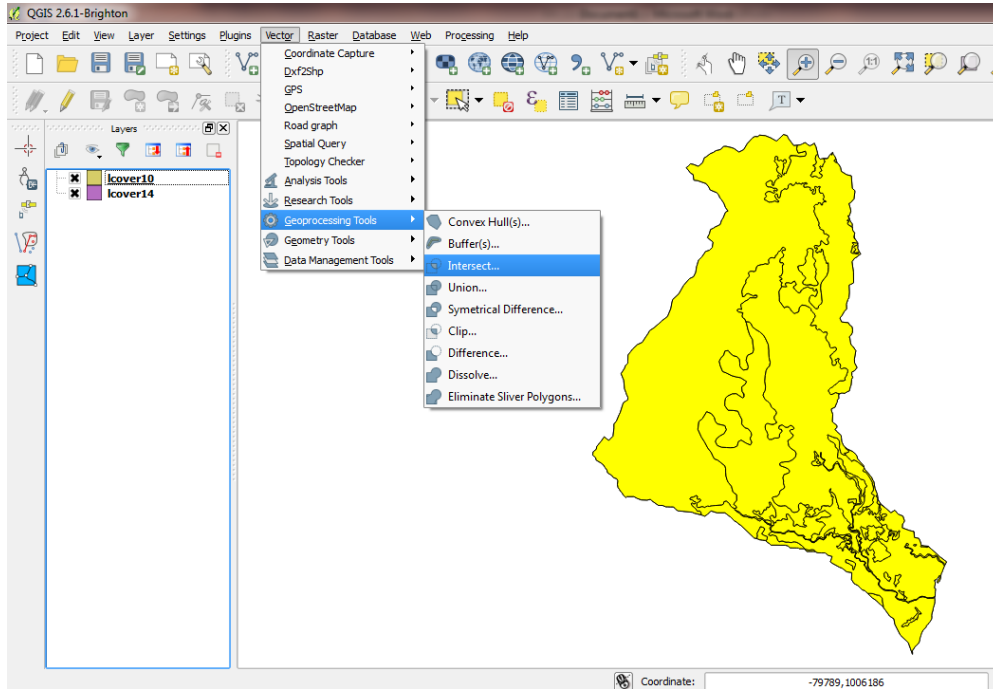
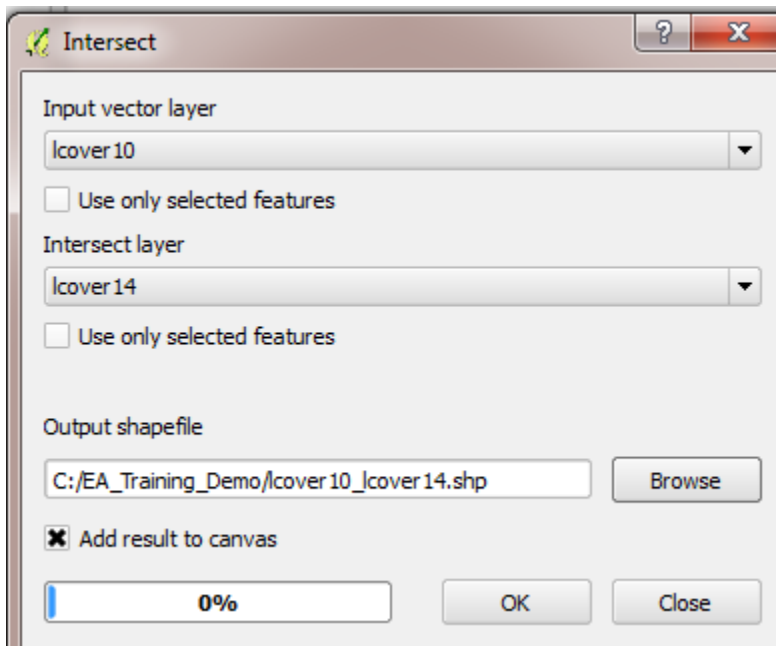


## Land Cover Change Matrix

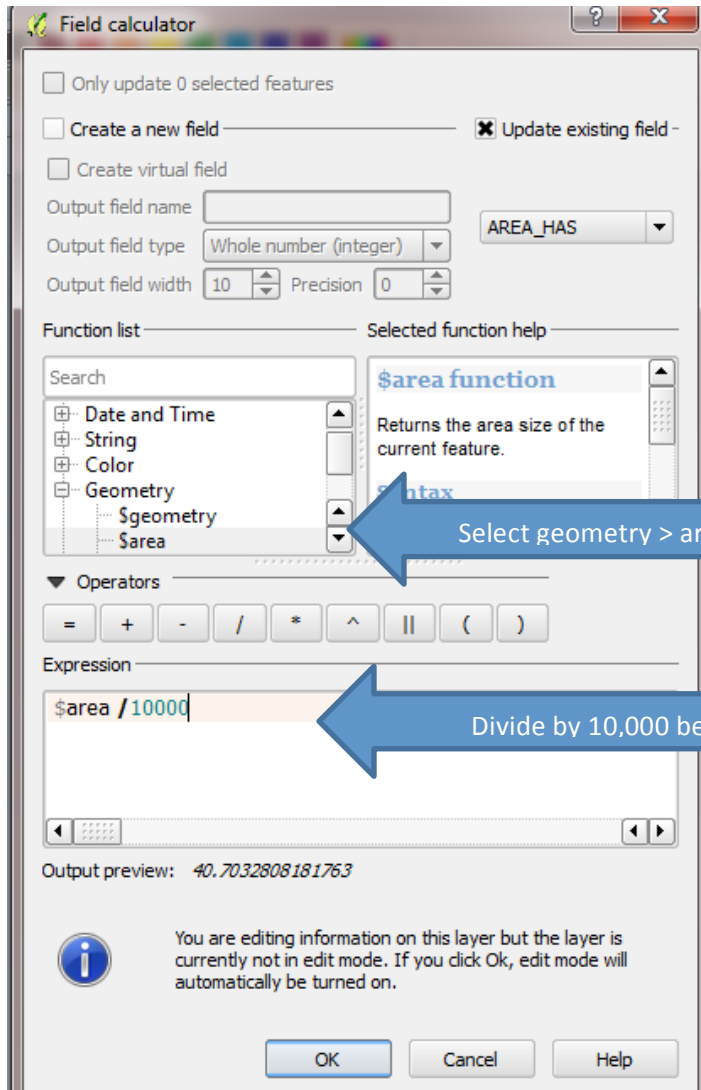
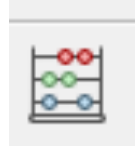
1. Open 'lcover10' and 'lcover14'
2. Intersect the two layers



3. Fill-up the intersect window using guide below



4. Open attribute table of the intersected layer, compute for area by opening field calculator



Update because the column is existing

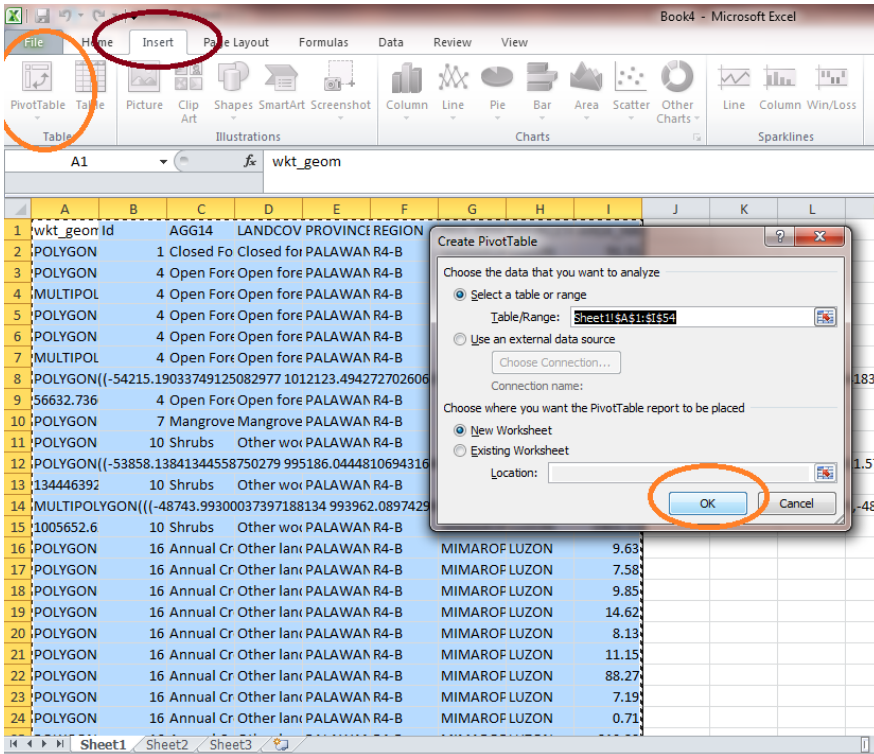
Select column of area

Select geometry > area

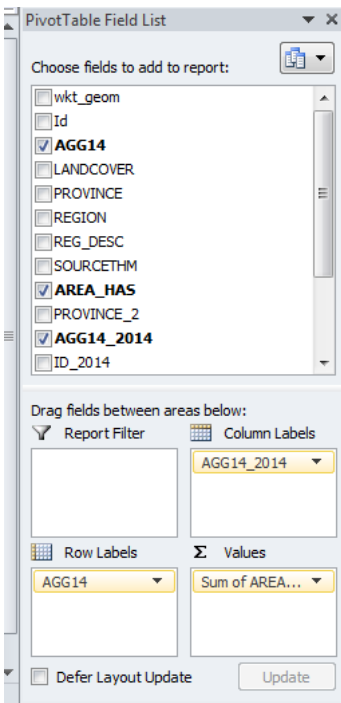
Divide by 10,000 because default is m2

5. Select all (ctrl+a) and copy (ctrl+c) to a spreadsheet (excel)

6. Make a pivot table



7. Arrange table AGG14 (row) AGG14\_2014 (column), add area



Make sure 'sum' is selected and not 'count'

- Copy and paste the table into another sheet (so that we can manipulate it, pivot table can't be manipulated).
- Insert cells to the row label (because in 2010 there are no classification for wooded grassland and bare land)

Row Labels	Annual Cr	Built-up	Closed Fo	Inland Wa	Mangrove	Open Forc	Open/Bar	Perennial	Shrubs	Wooded	Grand Tot
Annual Crop	350	13.08		2.18				142.47	23.45		531.18
Built-up	12.31	114.52		1.33				37.02	0.49		165.67
Closed Forest			50.8			40.7	0				91.5
Inland Water	7.49	2.85		24.21		0.69		34.16	2.53		71.93
Mangrove Forest					12.34			5.2			17.54
Open Forest			40.43	8.15		7627.64	126.77	61.35	322.16	13.31	8199.81
Open/Barren											
Perennial Crop	210.94	77.66		81.74	2.6	5.41	3.64	4506.11	235.6	0.29	5123.99
Shrubs	17.78	8.08	1.49	10.99		266.29	17	329.7	3340.7		3992.03
Wooded grassland											
<b>Grand Total</b>	<b>598.52</b>	<b>216.19</b>	<b>92.72</b>	<b>128.6</b>	<b>14.94</b>	<b>7940.73</b>	<b>147.41</b>	<b>5116.01</b>	<b>3924.93</b>	<b>13.6</b>	<b>18193.65</b>

- Add 'opening' and 'closing' columns. Cut 'Grand Total'

Row Labels	OPENING STOCK, 2010	Annual Cr	Built-up	Closed Fo	Inland Wa	Mangrove	Open Forc	Open/Bar	Perennial	Shrubs	Wooded	CLOSING STOCK, 2014	Grand Total
Annual Crop	531.18	350	13.08		2.18				142.47	23.45			
Built-up	165.67	12.31	114.52		1.33				37.02	0.49			
Closed Forest	91.5			50.8			40.7	0					
Inland Water	71.93	7.49	2.85		24.21		0.69		34.16	2.53			
Mangrove Forest	17.54					12.34			5.2				
Open Forest	8199.81			40.43	8.15		7627.64	126.77	61.35	322.16	13.31		
Open/Barren													
Perennial Crop	5123.99	210.94	77.66		81.74	2.6	5.41	3.64	4506.11	235.6	0.29		
Shrubs	3992.03	17.78	8.08	1.49	10.99		266.29	17	329.7	3340.7			
Wooded grassland													
<b>Grand Total</b>	<b>18193.65</b>	<b>598.52</b>	<b>216.19</b>	<b>92.72</b>	<b>128.6</b>	<b>14.94</b>	<b>7940.73</b>	<b>147.41</b>	<b>5116.01</b>	<b>3924.93</b>	<b>13.6</b>		

- Copy and paste (Transposed) column total into the closing stock

The screenshot shows the 'Paste Special' dialog box in Microsoft Excel. The 'Transpose' option is checked under the 'Paste' section. The dialog is positioned over a spreadsheet where the 'Grand Total' row from the previous table is being pasted into the 'CLOSING STOCK, 2014' column. A red arrow points to the 'CLOSING STOCK, 2014' column header.