

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 ▾

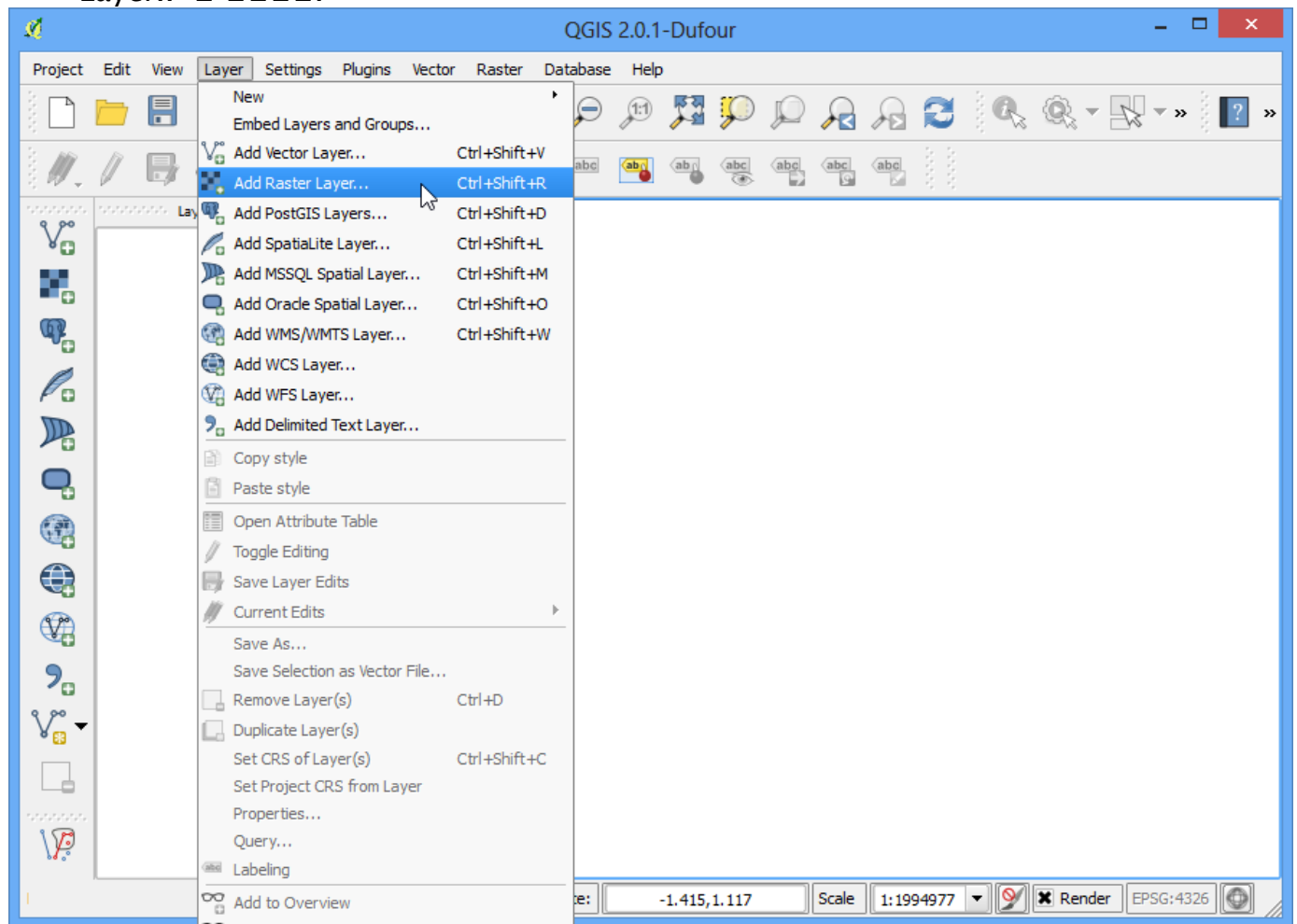
Download

 feedback and support

□ □ □ □ □ [GPW3]

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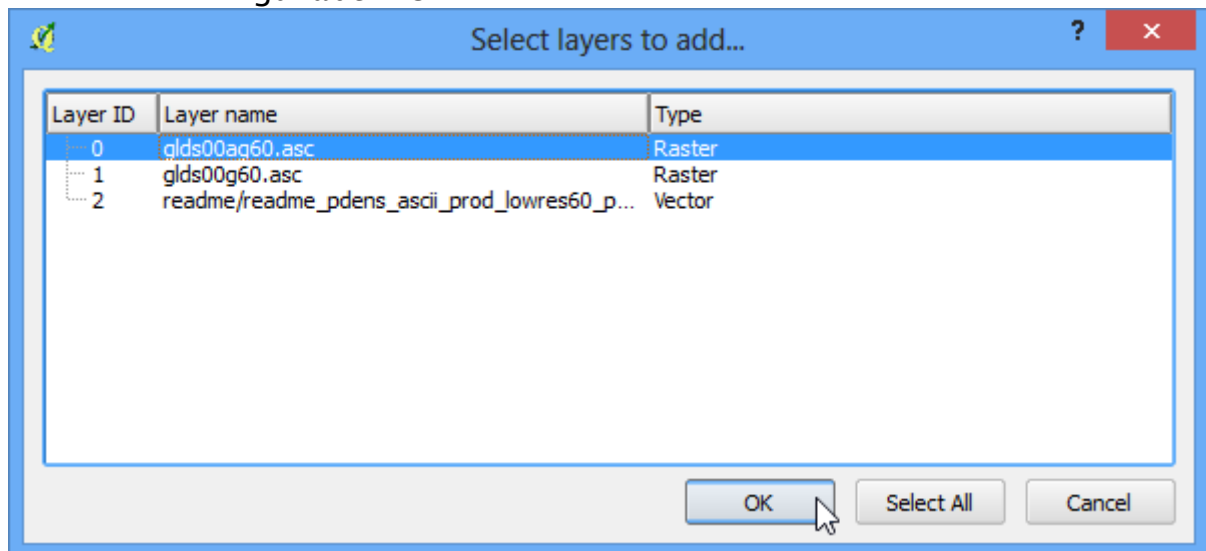
2. QGIS → Layer → Add Raster



3. 000000 000000 00000. 00000 :kbd:`Ctrl` 0 00000 000 000000 000000. 0 00000
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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。



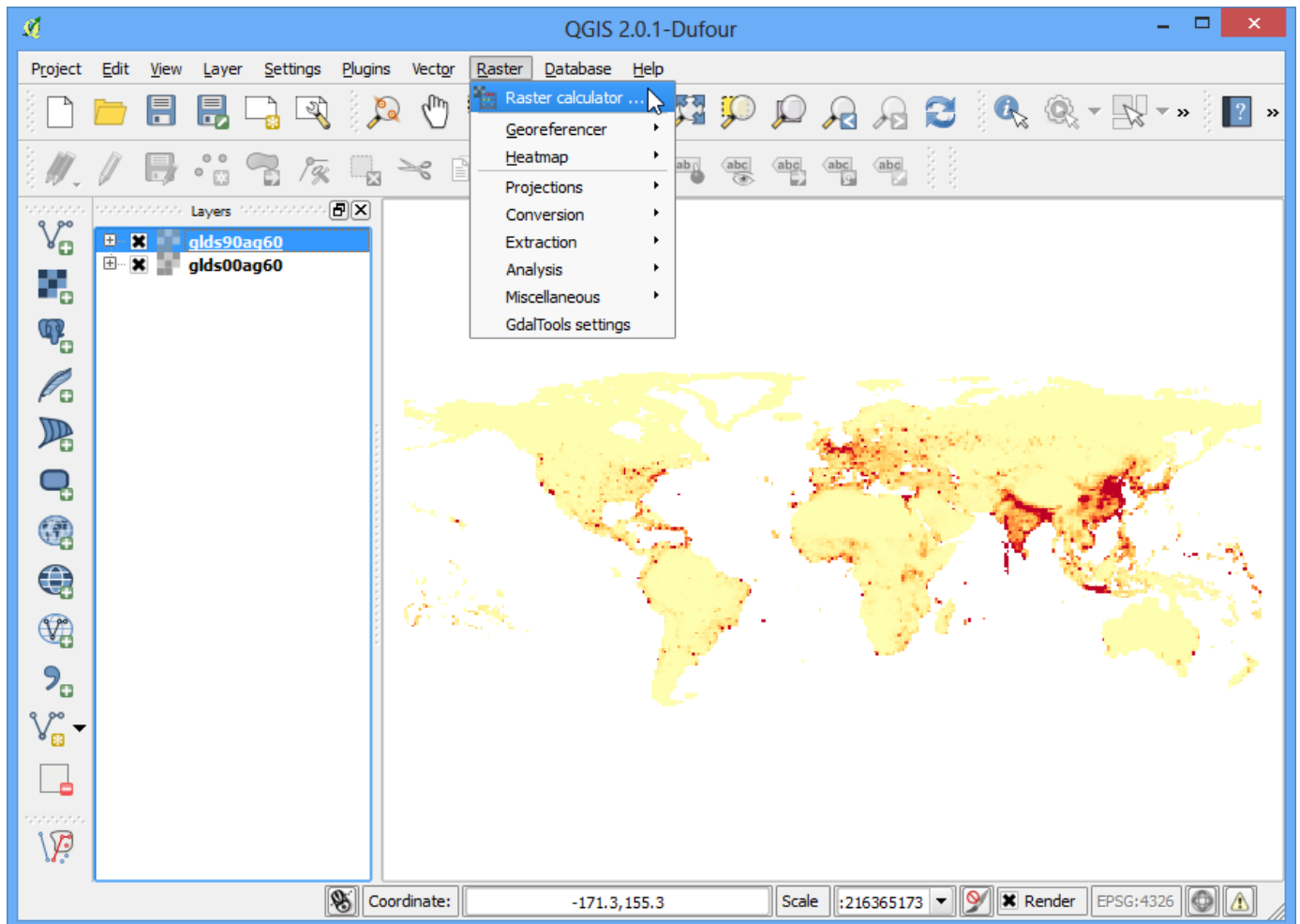
8. QGIS 的 CRS 对话框如下图所示。请根据对话框中的信息，选择正确的 CRS。



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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。カラー補間を線形に設定し、新しいカラーマップを生成する。モードを連続モードに設定し、クラス数を 5 に設定する。最小値を 0、最大値を 440.32 に設定する。カラーマップを生成する。累積カウントカットで最小値と最大値を設定する。累積カウントカットを 2.0 から 98.0% に設定する。範囲を全範囲に設定し、精度を推定（高速）に設定する。スタイルを保存する。



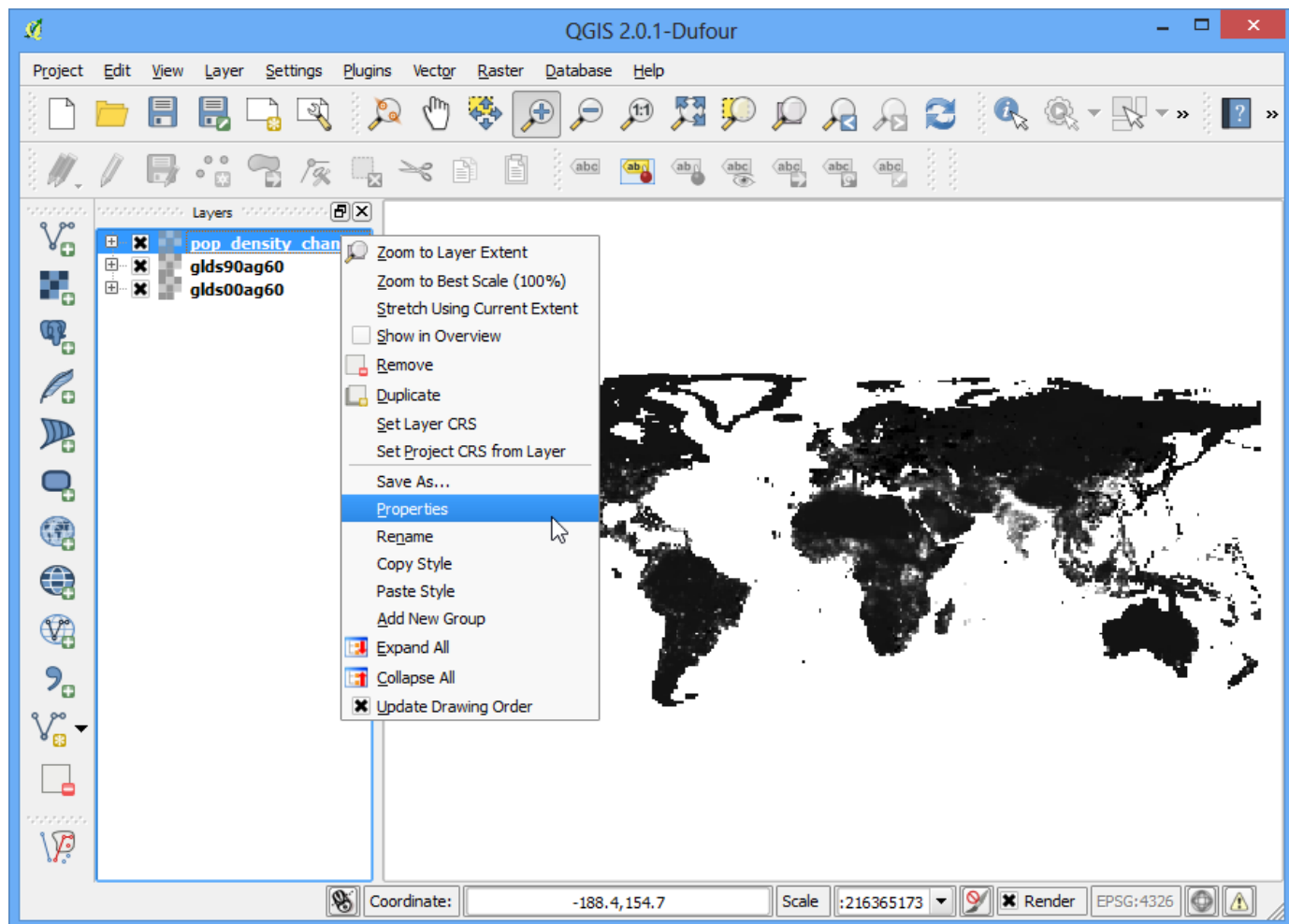
14. In the Raster bands section, you can select the layer by double-clicking on them. The bands are named after the raster name followed by @ and band number. Since each of our rasters have only 1 band, you will see only 1 entry per raster. The raster calculator can apply mathematical operations on the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



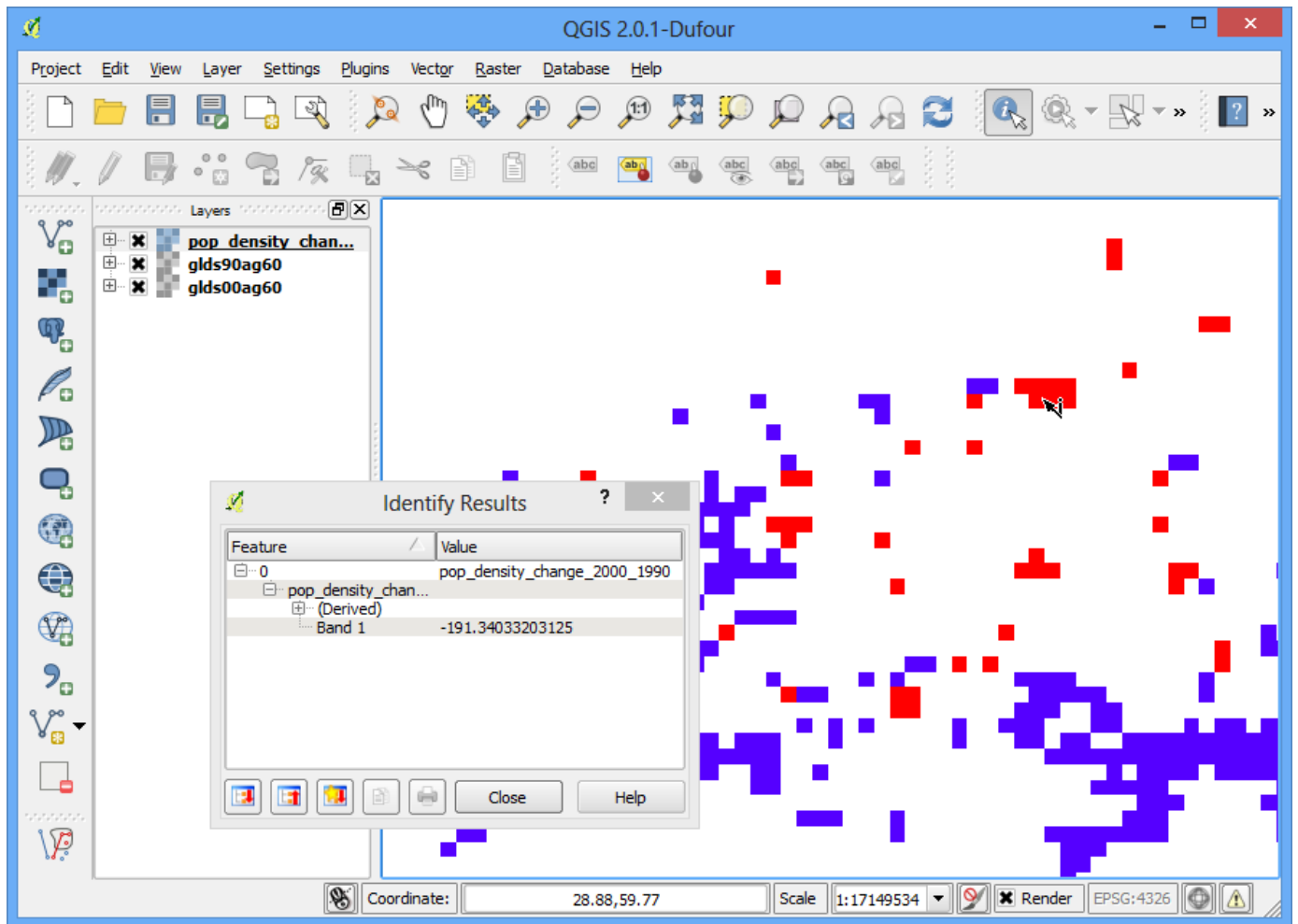
16. `pop_density_change_2000_1990`, `pop_density_change_2000_1990`.
 :guiLabel: Properties



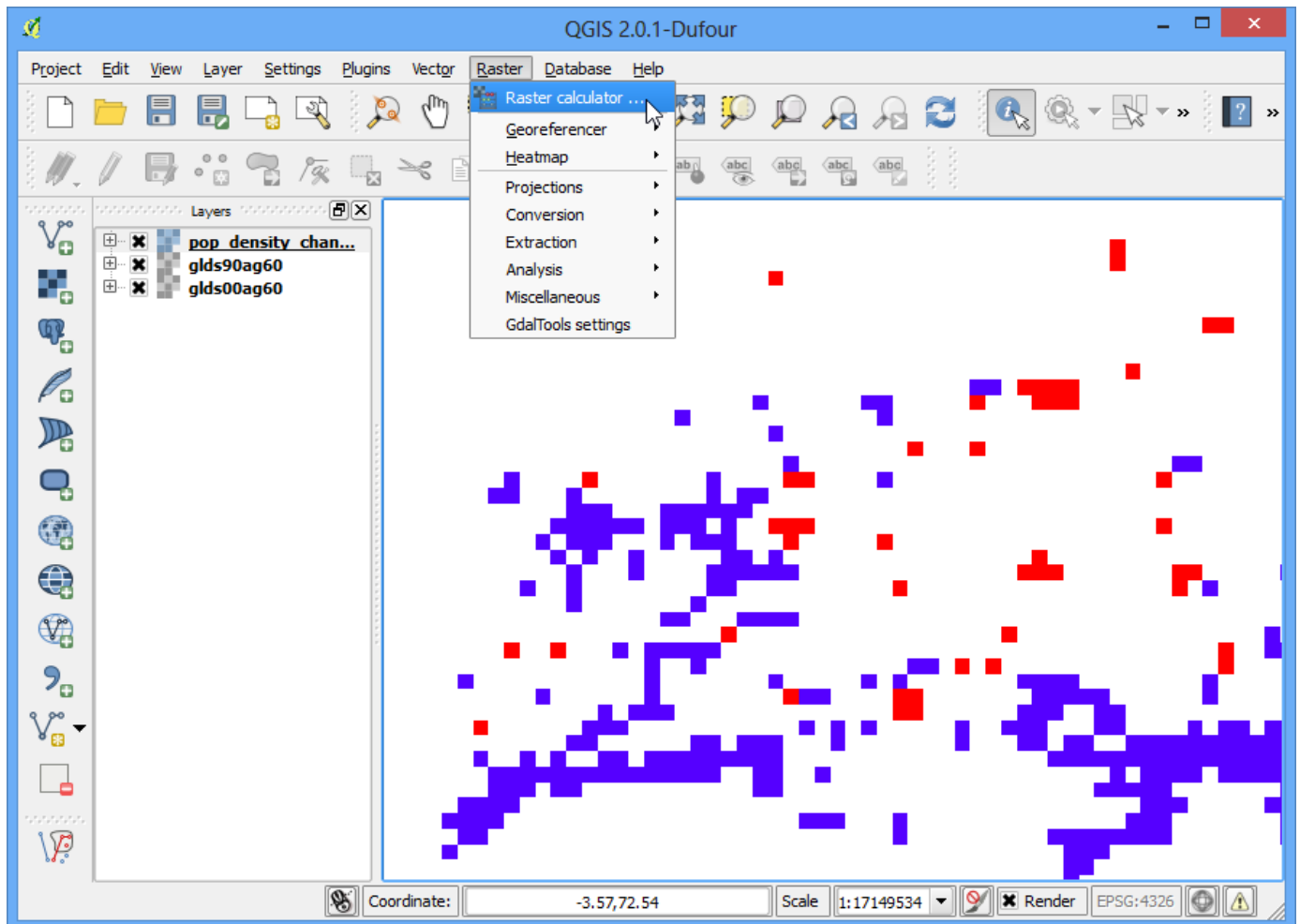
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21. `menuselection: Raster --> Raster calculator`



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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24. □□ □□□□□ □□□ □□□ □ □ □□□□.

