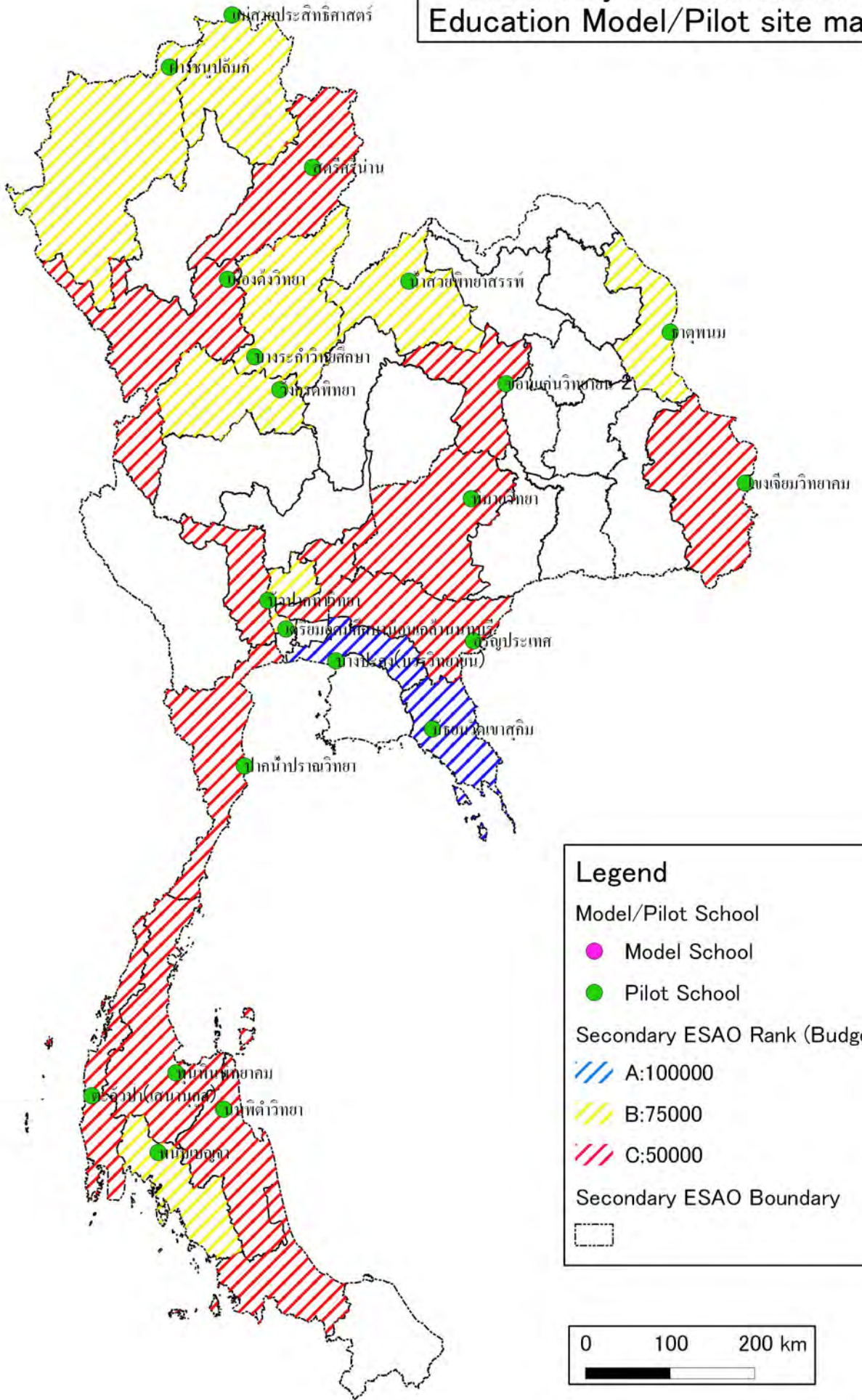
- Model/Pilot School
 - Model School (Pink dot)
 - Pilot School (Green dot)
- Model Primary ESAO (Red outline)
- Primary ESAO Rank(Budget)
 - A: 100000 (Blue hatching)
 - B: 75000 (Yellow hatching)
 - C: 50000 (Red hatching)
- Primary ESAO Boundary (Dashed line)



Primary ESAO – Total Number of Risk Community (Level 1,2,3)



Secondary ESAO Disaster Education Model/Pilot site map



มหาวิทยาลัยราชภัฏวชิรเวศน์

โรงเรียนปทุมมา

ศรีวิชัย

เมืองคองวิทยา

สวสยวิทยาสรรพ

ลาดพนม

ระพีวิทยาสถิตยา

ศรีนครวิทย

อินทนนท์วิทยาสถิต 2

สงเจียมวิทยาคม

อนุชวิทย

อุปถัมภ์วิทย

ศรีสมเด็จวิทยาคม (เขตลำนานน)

รัฐประเทส

บางประสง (ป.ร.วิทย)

รัตนวิทยาสถิต

ปากน้ำปรางวิทย

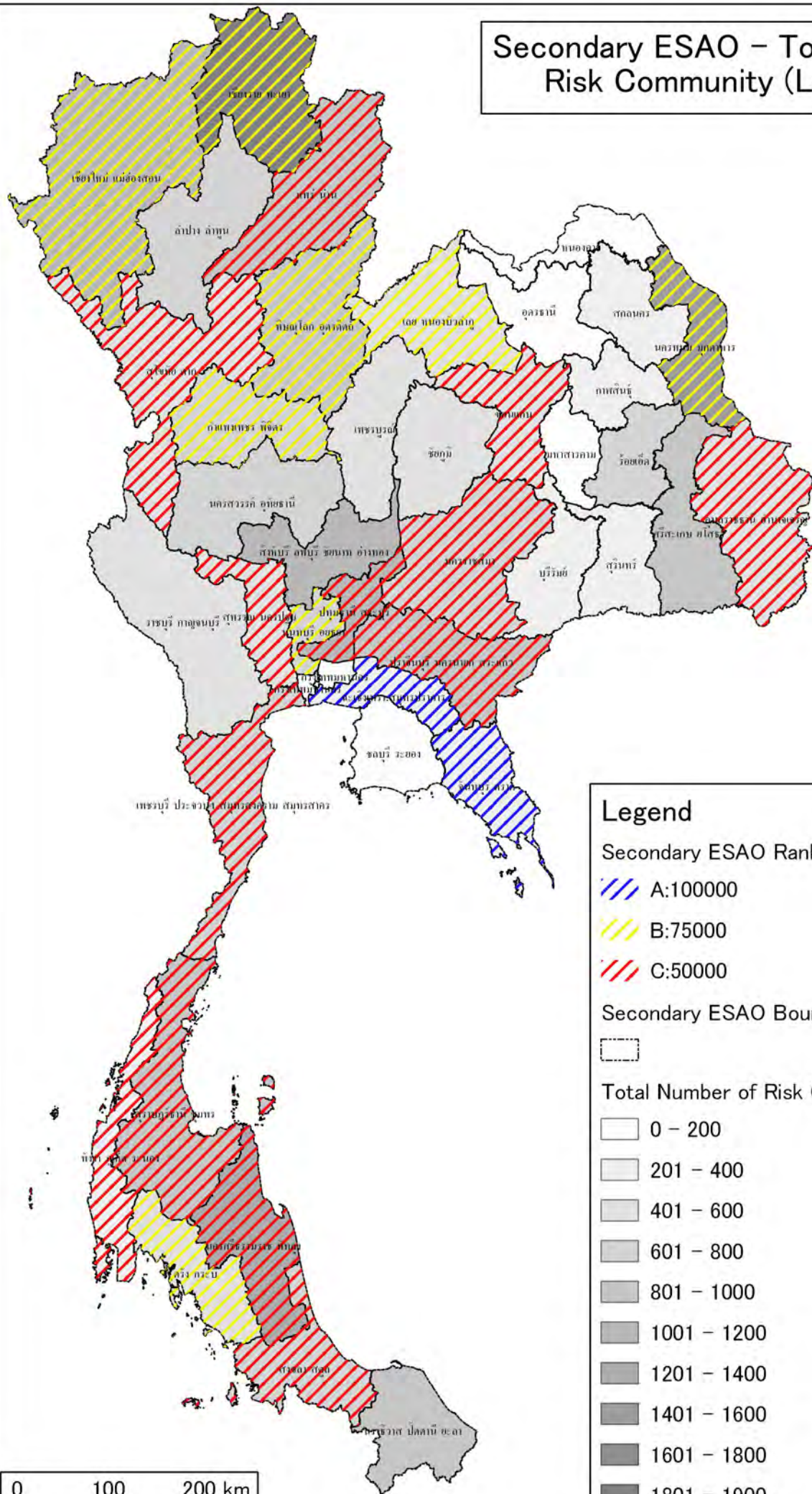
นันทนวิทยาคม

ธำรง (ธนบท)

นิตยวิทย

พนาวิทย

Secondary ESAO – Total Number of Risk Community (Level 1,2,3)



Legend

Secondary ESAO Rank (Budget)

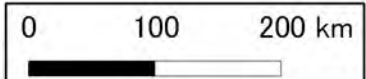
- ▨ A:100000
- ▨ B:75000
- ▨ C:50000

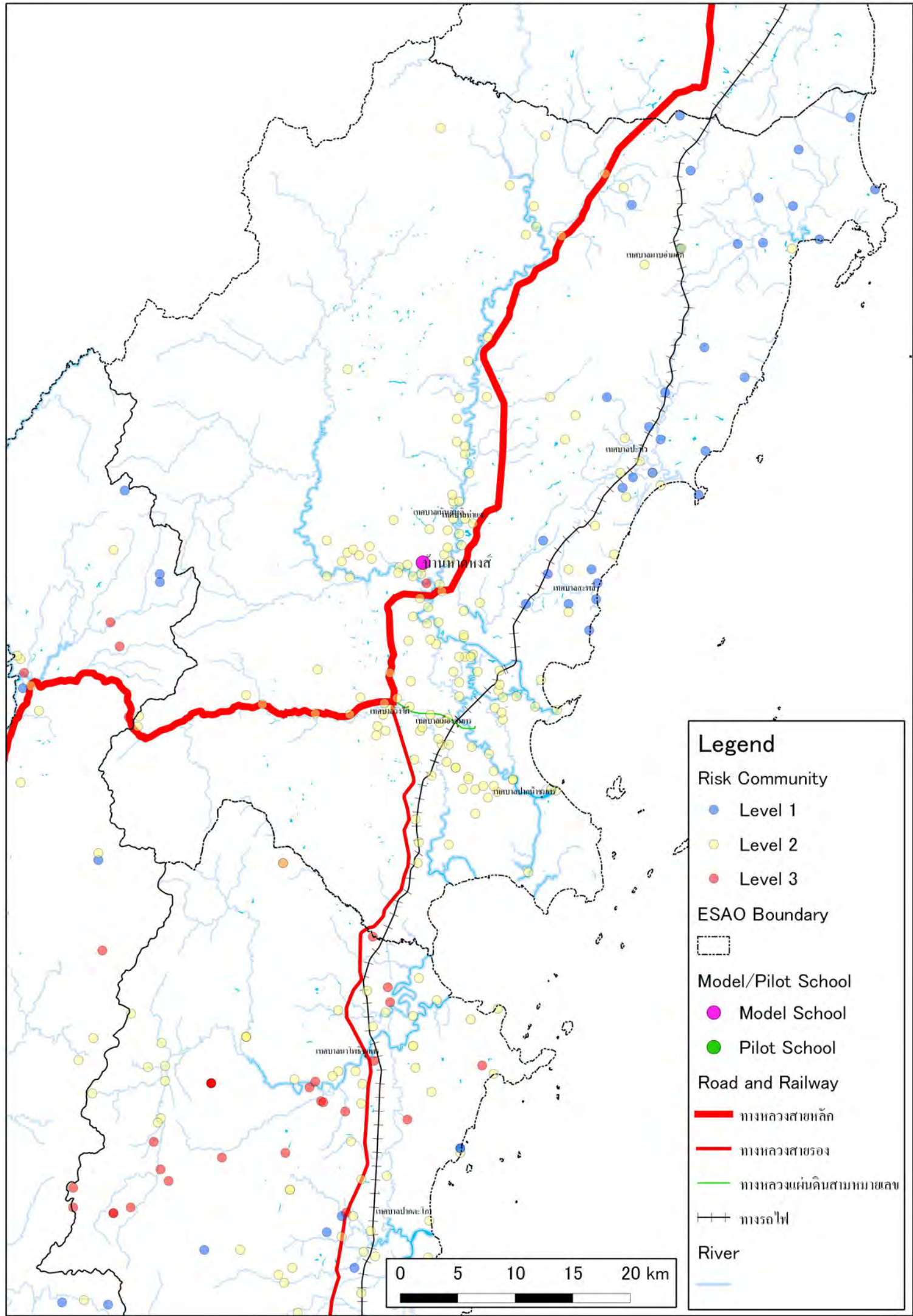
Secondary ESAO Boundary

▭

Total Number of Risk Community (level 1,2,3)

- ▭ 0 – 200
- ▭ 201 – 400
- ▭ 401 – 600
- ▭ 601 – 800
- ▭ 801 – 1000
- ▭ 1001 – 1200
- ▭ 1201 – 1400
- ▭ 1401 – 1600
- ▭ 1601 – 1800
- ▭ 1801 – 1900





Legend

Risk Community

- Level 1
- Level 2
- Level 3

ESAO Boundary

□

Model/Pilot School

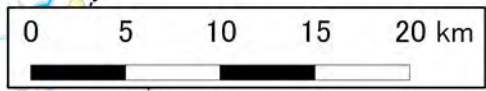
- Model School
- Pilot School

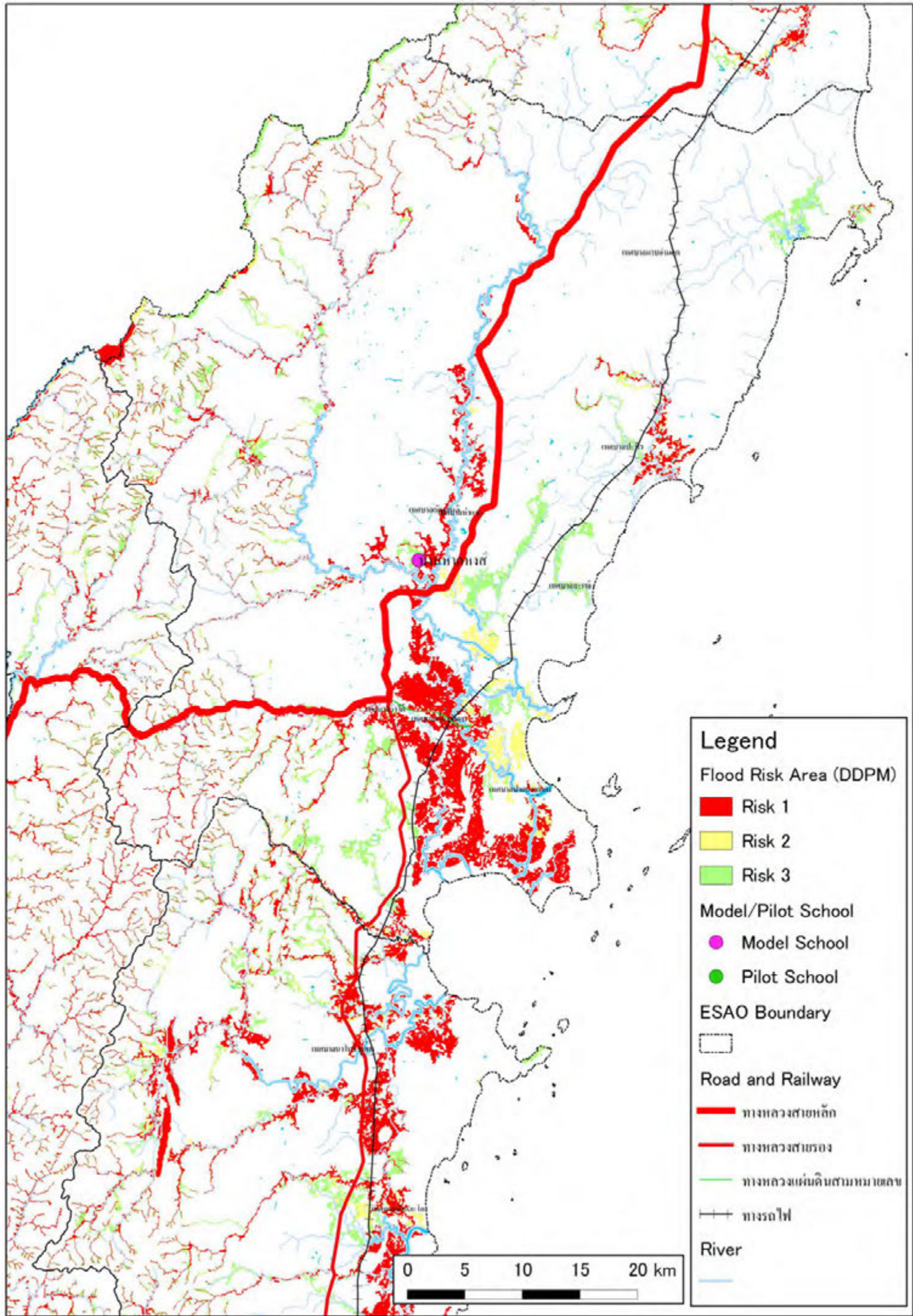
Road and Railway

- ทางหลวงสายหลัก
- ทางหลวงสายรอง
- ทางหลวงแผ่นดินสามขาหมายเลข
- ทางรถไฟ

River

—





Legend

Flood Risk Area (DDPM)

- Risk 1
- Risk 2
- Risk 3

Model/Pilot School

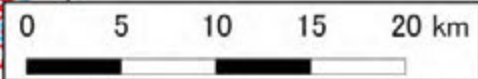
- Model School
- Pilot School

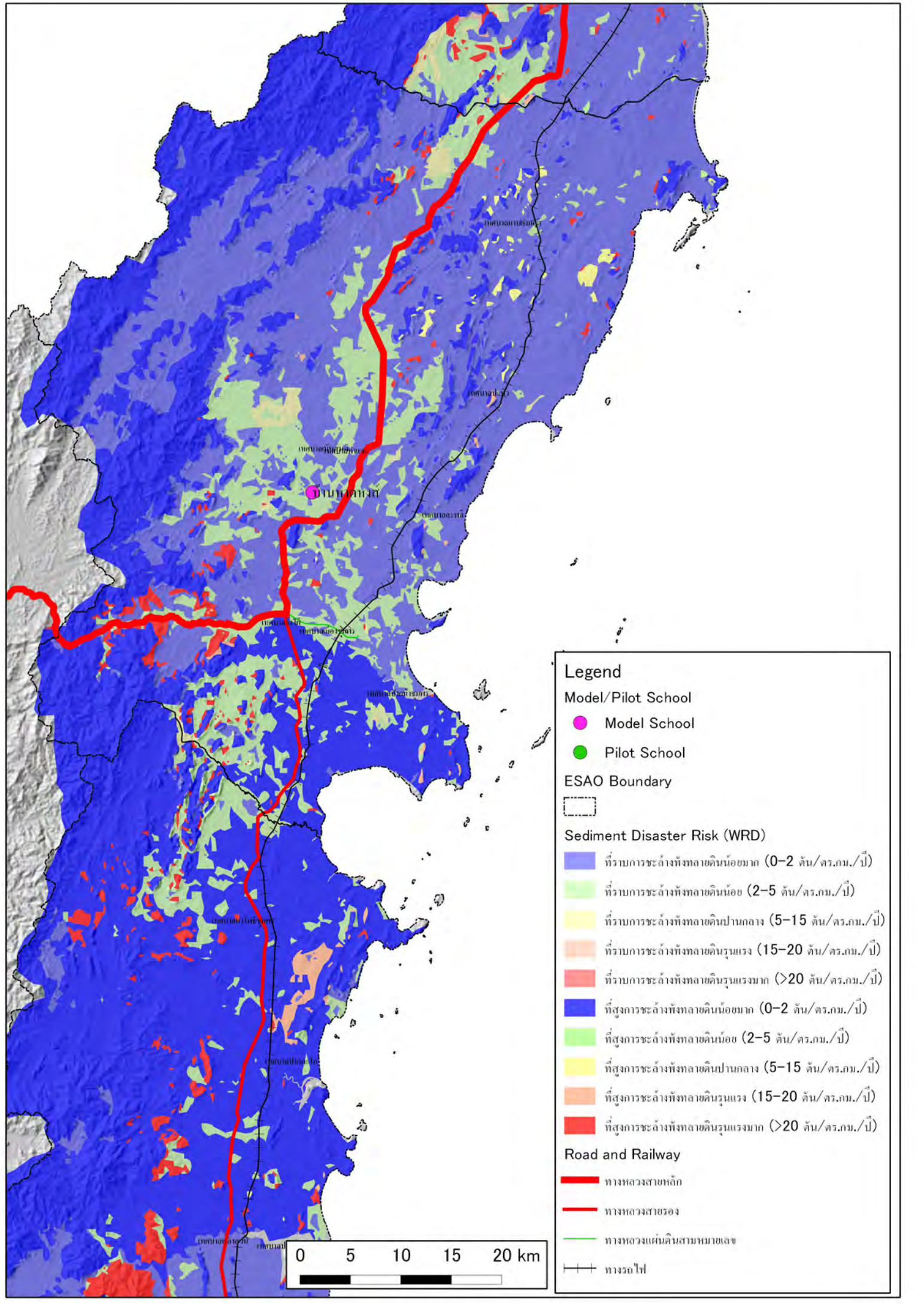
ESAO Boundary

Road and Railway

- ทางหลวงสายหลัก
- ทางหลวงสายรอง
- ทางหลวงแผ่นดินสามหมวกลาย
- ทางรถไฟ

River





Legend

Model/Pilot School

- Model School
- Pilot School

ESABO Boundary

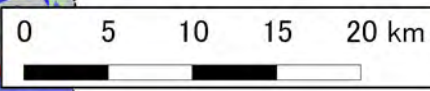
⋯

Sediment Disaster Risk (WRD)

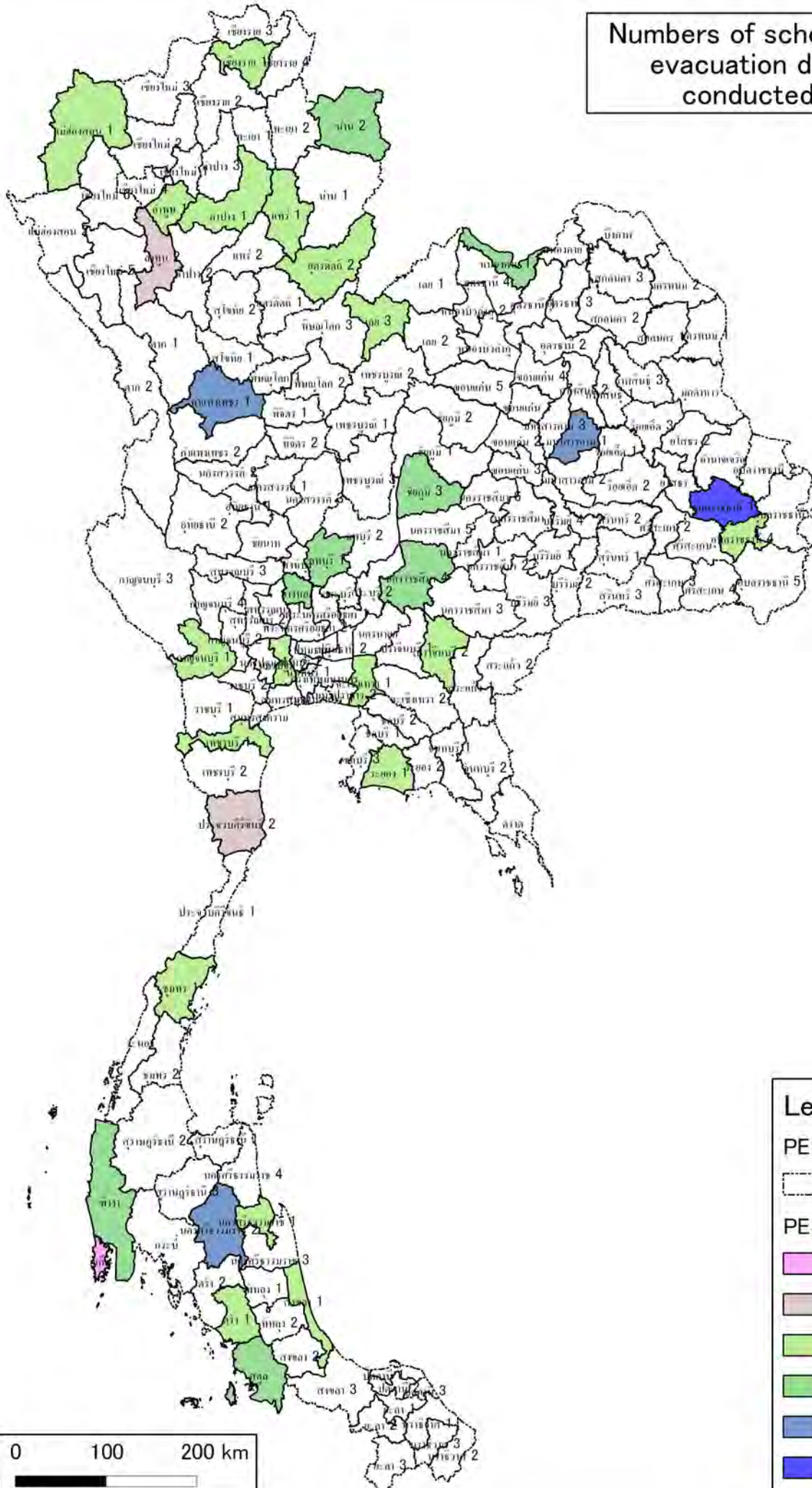
- ที่รวมการชะล้างทั้งหลายดินน้อยมาก (0-2 ตัน/ตร.กม./ปี)
- ที่รวมการชะล้างทั้งหลายดินน้อย (2-5 ตัน/ตร.กม./ปี)
- ที่รวมการชะล้างทั้งหลายดินปานกลาง (5-15 ตัน/ตร.กม./ปี)
- ที่รวมการชะล้างทั้งหลายดินรุนแรง (15-20 ตัน/ตร.กม./ปี)
- ที่รวมการชะล้างทั้งหลายดินรุนแรงมาก (>20 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างทั้งหลายดินน้อยมาก (0-2 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างทั้งหลายดินน้อย (2-5 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างทั้งหลายดินปานกลาง (5-15 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างทั้งหลายดินรุนแรง (15-20 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างทั้งหลายดินรุนแรงมาก (>20 ตัน/ตร.กม./ปี)

Road and Railway

- ทางหลวงสายหลัก
- ทางหลวงสายรอง
- ทางหลวงแผ่นดินสามขาเฉลย
- ทางรถไฟ



Numbers of schools in which evacuation drill will be conducted (Plan)

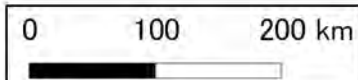


Legend

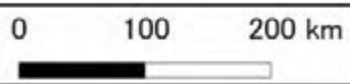
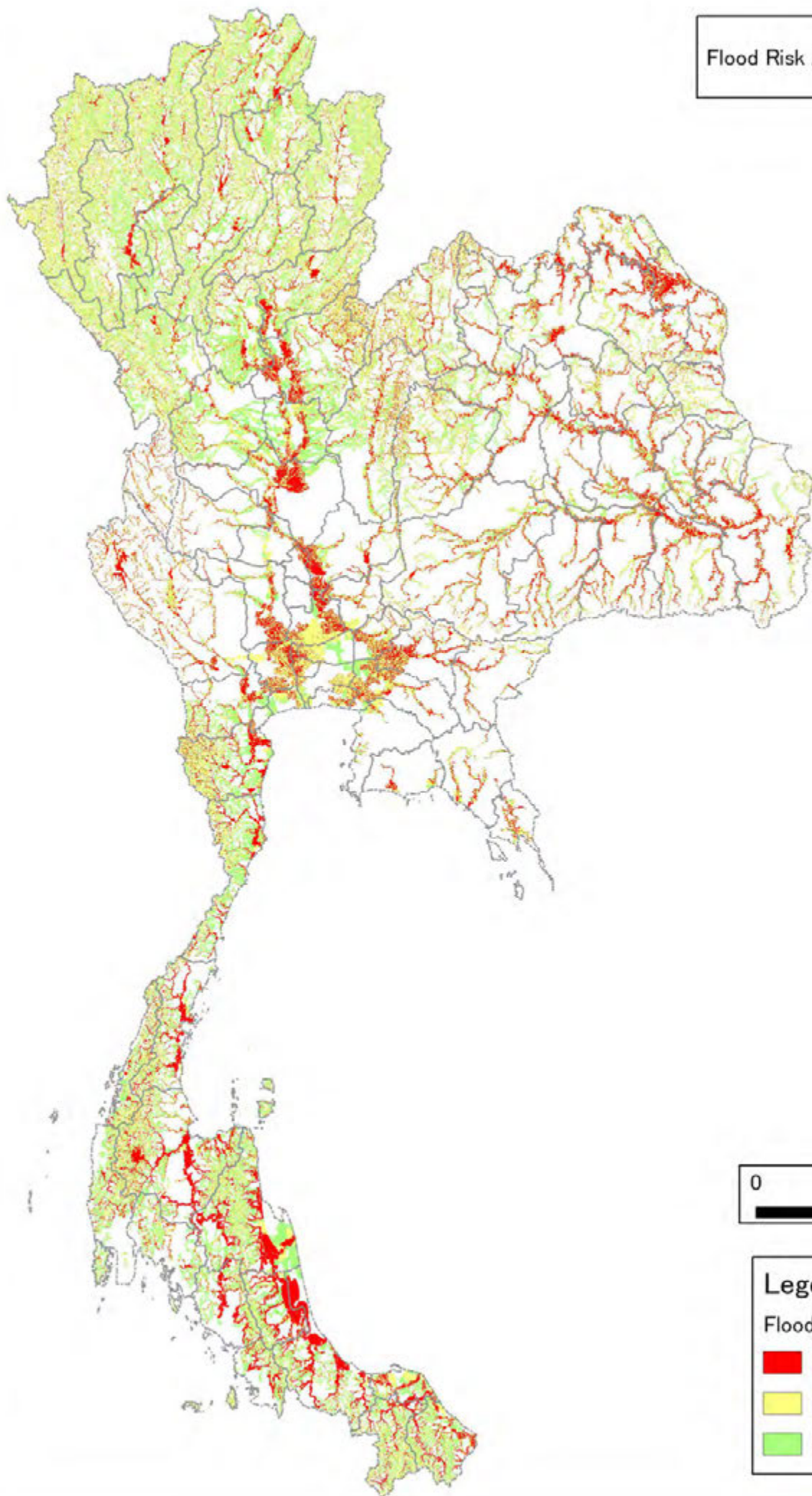
PESAO Boundary
[Dashed line]

PESAO Evacuation drill

- [Light pink] 1 - 50
- [Light brown] 51 - 100
- [Light green] 101 - 150
- [Medium green] 151 - 200
- [Dark green] 201 - 250
- [Blue] 251 - 300



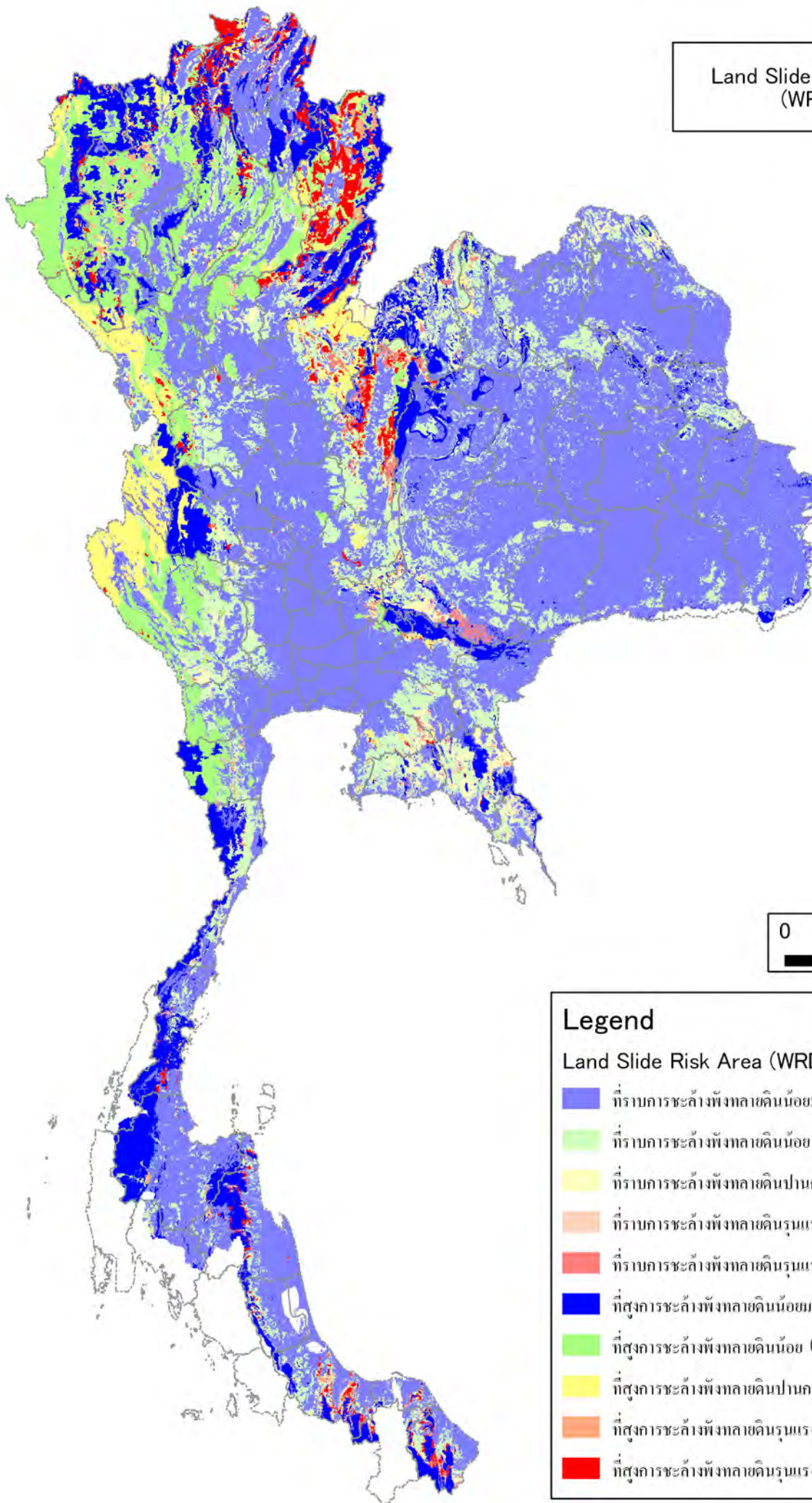
Flood Risk Area (DDPM)



Legend
Flood Risk Area (DDPM)

- Risk 1
- Risk 2
- Risk 3

Land Slide Risk Area
(WRD)



0 100 200 km

Legend

Land Slide Risk Area (WRD)

- ที่ราบการชะล้างพังทลายดินน้อยมาก (0-2 ตัน/ตร.กม./ปี)
- ที่ราบการชะล้างพังทลายดินน้อย (2-5 ตัน/ตร.กม./ปี)
- ที่ราบการชะล้างพังทลายดินปานกลาง (5-15 ตัน/ตร.กม./ปี)
- ที่ราบการชะล้างพังทลายดินรุนแรง (15-20 ตัน/ตร.กม./ปี)
- ที่ราบการชะล้างพังทลายดินรุนแรงมาก (>20 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างพังทลายดินน้อยมาก (0-2 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างพังทลายดินน้อย (2-5 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างพังทลายดินปานกลาง (5-15 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างพังทลายดินรุนแรง (15-20 ตัน/ตร.กม./ปี)
- ที่สูงการชะล้างพังทลายดินรุนแรงมาก (>20 ตัน/ตร.กม./ปี)

