

Basic Raster Styling and Analysis

QGIS Tutorials and Tips



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QGIS is a free and open source geospatial software package. It provides a graphical user interface and a robust architecture for geospatial data processing and analysis. QGIS is a cross-platform desktop application available on Windows, Mac OS, and Linux. It can read and write data in a wide variety of formats, and it can be used to create maps and reports.



The data is available for the years 1990 and 2000. The data is available in two formats: ASCII and GeoTIFF. The ASCII format is a text file that contains the population density values for each cell in the grid. The GeoTIFF format is a raster image that contains the population density values for each cell in the grid.



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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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Please check the Research Note field for issues pertaining to importing authors that are organizations.

[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](#)

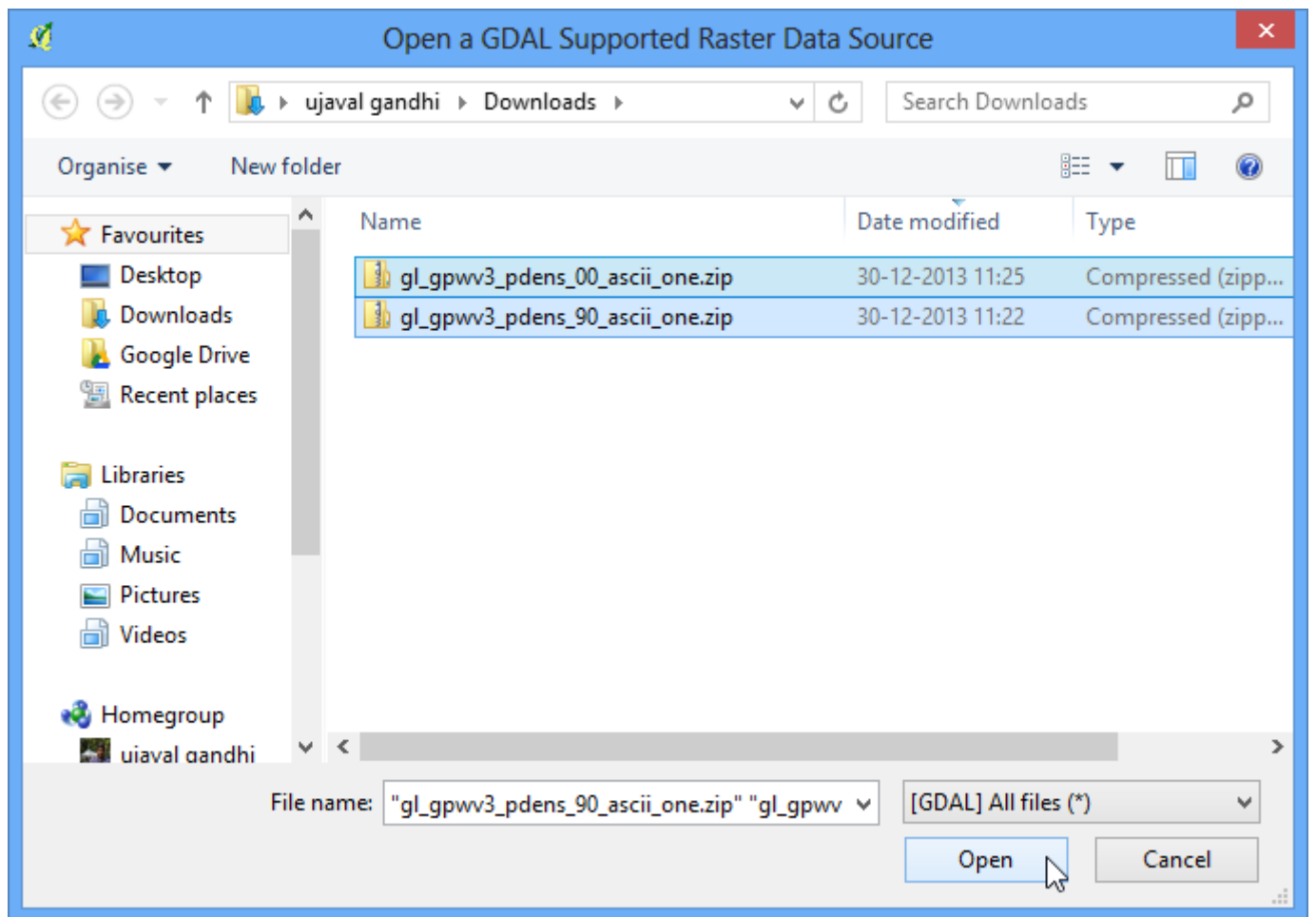
feedback and support

■■■■ ■■ [GPW3]

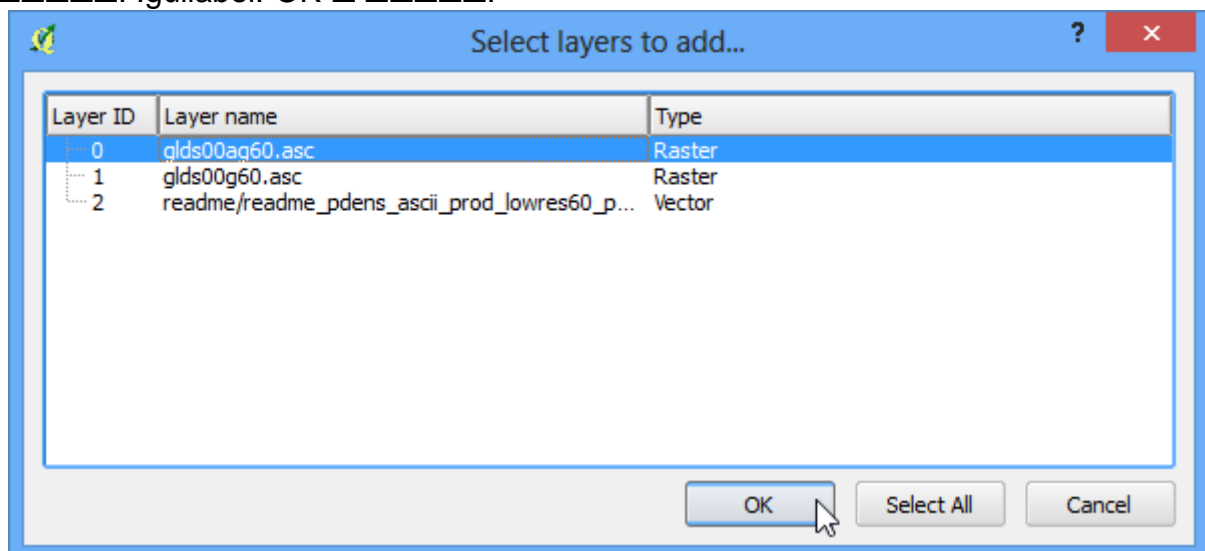
The screenshot shows the QGIS 2.0.1-Dufour application window. The 'Layer' menu is open, displaying a list of options. The 'Add Raster Layer...' option is highlighted by the mouse. The menu includes options for adding various types of layers (Vector, Raster, PostGIS, Spatialite, MSSQL Spatial, Oracle Spatial, WMS/WMTS, WCS, WFS, Delimited Text), copying and pasting styles, opening attribute tables, toggling editing, saving layer edits, removing layers, duplicating layers, setting CRS, and adding layers to the overview.

Menu Item	Shortcut
New	
Embed Layers and Groups...	
Add Vector Layer...	Ctrl+Shift+V
Add Raster Layer...	Ctrl+Shift+R
Add PostGIS Layers...	Ctrl+Shift+D
Add Spatialite Layer...	Ctrl+Shift+L
Add MSSQL Spatial Layer...	Ctrl+Shift+M
Add Oracle Spatial Layer...	Ctrl+Shift+O
Add WMS/WMTS Layer...	Ctrl+Shift+W
Add WCS Layer...	
Add WFS Layer...	
Add Delimited Text Layer...	
Copy style	
Paste style	
Open Attribute Table	
Toggle Editing	
Save Layer Edits	
Current Edits	
Save As...	
Save Selection as Vector File...	
Remove Layer(s)	Ctrl+D
Duplicate Layer(s)	
Set CRS of Layer(s)	Ctrl+Shift+C
Set Project CRS from Layer	
Properties...	
Query...	
Labeling	
Add to Overview	

3. ■■■■■■ ■■■■■■ ■■■■■■. ■■■■■■ :kbd:`Ctrl` ■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■. ■ ■■■■■■ ■
■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■. ■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■ ■■■■■■.



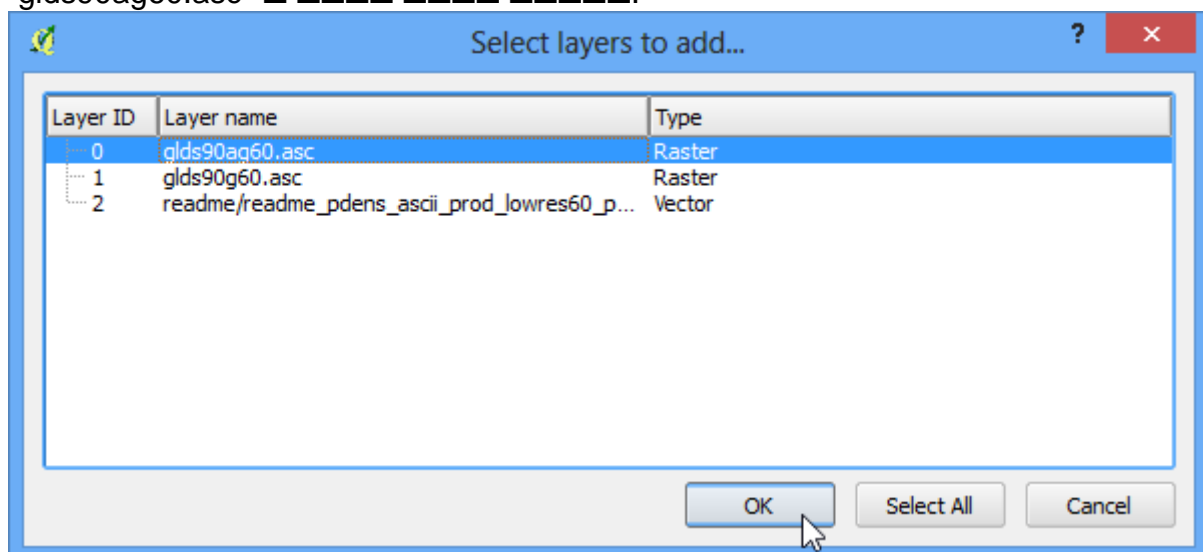
4. **2**. **a** UN **glds00ag60.asc**. **:guilabel: OK**.



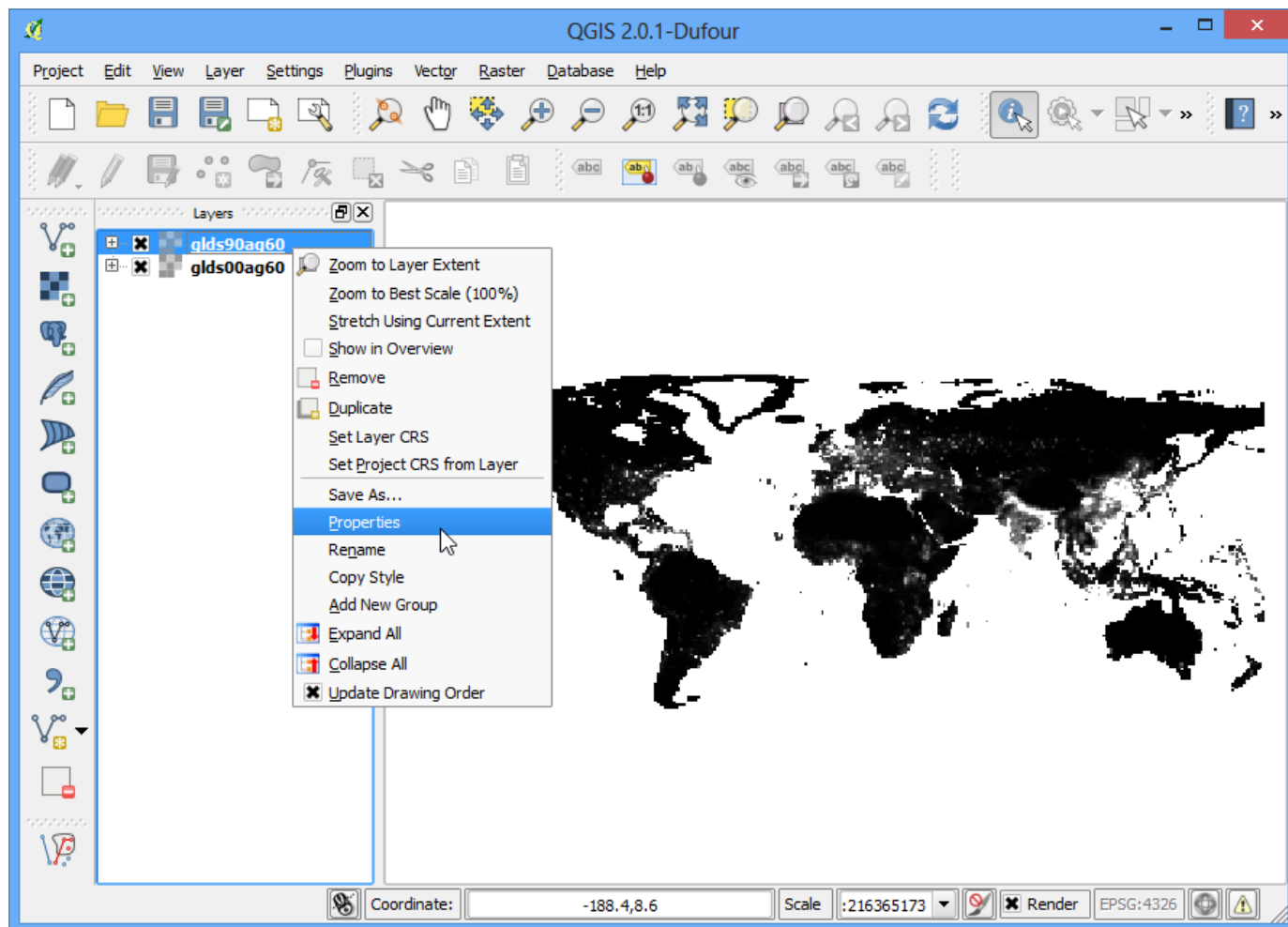
5. **CRS**. **EPSG:4326**.



6. `glds90ag60.asc`



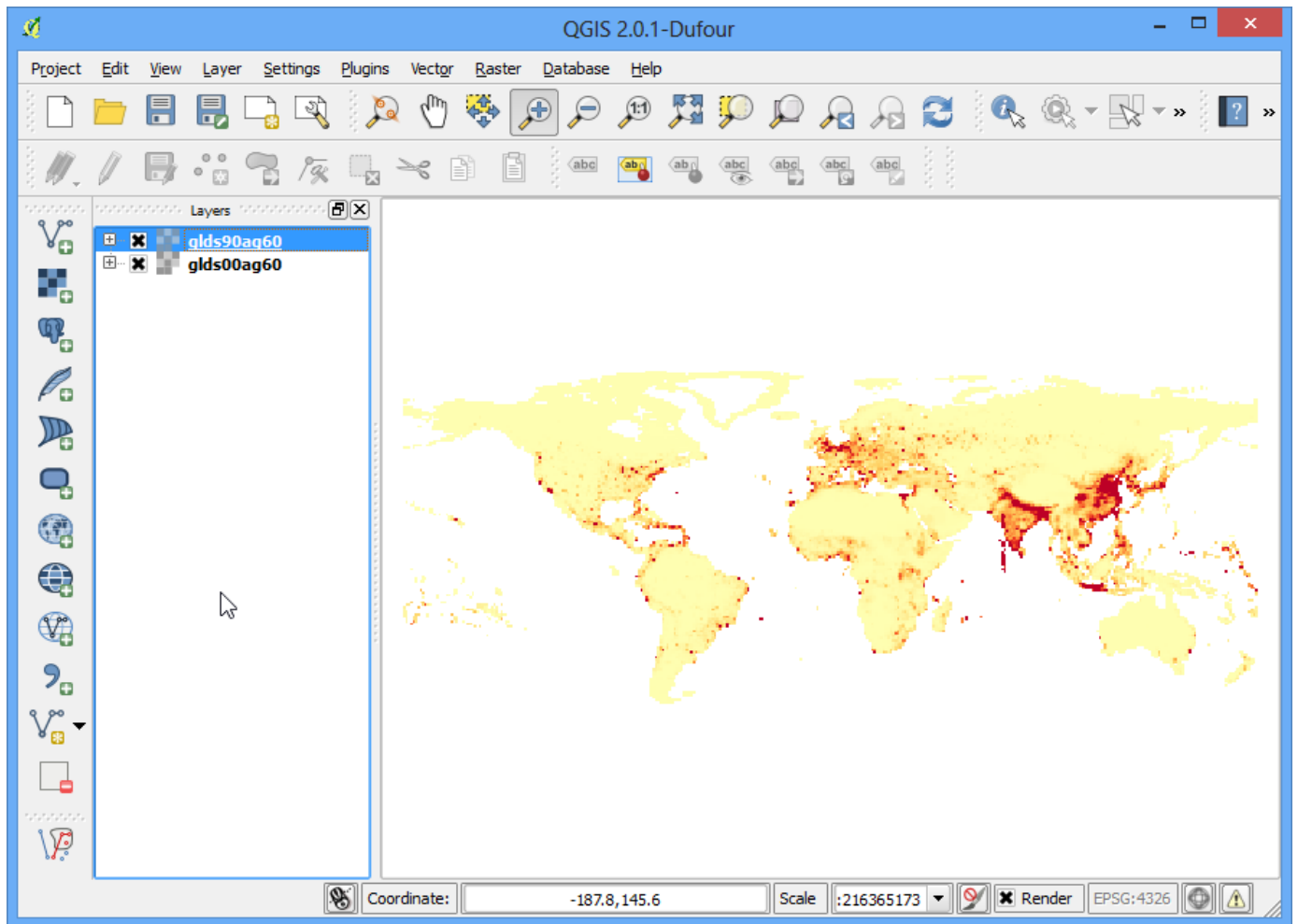
7. CRS `EPSG:4326`.



11. ■■■■ Style ■■■■ ■■ ■■ Render type ■ ■■■■■ ■■■■■ Singleband pseudocolor ■
 ■■■■■. ■■ ■ ■■■■ ■■ :guilabel:`Generate a new color map` ■■ ■■ :guilabel:`Classify`
 ■■■■■. 5 ■■ ■■■■ ■■■■ ■■■■■ ■■ ■ ■■■■■. :guilabel:`OK` ■ ■■■■■.



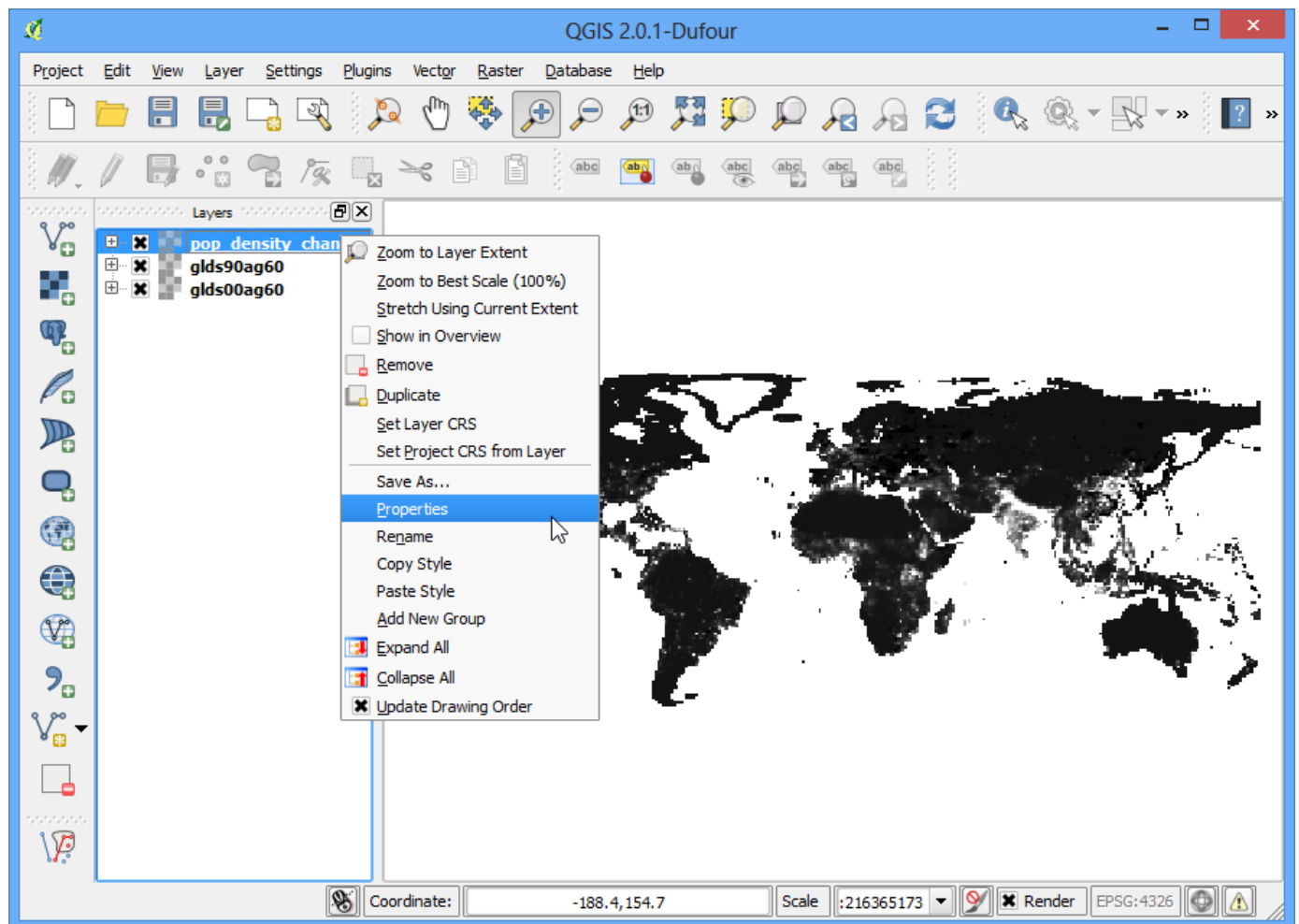
12. QGIS ■■■■■ ■■■■ ■■■■. ■■■■■ ■■■■ ■■ ■■■■ ■■ ■ ■■■■■. ■■ ■■■■ ■■ ■■■■■ ■■ ■■■■■.



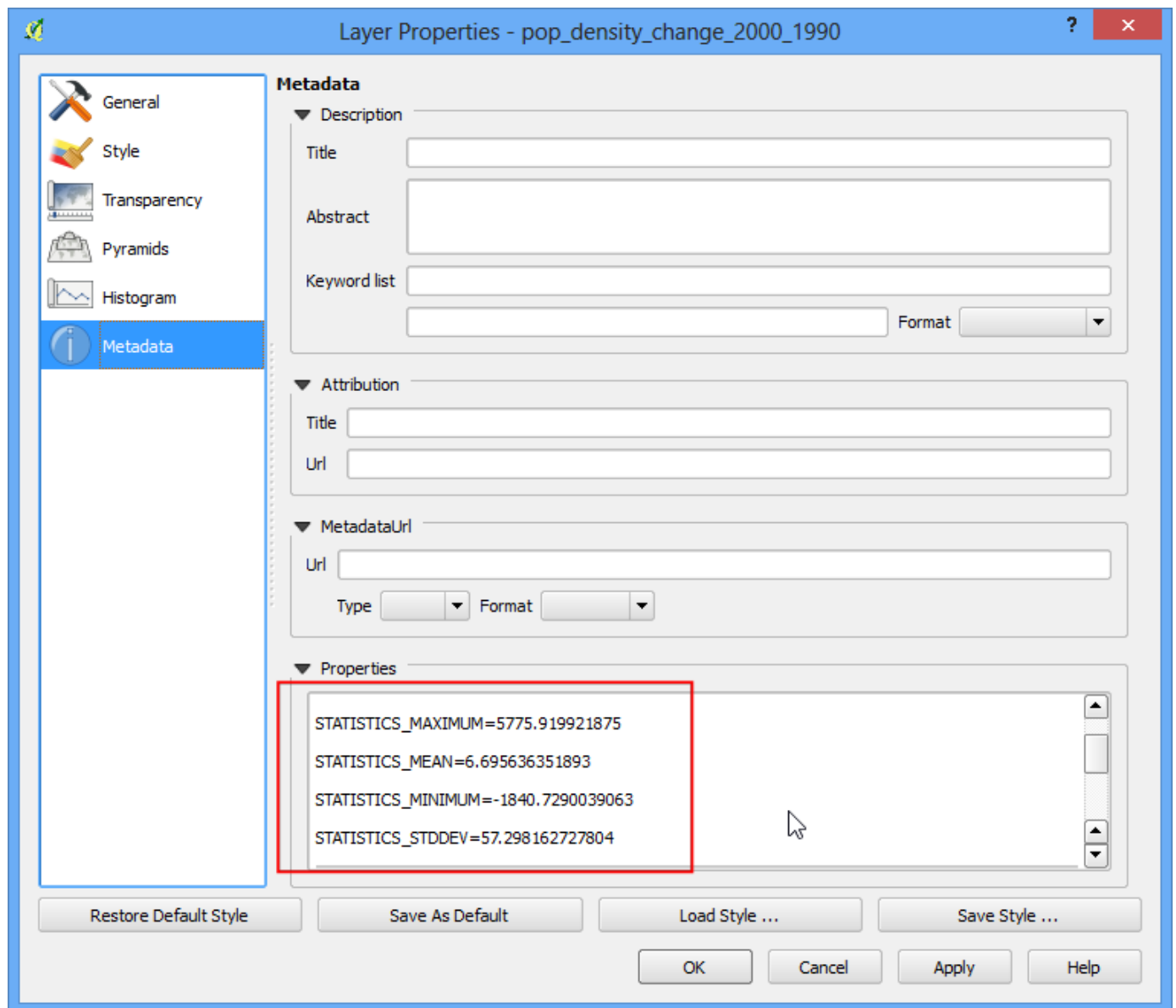
13. ■■■■■■ 1990■■■ 2000■ ■■■■ ■■ ■■■■■■ ■ ■■ ■■ ■■■■■■. ■■■■ ■■■■ ■■ ■■■■ ■■■■
 ■■■■■■ ■ ■■■■ ■■■■ ■■ ■■■■ ■■ ■■■■■■. ■■■> ■■■■ --> ■■■■ ■■■■
 :menuselection: Raster --> Raster calculator`■ ■■■■■■.



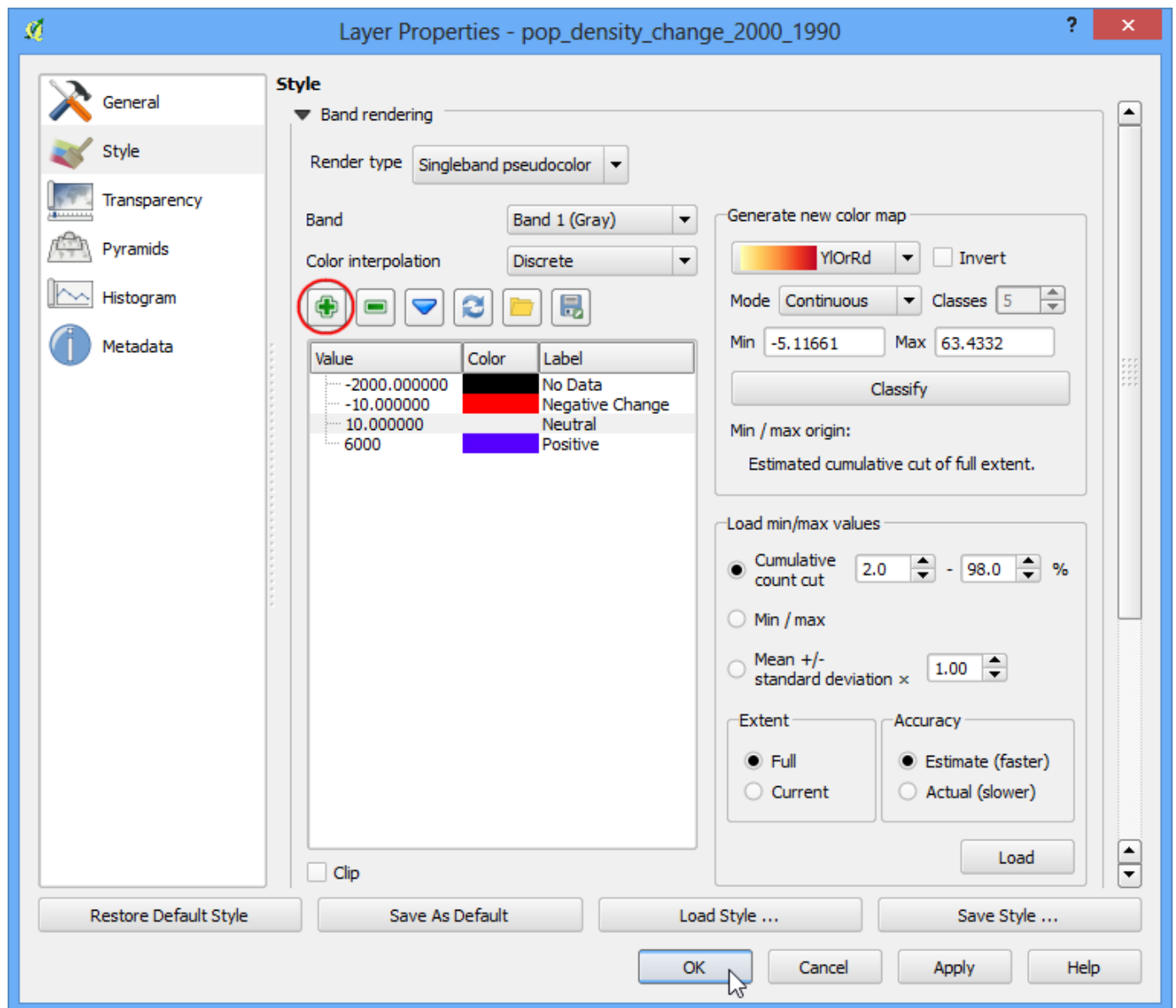
16. `pop_density_change_2000_1990``
:guilabel: Properties



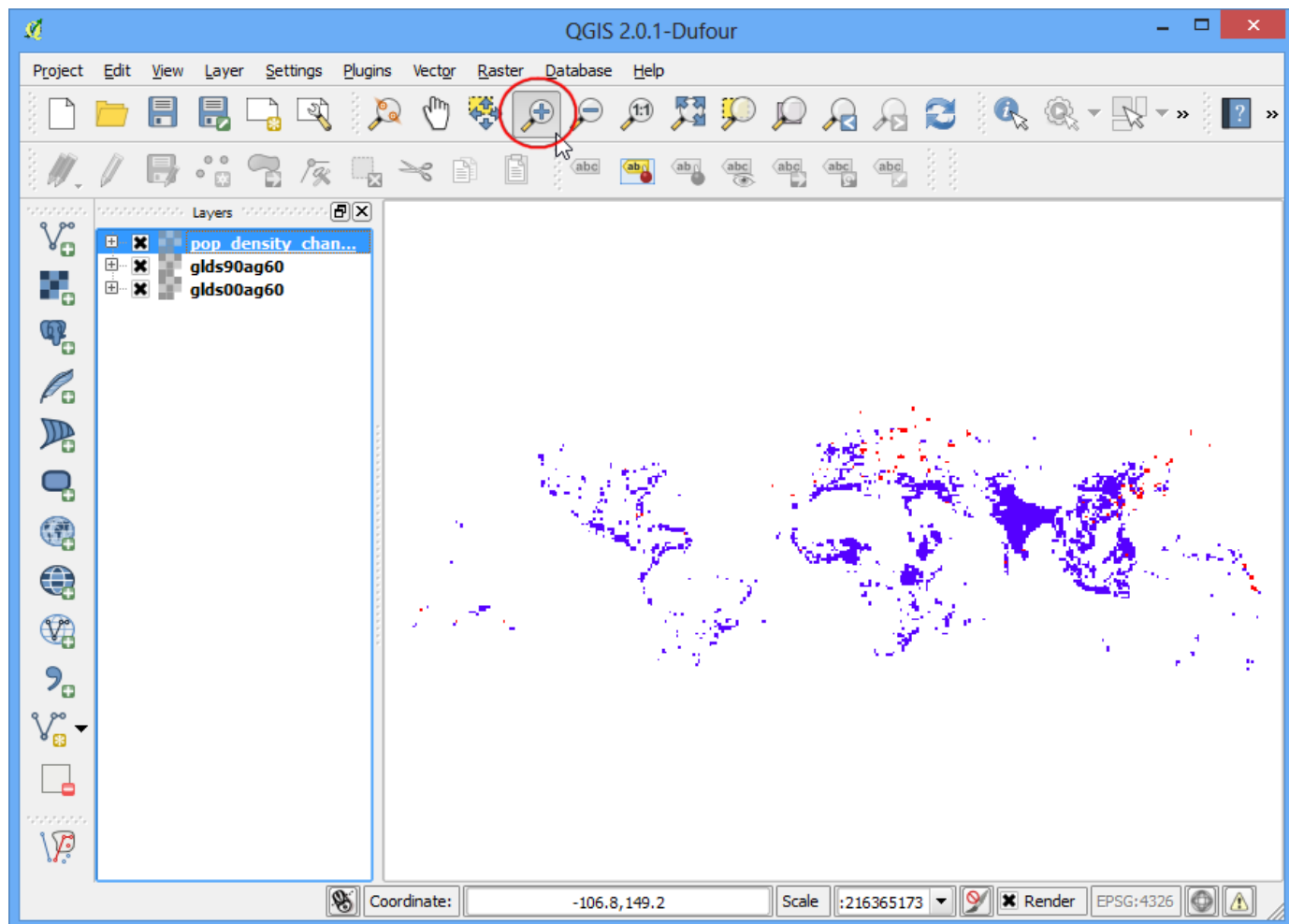
17. `guiabel: 'Metadata'`



18. **Style** **Band Rendering** **Render type** **Singleband pseudocolor** **Color interpolation** **Discrete** **Add entry** **4** **-2000** **-2000** **No Data** **OK**



19. `self.zoom_in_button.setText('Zoom In')`



20. ■■■ ■■■ :guilabel: 'Identify' ■■■ ■■■■■, ■■■ ■■■■ ■■■■■■■■ ■■■■■ ■■■■■■■■ ■■■■■
 ■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■■■.



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



22. `pop_density_change_2000_1990@1 < -10`. `negative_pop_change_2000_1990`.
 1 0. `negative_pop_change_2000_1990`.
 0. `negative_pop_change_2000_1990`.
 :guilabel: Add result to project. OK.



23. ■■■ ■■■■ ■■■■ ■■■■■■■■■■. ■■■■ ■■■■ ■■■■ ■ ■■■ ■■■ :guilabel: `Properties` ■■■■■■■■. ■■■■ :guilabel: `Transparency` ■■■■ ■■■■ no data value :guilabel: `Additional no data value` ■ 0 ■■■■■■■■. ■■■■ ■■■■ 0 ■■ ■■ ■■ ■■ ■■■■ ■■■■. :guilabel: `OK` ■■■■■■■■.



24. ■■■ ■■■■■ ■■■ ■■■ ■■■ ■ ■■■■.

