

Creating Heatmaps

QGIS Tutorials and Tips



Author

Ujaval Gandhi

<http://google.com/+UjavalGandhi>

Translations by

SongHyun Choi

클러스터 분석은 데이터의 유사성을 기반으로 그룹을 형성하는 방법이다. 클러스터 분석은 데이터 마이닝의 중요한 기법 중 하나이다. 클러스터 분석은 데이터의 유사성을 기반으로 그룹을 형성하는 방법이다. 클러스터 분석은 데이터 마이닝의 중요한 기법 중 하나이다. 클러스터 분석은 데이터의 유사성을 기반으로 그룹을 형성하는 방법이다. 클러스터 분석은 데이터 마이닝의 중요한 기법 중 하나이다.

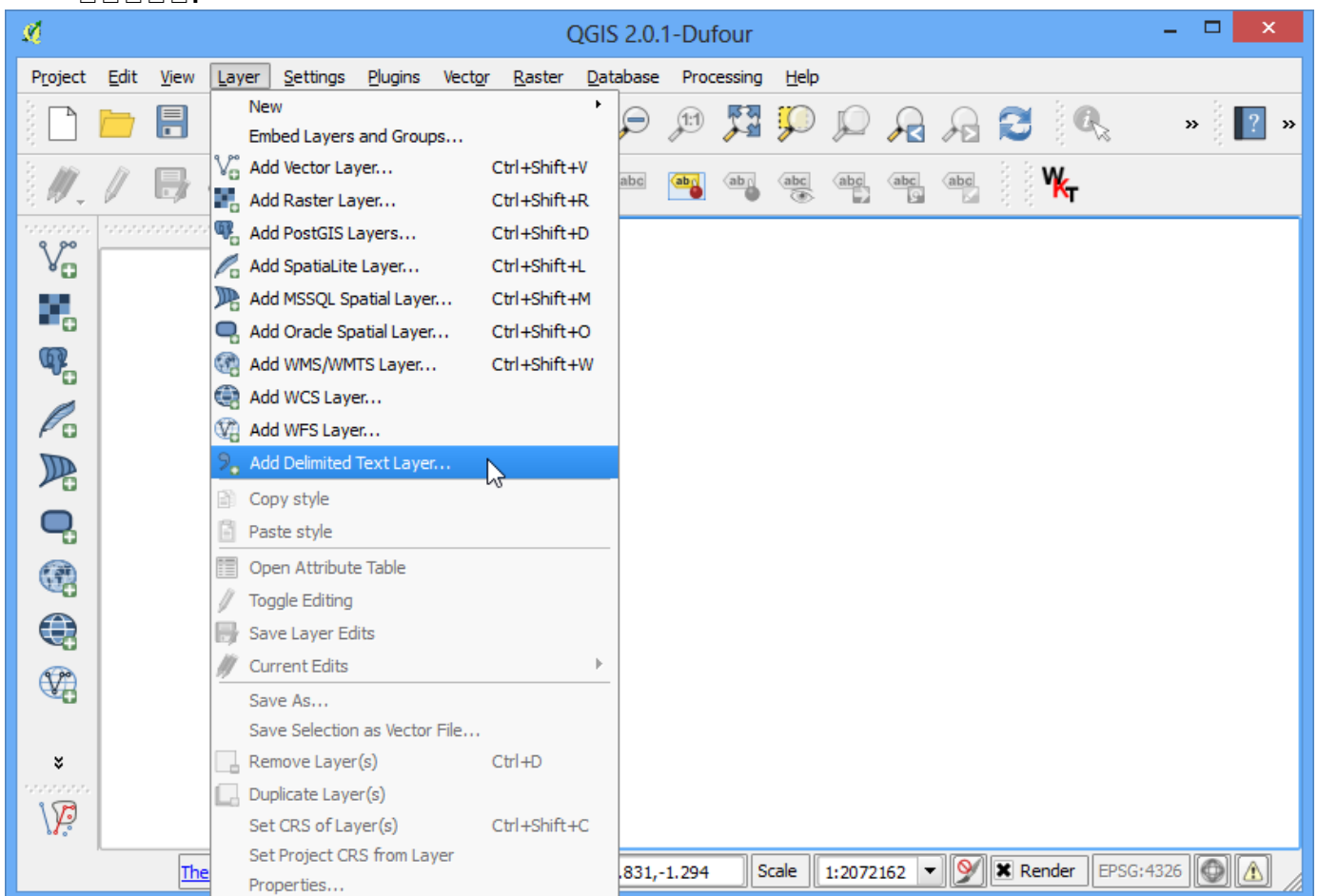
[illegible]

raw data from the Police.uk crime mapping website
<<http://data.london.gov.uk/datastore/package/policeuk-crime-data>>_

Download the [Surrey data](#).

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1. `####` `###` `###` `####` `#####`. `####` `CSV####` `##` `####`. `QGIS` `##` `####` `#####`(`####` `####` `:doc: 'importing_spreadsheets_csv`' #####). ## #### --> #### ### ### #### :menuselection: `Layer --> Add Delimited Text Layer`' #####.`



2. police-uk-crime-data-surrey.txt ☐ ☒ CSV
 (comma separated values) ☐ *Easting* ☐ *Northing* ☒
☐ X ☐ Y ☐
☐ :☐ spatial index ☐
-

Create a Layer from a Delimited Text File

File Name:

Layer name: Encoding:

File format: ☒ CSV (comma separated values) ☐ Custom delimiters ☐ Regular expression delimiter

Record options: Number of header lines to discard: ☒ First record has field names

Field options: ☐ Trim fields ☐ Discard empty fields ☐ Decimal separator is comma

Geometry definition: ☒ Point coordinates ☐ Well known text (WKT) ☐ No geometry (attribute only table)

X field: Y field: ☐ DMS coordinates

Layer settings: ☒ Use spatial index ☐ Use subset index ☐ Watch file

	ID	Month	Reported by	Falls within	Easting	Northing	Location	Crime type	Conte
1	480097	2010-12	Surrey Police	Surrey Police	532773.00	156680.00	On or near Addison Road	Burglary	
2	480098	2010-12	Surrey Police	Surrey Police	498361.00	149806.00	On or near The Oval	Burglary	
3	480099	2010-12	Surrey Police	Surrey Police	498205.00	165251.00	On or near Albury Close	Burglary	
4	480100	2010-12	Surrey Police	Surrey Police	507437.00	174069.00	On or near Sanctuary Road	Burglary	
5	480101	2010-12	Surrey Police	Surrey Police	498205.00	165251.00	On or near Albury Close	Burglary	

3. `guiLabel: 'Close'`

Delimited text file errors

Errors in file C:/Users/ujaval/Downloads/police-uk-crime-data-surrey/police-uk-crime-data-surrey.txt
1969 records discarded due to missing geometry definitions

4. `guiLabel: 'OSGB 1936 / British National Grid'`

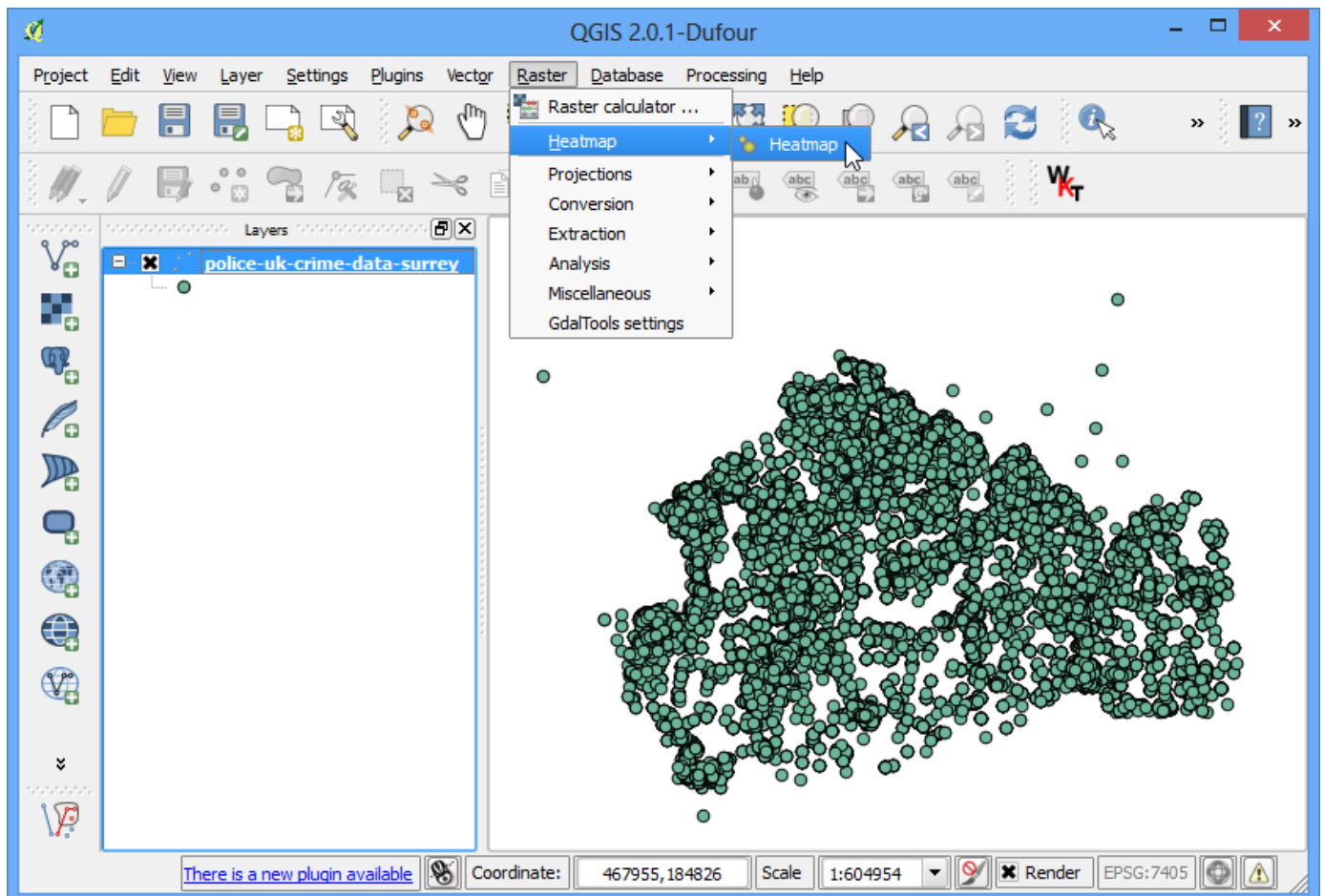


5. □□ QGIS □ □□□ □□□□□ □ □ □□□.

- To create the heatmap, you need to enable a core plugin named *Heatmap*. See [this post](#) to know how to enable built-in plugins. Once you have enabled the plugin, go to Raster › Heatmap › Heatmap.

Warning

The Heatmap plugin has a bug in QGIS 2.8.1. See [this post](#) for workarounds.



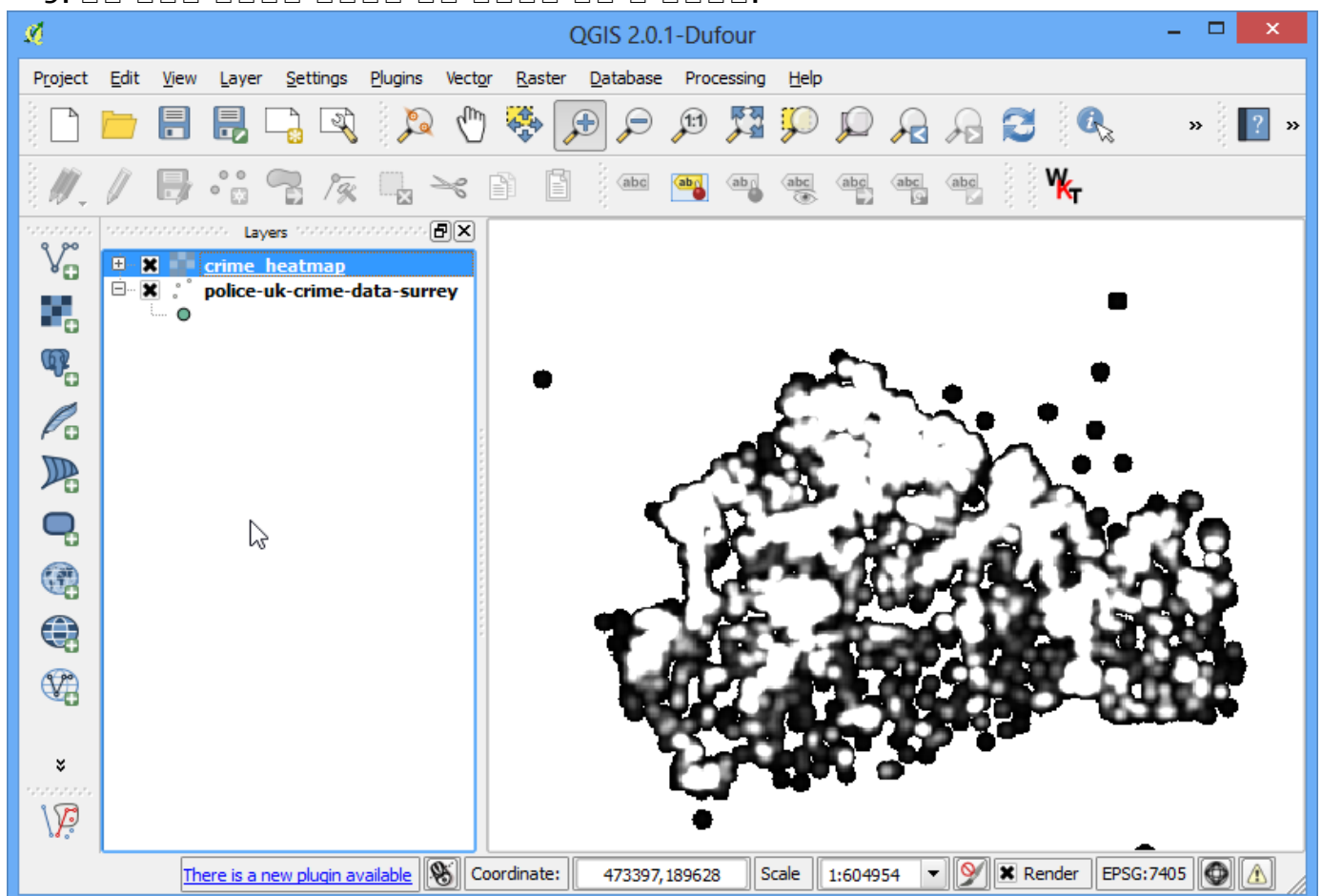
- ```

:guiabel: `Heatmap Plugin`
:guiabel: `Output raster` sms
`crime_heatmap`
:guiabel: `Radius` `1000`
`heat`
:guiabel: `Advanced`
:guiabel: `Cell Size X`
`Cell Size Y` `100`
:guiabel: `OK`

```

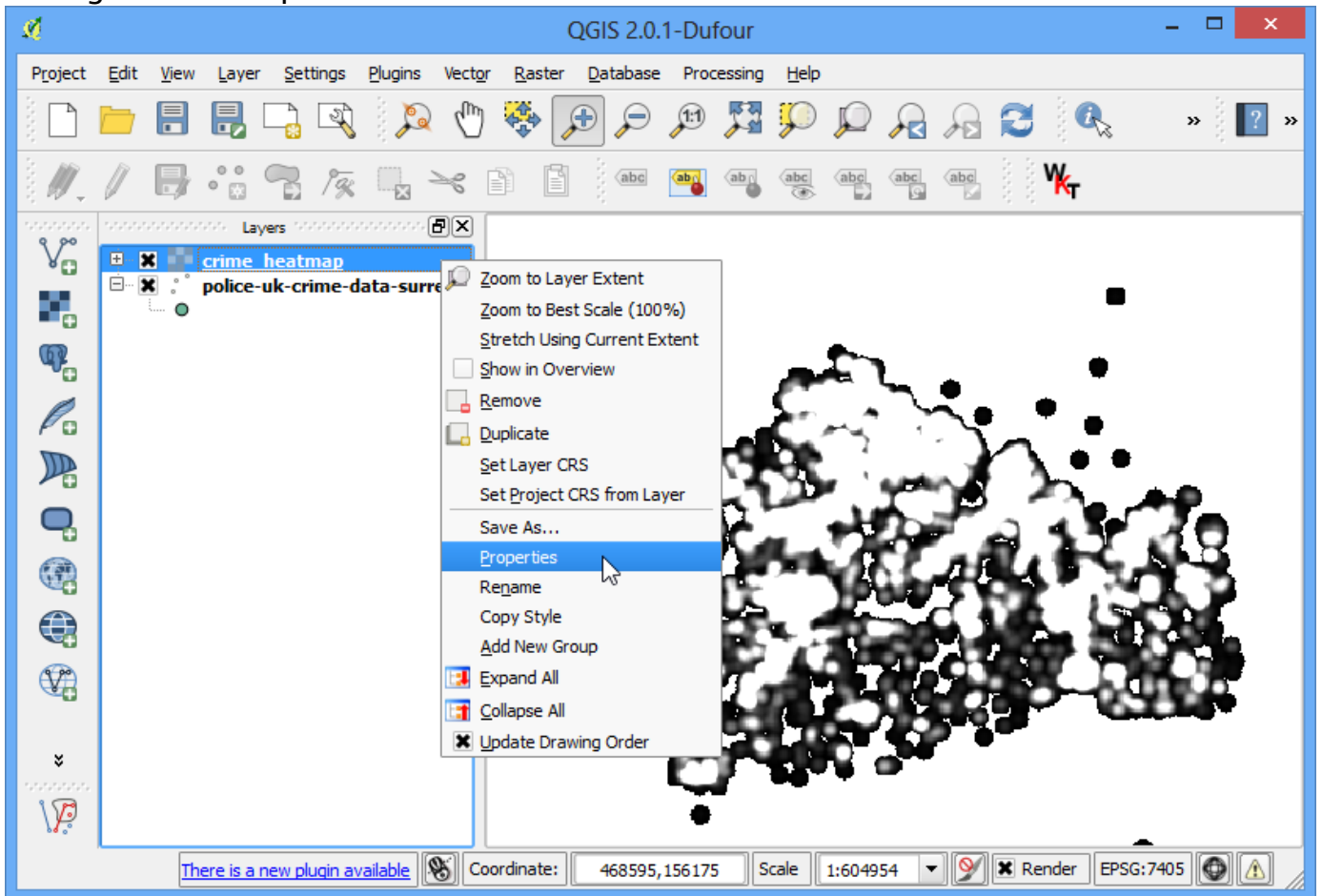


9. □□ □□□ □□□□ □□□□ □□ □□□□ □□ □ □□□□.





10. Click on the 'Properties' button in the context menu.



11. Click on the 'Render' button in the 'Style' dialog.

Click on the 'Singleband pseudocolor' option.

Click on the 'Load min/max values' button.

Click on the 'Accuracy' button.

Click on the 'Actual (slower)' button.

Click on the 'Load' button.

Click on the 'Generate new color map' button.

Click on the 'YlOrRd (Yellow-Orange-Red)' color map.

Click on the 'Classify' button.

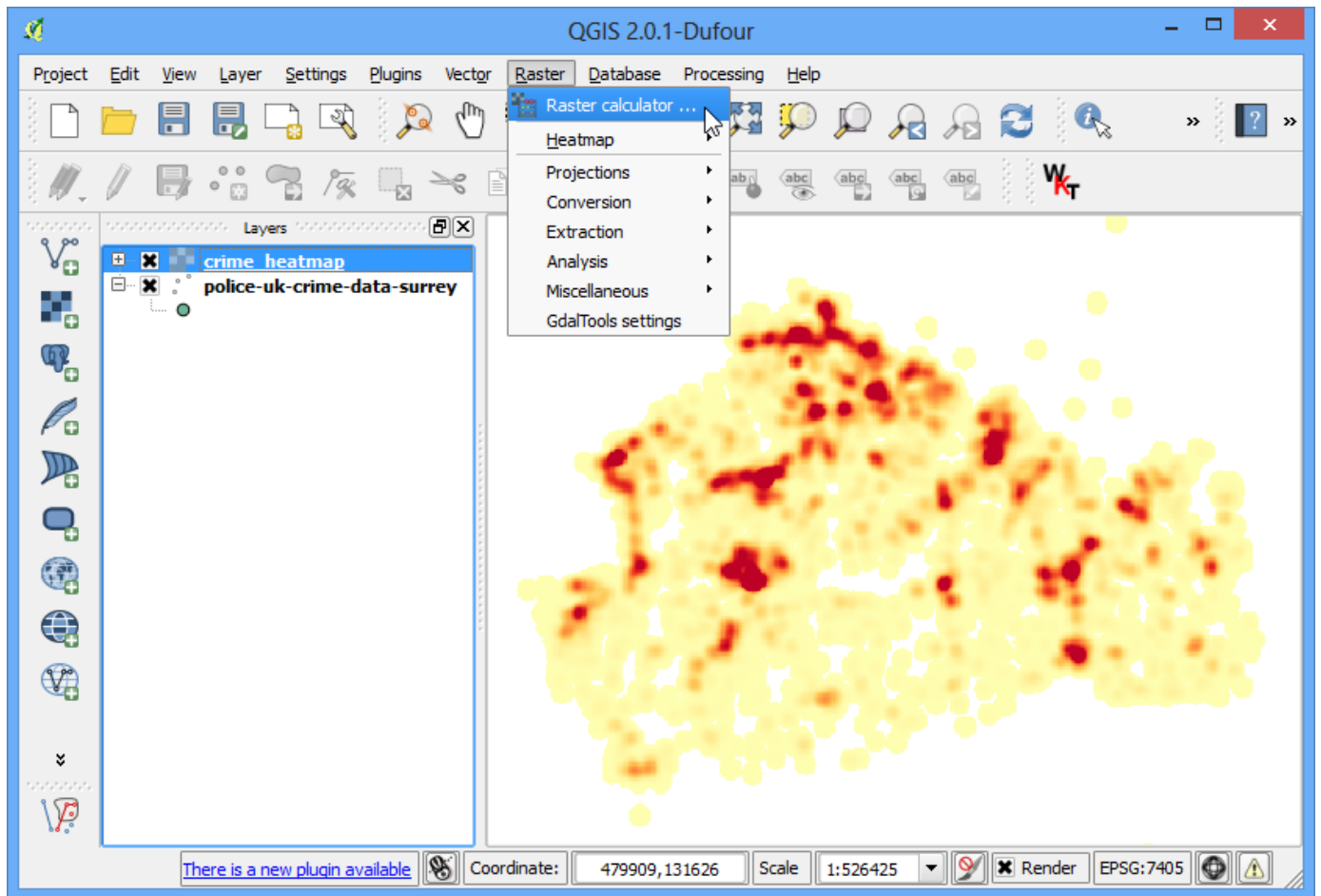
Click on the 'OK' button.



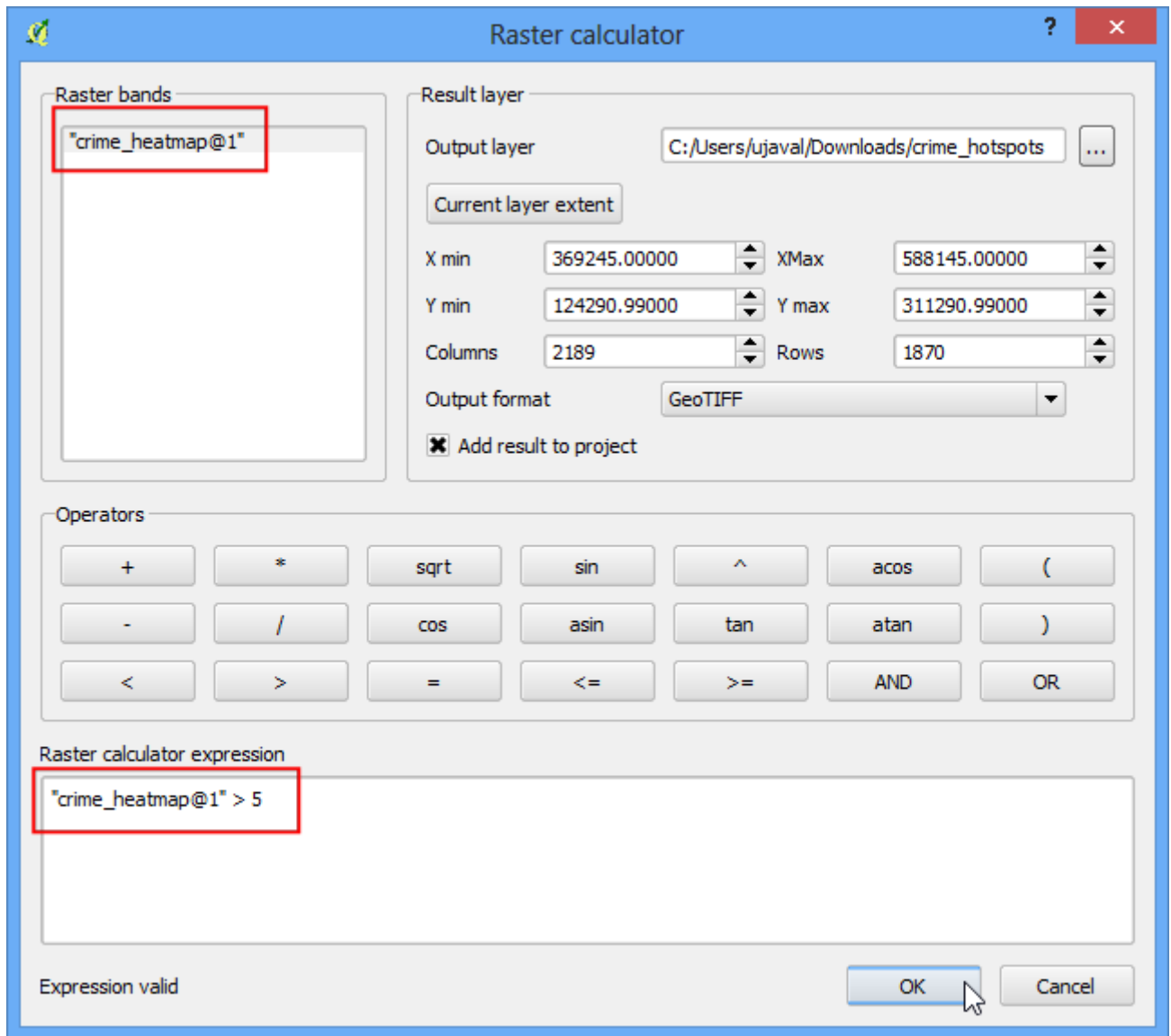




13. □□ □□□□ □□□□□□. □□□ □□□ □□□ □□□□□. □□□ □□□ □ □□□ □□□□□□ □□□□ □□□□. □□□ □□ □□ □□□ □ □ **hotspots** □ □□□□□ □□□□. □ □□□□ □□□ **hotspots** □ □□□□□ □□□□□. □□ □□□ --> □□□ □□□ :menuselection: `Raster --> Raster Calculator` □ □□□□.



14. `crime_hotspots` Raster calculator `crime_hotspots` `crime_heatmap@1` Raster calculator expression `"crime_heatmap@1" > 5` `Add result to project` `OK`



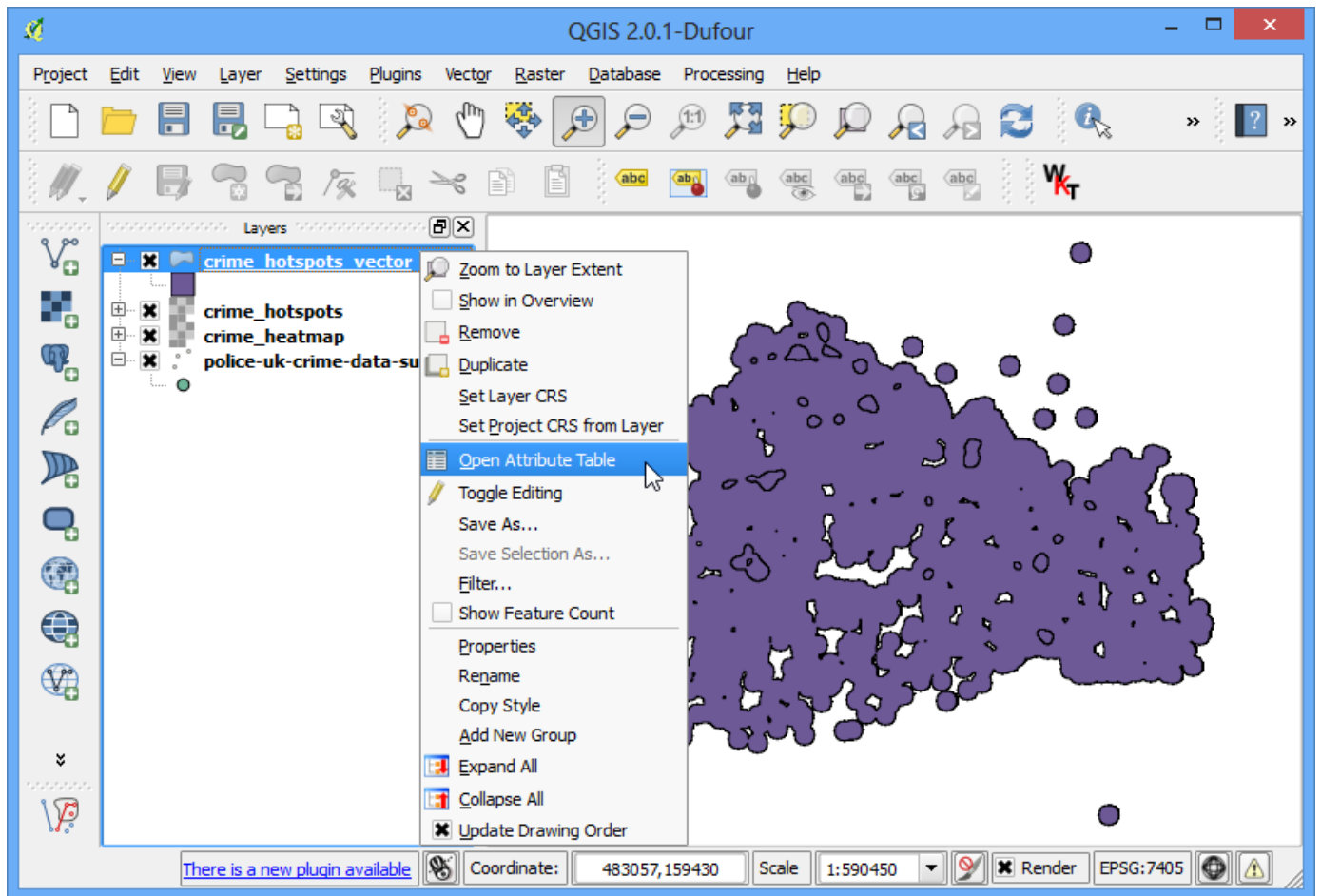
15. QGIS 0.16.0 0.16.0 0.16.0. 0 1 0 0 0. 0.000 5.000 0.00000 0.00000 1.000 0.000 0.000 0.000 0.000. 0.000 --> 0.000 --> 0.000 /0.000 0.000 :menuselection: Raster --> Conversion --> Polygonize (Raster to Vector) 0.000.



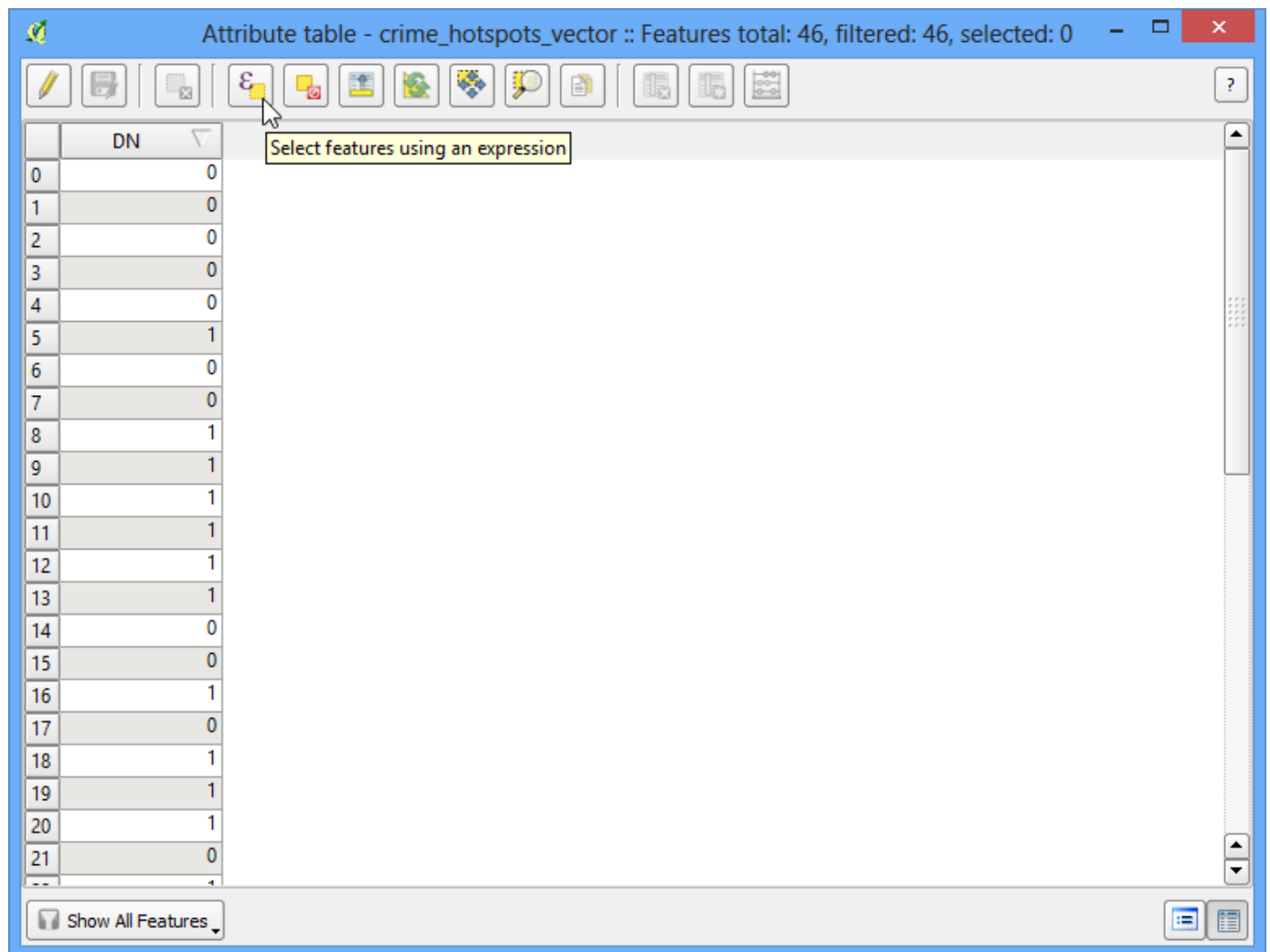
16. Click on crime\_hotspots\_vector` in the Layers panel. Click on :guilabel:`Field name` in the Polygonize dialog. Click on :guilabel:`Load into canvas when finished` in the Polygonize dialog. Click on :guilabel:`OK` in the Polygonize dialog.



17. Click on the 'crime\_hotspots\_vector' layer in the Layers panel. Click on 'Open Attribute Table' in the context menu. Click on '0' in the attribute table. Click on '1' in the attribute table. Click on '0' in the attribute table. Click on 'Open Attribute Table' in the context menu. Click on '0' in the attribute table.

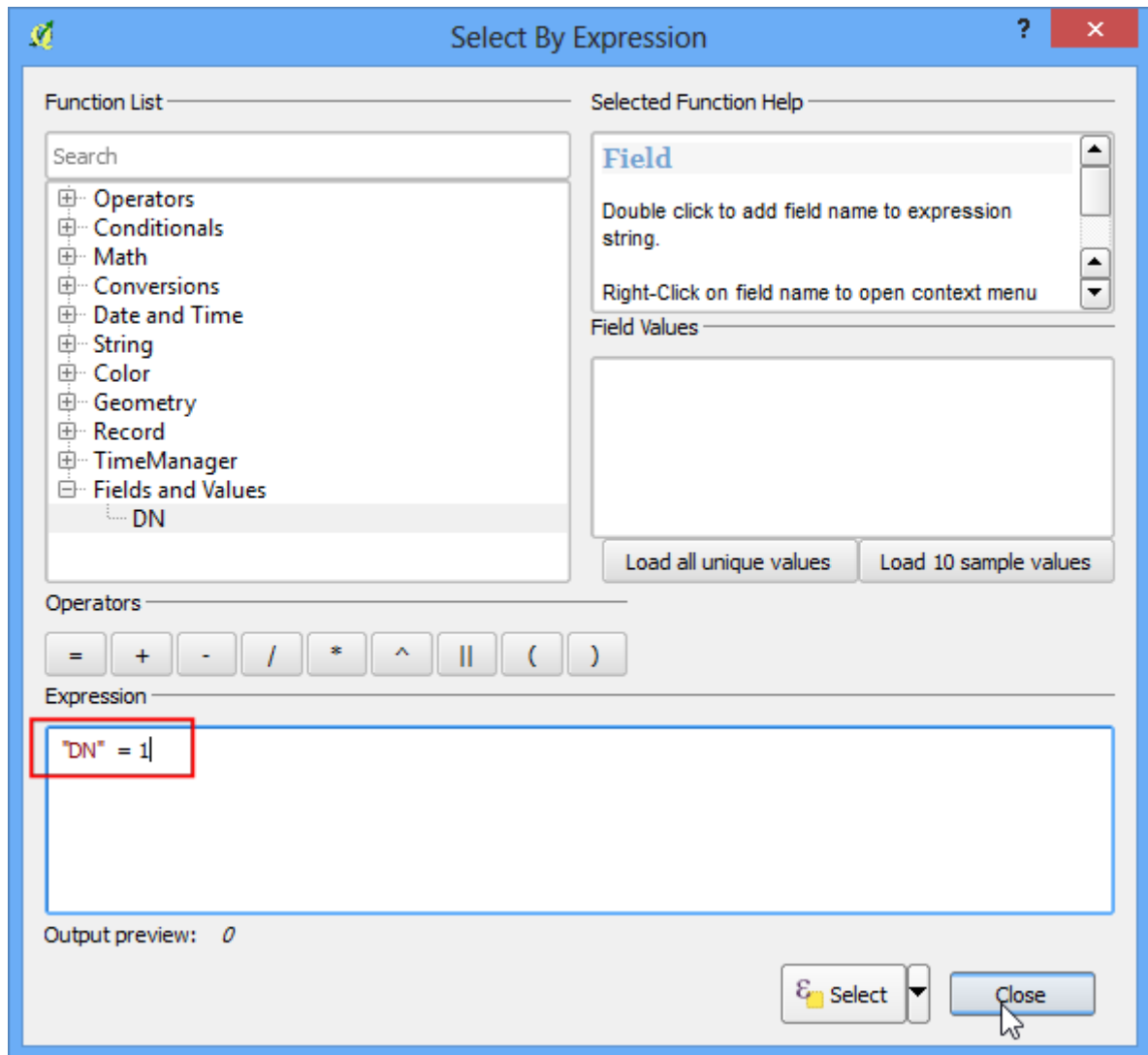


18. `guiabel: `Attribute table`` `guiabel: `Select feature using an expression``



19. `DN = 1` `:guiabel: Select` `:guiabel: Close`





20. QGIS 的 选择 功能 可以 根据 表达式 来 选择 数据。 例如， 我们 可以 选择 所有 具有 属性 值 为 1 的 数据。 在 表达式 框 中 输入 :guiabel: 'Save Selection As...' 并 单击 确定。



21. `crime_clusters` `:guilabel: Add saved file to map` `:guilabel: OK`.



22. 〇〇〇〇〇〇〇. 〇〇 〇〇〇〇 〇〇〇〇〇 〇〇〇 `hotspots` 〇 〇〇〇〇 〇〇〇〇. 〇 〇〇〇〇〇〇 〇〇〇〇〇〇 〇〇〇 \*intelligence\* 〇〇 〇〇〇 〇〇〇 〇〇〇 〇〇 〇〇〇 〇〇 〇〇〇 〇〇 〇〇〇〇〇〇〇〇 〇〇〇 〇 〇〇〇〇.

