

# Basic Raster Styling and Analysis

## QGIS Tutorials and Tips



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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.

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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 ▾

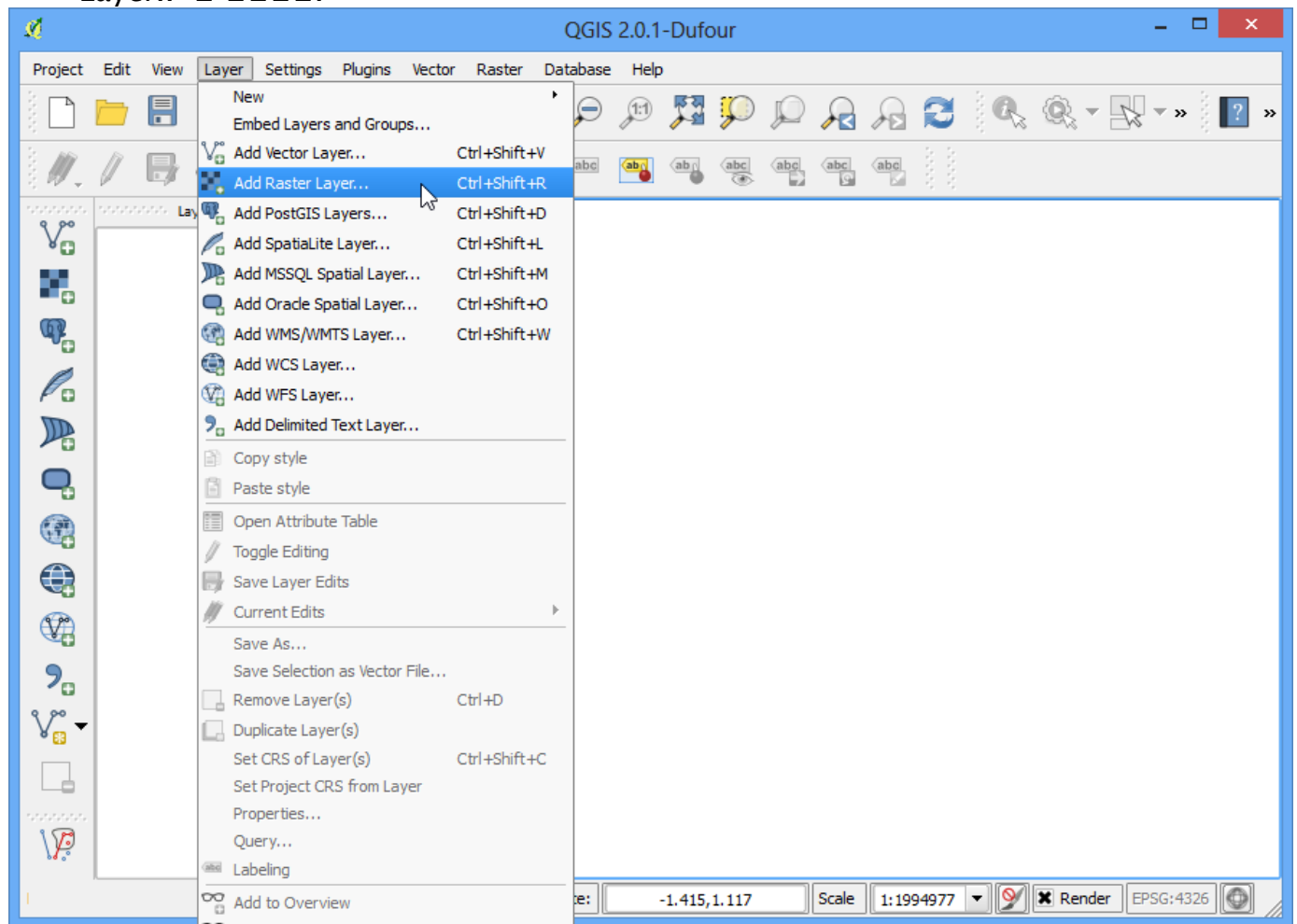
Download

 feedback and support

□ □ □ □ □ [GPW3]

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2. QGIS → Layer → 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.



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



6. 在弹出的对话框中，选择 WGS 84 坐标系，并勾选“使用默认投影”。



7. 在弹出的对话框中，选择 EPSG:4326 坐标系。



8. QGIS 中，如何设置坐标参考系统？请描述其步骤。





10. 00000 000 00 00 000 00 000 000 0000 0 000 0000. 00000 0000 000  
 000 0000 00 :guilabel: `Properties` 0 00000. TOC 0, Table of Contents00  
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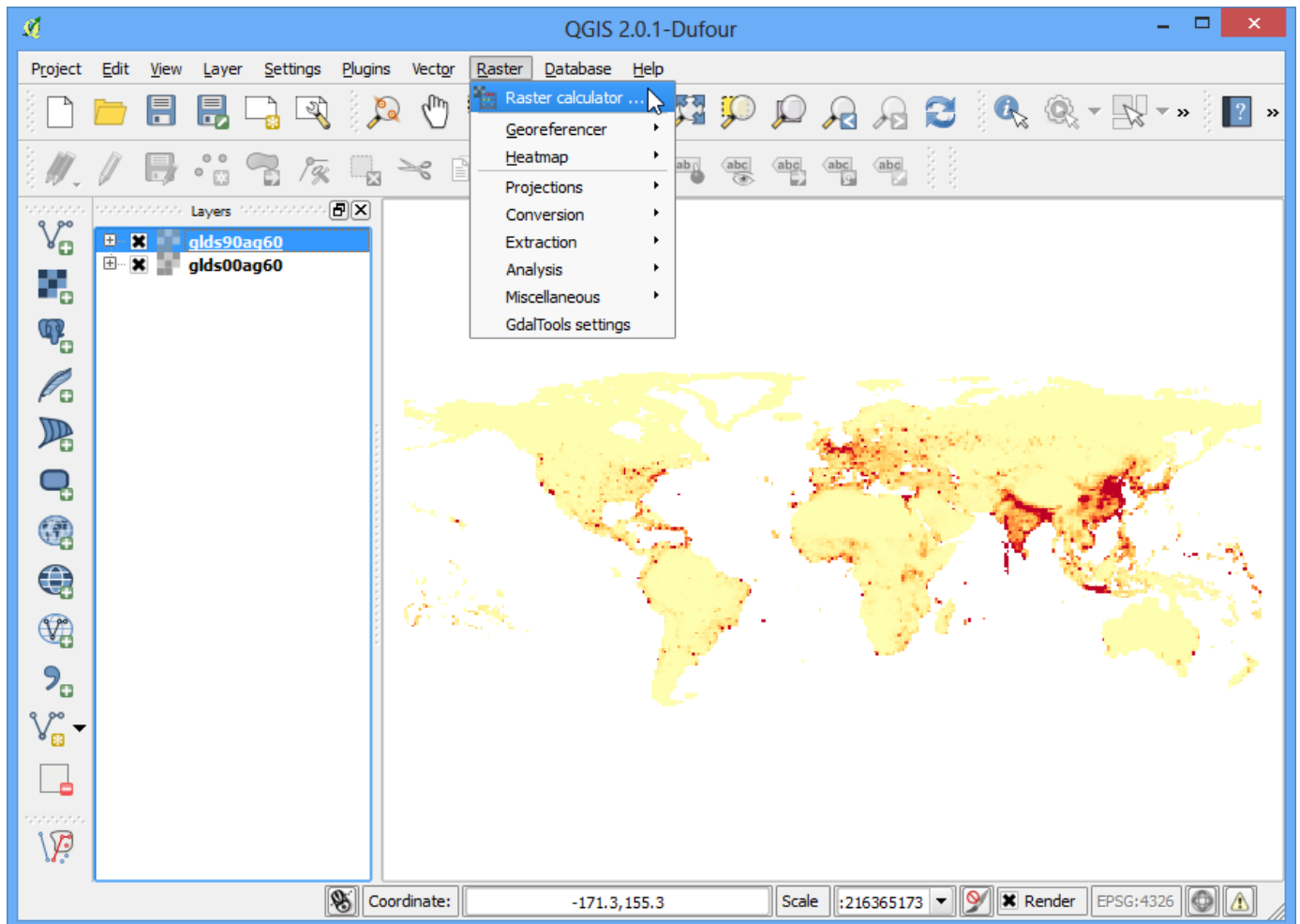






12. QGIS の Style タブで、単バンド擬似カラーでバンド 1 をレンダリングする。カラーマップを生成し、累積カウントカットで 2.0 から 98.0% の範囲で分類する。範囲を全範囲とし、推定（高速）の精度で分類する。





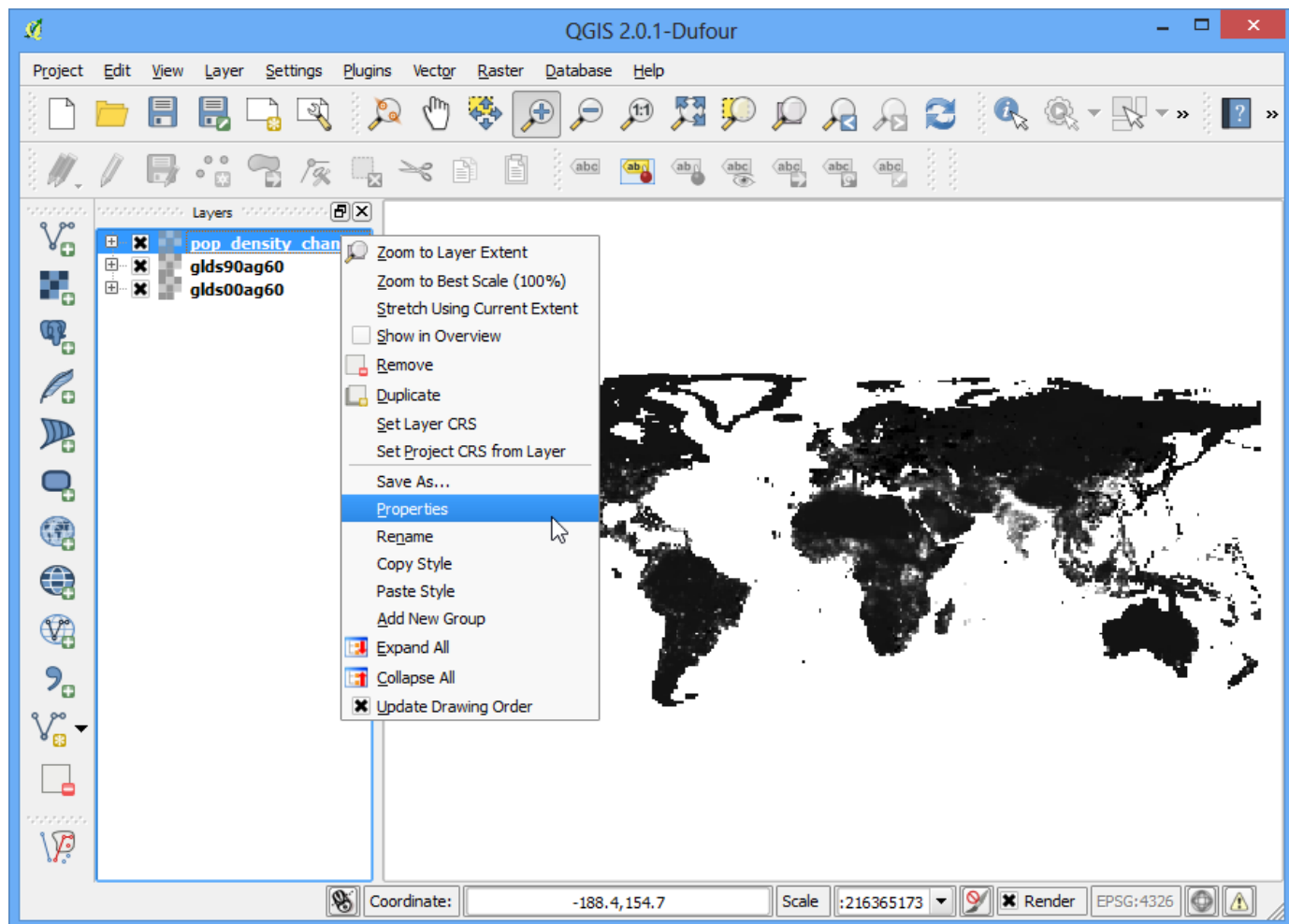
14. In the Raster bands section, you can select the layer by double-clicking on them. The bands are named after the raster name followed by @ and band number. Since each of our rasters have only 1 band, you will see only 1 entry per raster. The raster calculator can apply mathematical operations on the 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`.  
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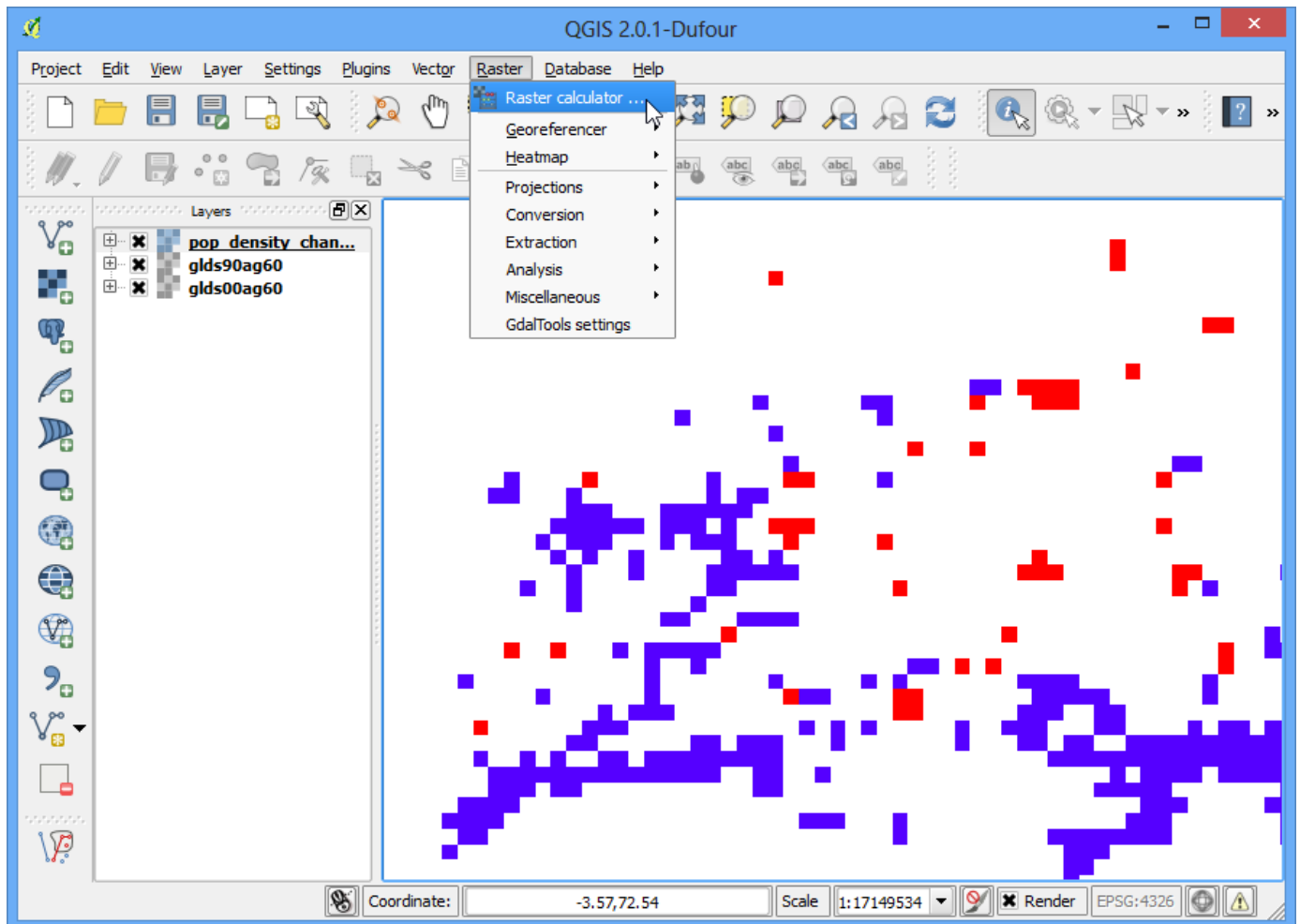






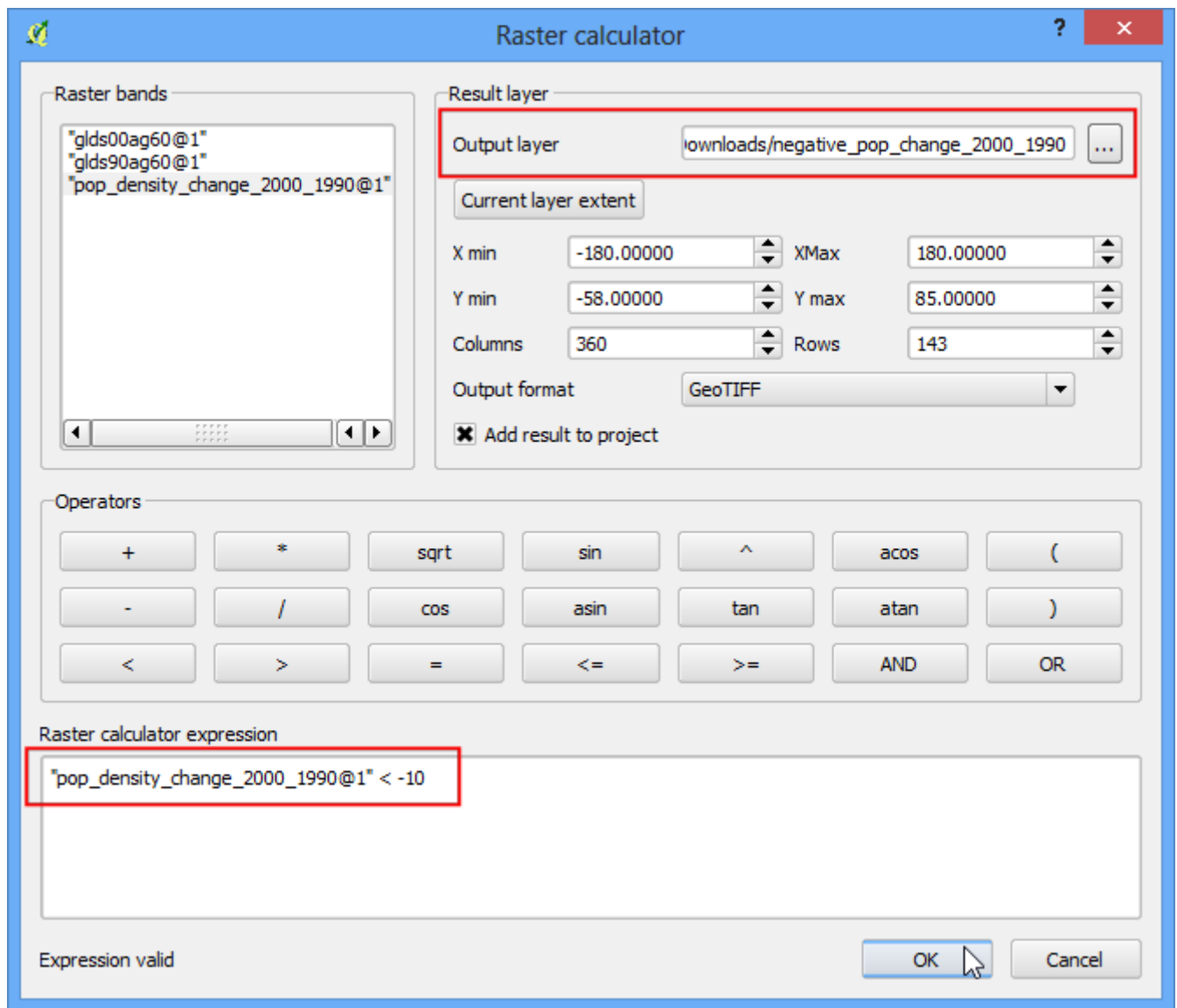


21. `menuselection: Raster --> Raster calculator`



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. 00 000 0000 0000000. 000 000 000 0 00 00 :guilabel: `Properties` 0
00000. 000 :guilabel: `Transparency` 000 0000 no data value
:guilabel: `Additional no data value` 0 000000. 000 000 0 00 00 00 00
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24. □□ □□□□□ □□□ □□□ □ □ □□□□.

