

# Basic Raster Styling and Analysis

## QGIS Tutorials and Tips



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Translations by

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□ □□□□□ Columbia University□ [Gridded Population of the World \(GPW\) v3](#) □□□□□ □□□ □□□□. □□, 1990□□ 2000□ □□□ ASCII □□□ □ □□□ □□□□ □□□ □□□□ □□□□□. □□□□ □□ □□□□ □□□ □□ □□□□□□□ □□□□□.

1. Go to the [Population Density Grid, v3 download page](#). Select the Data Attributes as .ascii format, 1° resolution and 1990 year. Click Download. At this point, you may create a free account and login, or use the Guest Download button at the bottom to immediately download the data. Repeat the process for 2000 year data.

Set Overview

Data Download

Maps

Map Services

Metadata

## Downloads

Recommended Citation:

Center for International Earth Science Information Network - CIESIN - Columbia University, and Centro Internacional de Agricultura Tropical - CIAT. 2005. Gridded Population of the World, Version 3 (GPWv3): Population Density Grid. NY: NASA Socioeconomic Data and Applications Center (SEDAC). <http://sedac.ciesin.columbia.edu/data/set/gpw-density>. Accessed DAY MONTH YEAR.

Download this Citation:

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ENW

Use this format for EndNote and RefWorks software.

RIS

Use this format for ProCite, Reference Manager and Zotero software.

Data:

Geography: 

Region » Global

Data Set: 

Population Density Grid

Data Attributes: 

.ascii

1°

1990

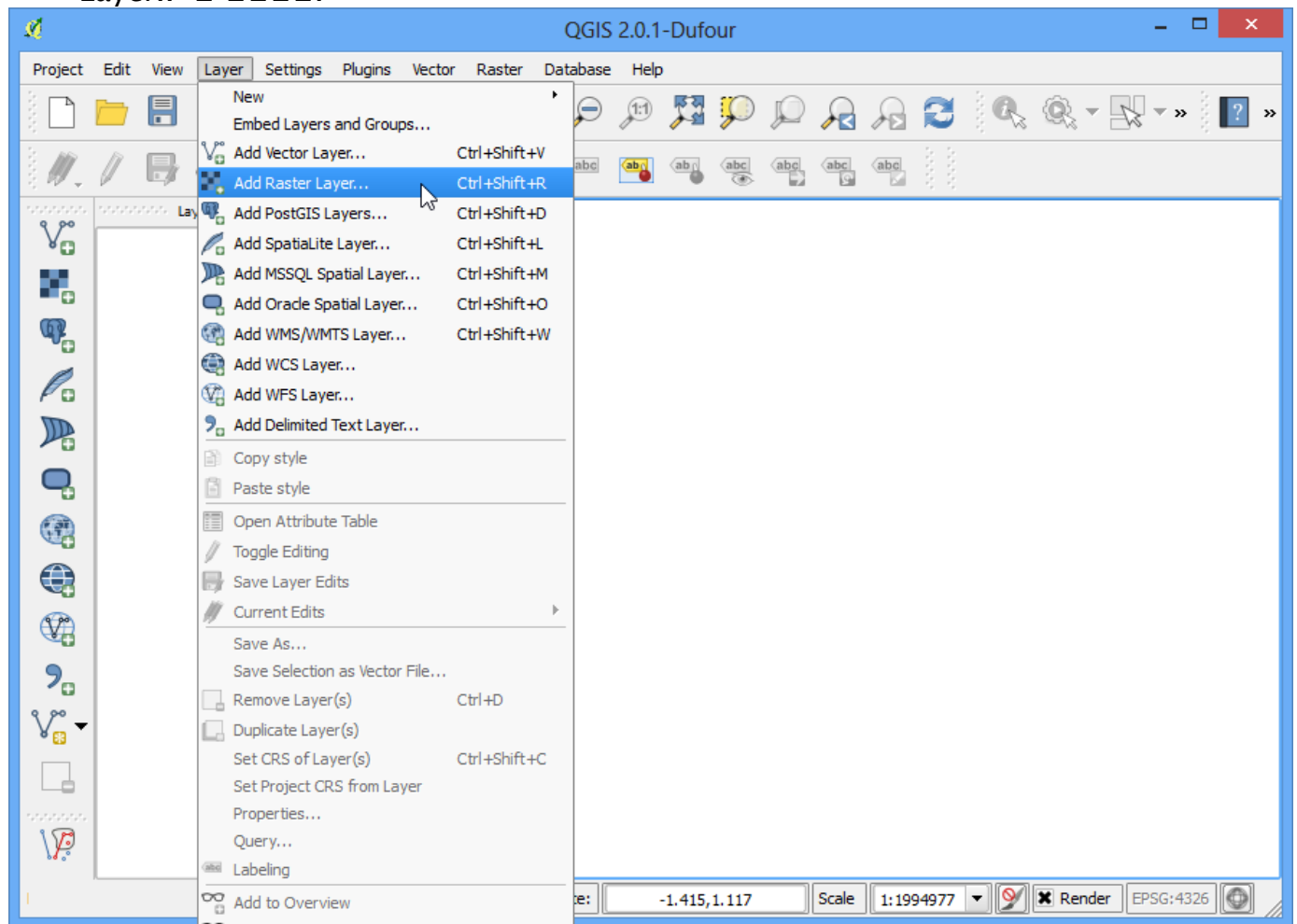
Download

 feedback and support

□ □ □ □ □ [GPW3]

11

2. QGIS → Layer → Layer Properties → Source tab → Add Raster



3. 000000 000000 00000. 00000 :kbd:`Ctrl` 0 00000 000 000000 000000. 0 00000  
0 00 0000 0000 0000 0 000000. 0000 00 0 00 0000 000000 00 00 0000 00000000.



4. □ □□□□□ 2□□ □□□□□□ □□□□□□. □□□□ □□ `a` □ □□□□ UN □□□ □□□ □□ □□□□□. □ □□□□□ □□ □□□□ □□ □□□□. `glds00ag60.asc` □ □□□ □□□□ □□□□□□. :guilabel: `OK` □ □□□□□.



5. □□□□ □□□ CRS □□ □□ □□□□. □□□ □□□□ □□/□□□□□ □□□□□ `EPSG:4326` □ □□□□□.



6. 在弹出的对话框中，选择 WGS 84 坐标系。单击 OK 按钮。



7. 在弹出的对话框中，选择 EPSG:4326 坐标系。单击 OK 按钮。



8. QGIS 的 CRS 对话框如下图所示。请根据对话框中的信息，选择正确的 CRS 名称，并填写 PROJ 字符串。





10. 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. 〇〇〇〇〇 〇〇〇〇 〇〇〇 〇〇〇 〇〇〇〇 〇〇 :guilabel: `Properties` 〇 〇〇〇〇〇. TOC 〇, Table of Contents 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.

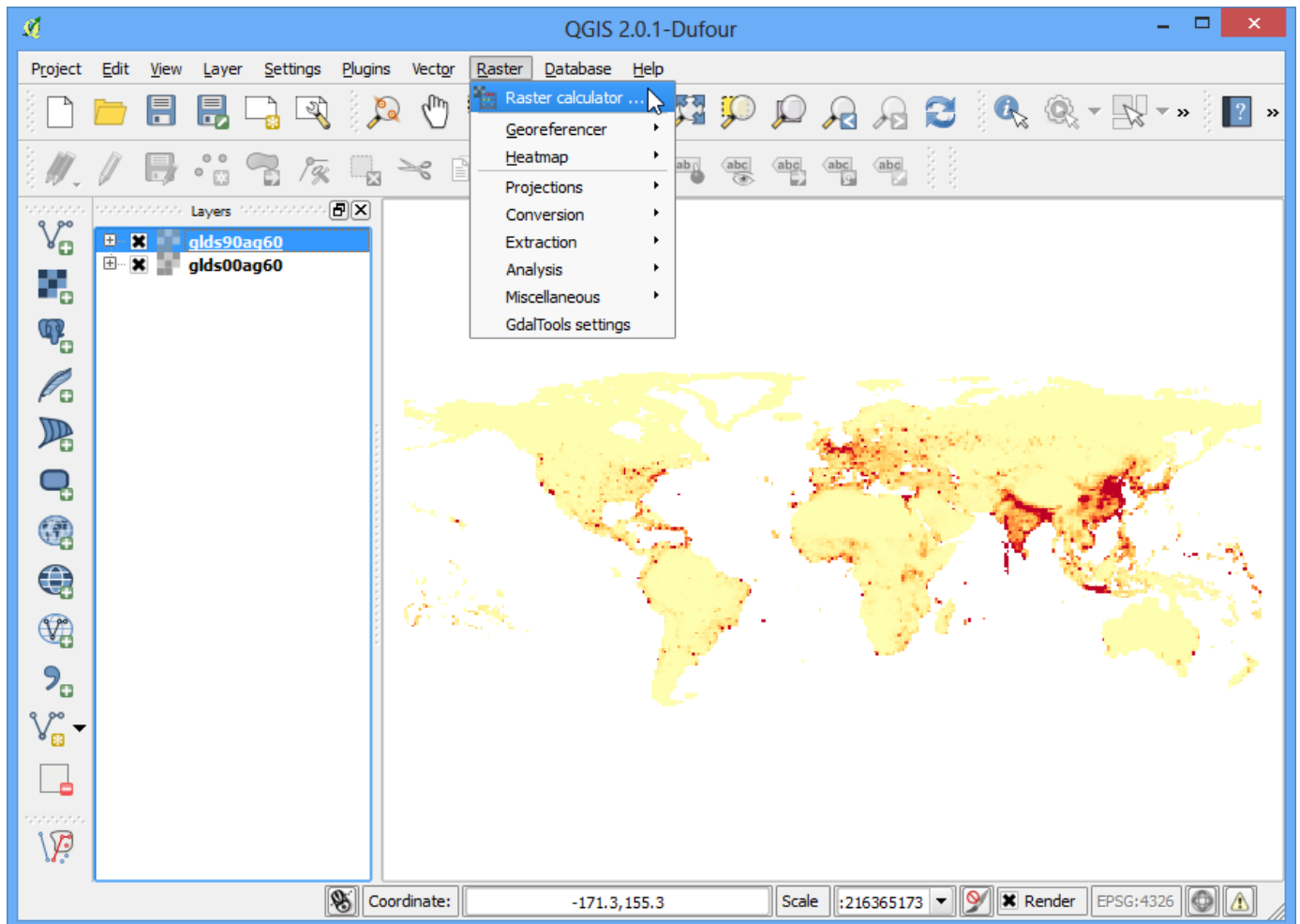






12. QGIS の Style タブで、単バンド擬似カラーでバンド 1 をレンダリングする。カラーinterpola-  
tion は Linear とする。新しいカラーマップを生成する。カラーマップは YlOrRd カラーレ-  
ンで 5 クラスで生成する。最小値は 0、最大値は 440.32 とする。累積パーセンタ-  
ジカットで最小値と最大値を決定する。累積パーセンタジカットは 2.0 から 98.0% とする。





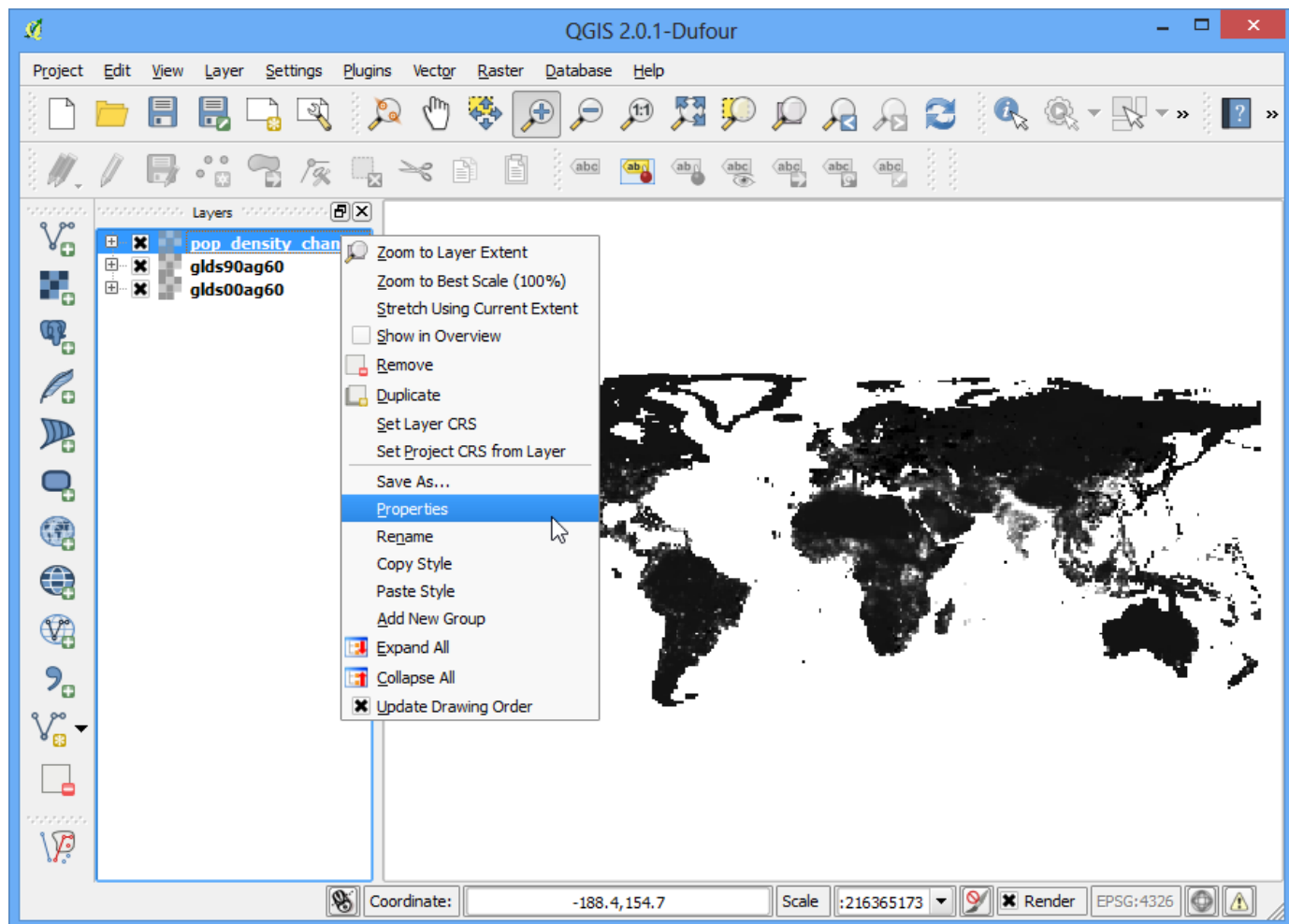
14. In the Raster bands section, you can select the layer by double-clicking on them. The bands are named after the raster name followed by @ and band number. Since each of our rasters have only 1 band, you will see only 1 entry per raster. The raster calculator can apply mathematical operations on the raster pixels. In this case we want to enter a simple formula to subtract the 1990 population density from 2000. Enter `glds00ag60@1 - glds90ag60@1` as the formula. Name your output layer as `pop_density_change_2000_1990.tif` and check the box next to Add result to project. Click OK.



15. □ □ □ □ □ □ □ □ QGIS□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □.



16. `pop_density_change_2000_1990`, `pop_density_change_2000_1990`.  
 :guiLabel: Properties



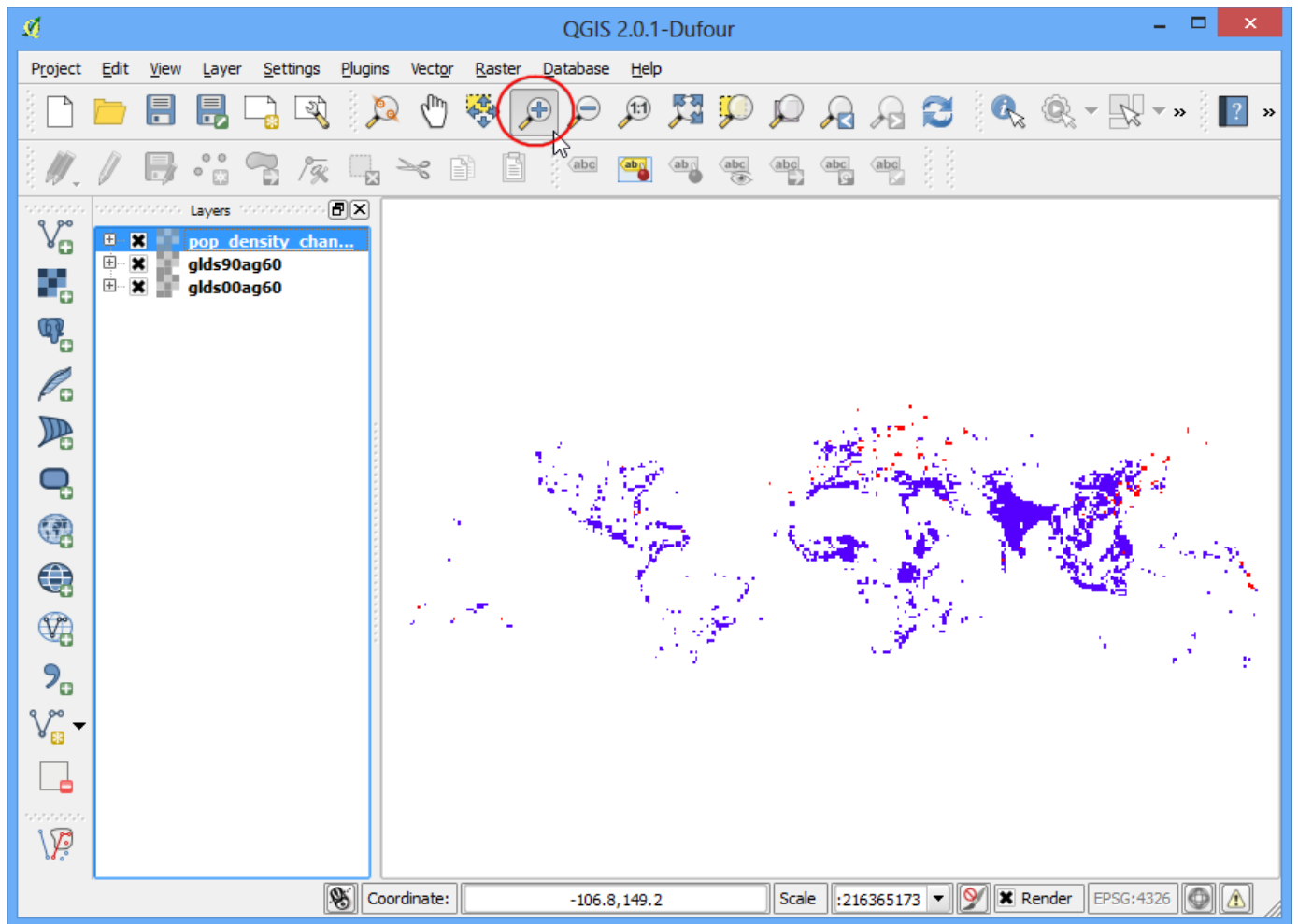
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18. 00 000 Style 000 000. 00 000 :guilabel: `Band Rendering` 00 00 00
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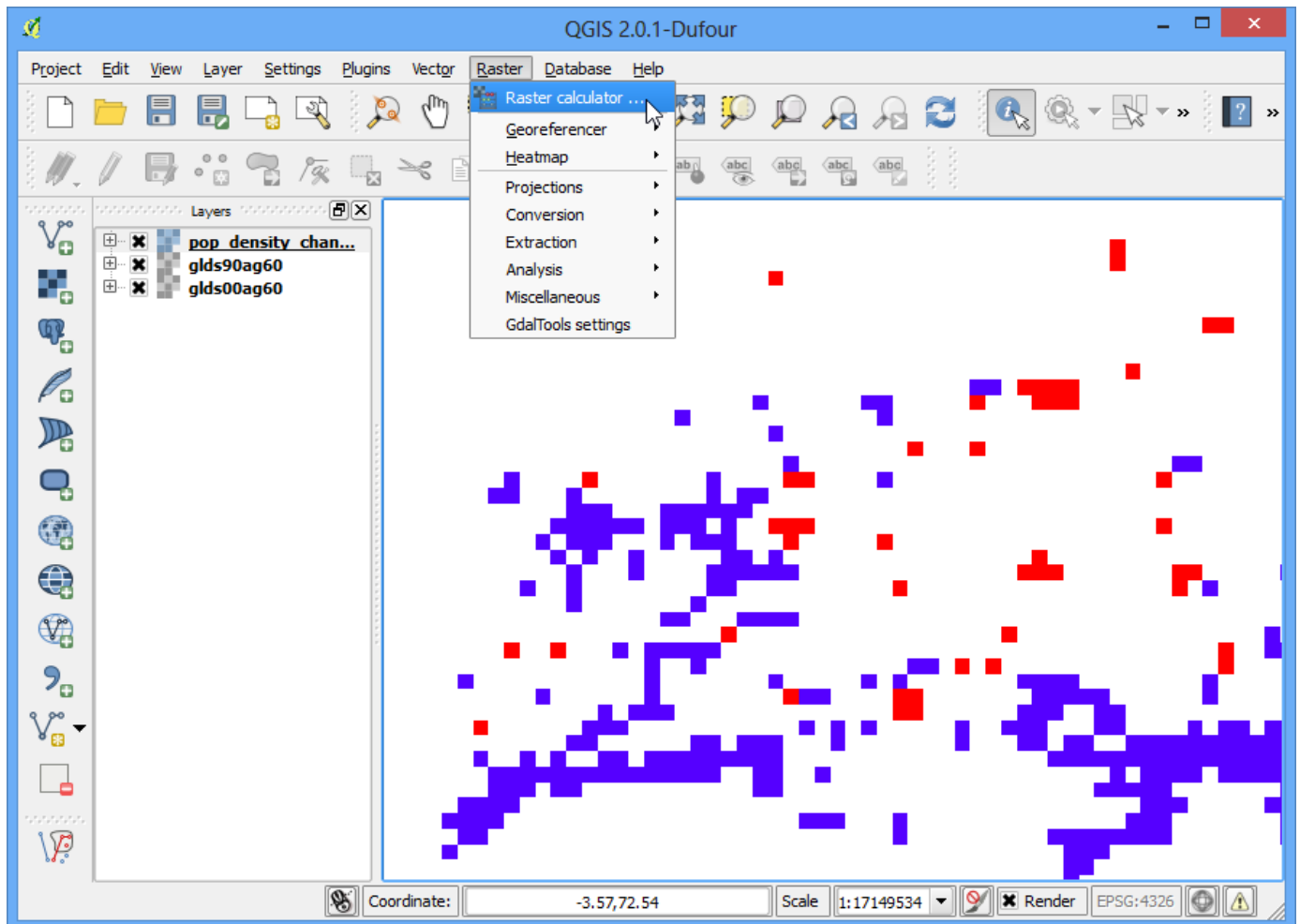




20. `guiabel: 'Identify'` 工具图标, 用于识别地图上的要素。  
 该工具允许用户点击地图上的要素并查看其属性。

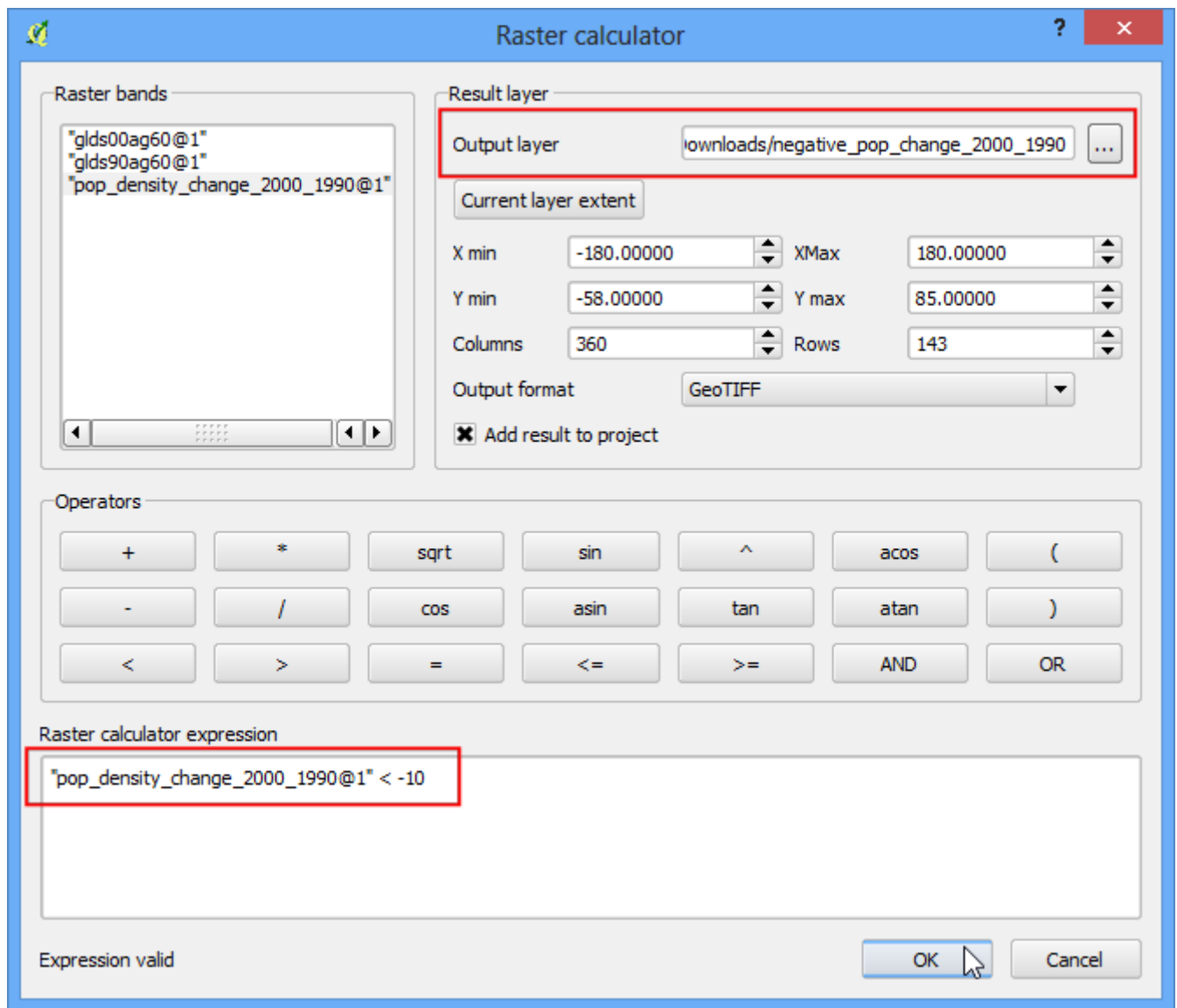


21. `menuselection: Raster --> Raster calculator`



22. Enter the expression as shown below What this expression will do is set the value of the pixel to 1 if it matches the expression and 0 if it doesn't. So we will get a raster with pixel value of 1 where there was negative change and 0 where there wasn't. Name the output layer as *negative\_pop\_change\_2000\_1990* and check the box next to Add result to project. Click OK.

```
pop_density_change_2000_1990@1 < -10
```



23. □□ □□□ □□□□ □□□□□□□□. □□□ □□□ □□□ □ □□ □□ :guilabel: `Properties` □  
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