

# INSTRUCTIONS FOR JOINING SUBNATIONAL POPULATION DATA TO SHAPEFILES

U.S. CENSUS BUREAU

The U.S. Census Bureau is providing the following to users of its products for countries with subnational population estimates for 2000 to 2020 in the Spatial Data Repository:

- *Shapefiles.* Contain fields for the subnational area names (AREA\_NAME) and for unique concatenations of area names for joining the population estimates as attribute data (GEO\_MATCH).
- *Tab-delimited Text Files.* Contain all fields in a table with geographic attributes and the 2000-2020 subnational population estimates, including a GEO\_MATCH field containing names identical to those in the shapefile's GEO\_MATCH field.

The instructions are for 10.x versions of ArcGIS.

To join the text file to the shapefile for a country, follow the steps below:

1. Download and save the shapefile and corresponding data.
2. Open ArcMap and add the shapefile for the area of interest to the map using the **Add Data** icon or **File – Add Data – Add Data**.
3. In ArcMap, right-click on the shapefile that the data will be joined to. Select **Joins and Relates**.
4. From the submenu, select **Join**.
5. The **Join Data** box appears. Use the following responses:
  - a. *What do you want to join to this layer?* Select **Join attributes from a table**.
  - b. *Choose the field in this layer that the join will be based on:* Choose **GEO\_MATCH** from the drop-down menu.
  - c. *Choose the table to join to this layer, or load the table from disk:* Use the browse (open folder icon) option to navigate to the data file. This is the text file you downloaded. Select the file.
  - d. *Choose the field in the table to base the join on:* Choose **GEO\_MATCH** from the drop-down menu.
  - e. *Join Options.* Select the button for **Keep only matching records**.
  - f. Click **OK**. The attribute data including the 2000-2020 population estimates from the data file will be joined to the attribute table for the shapefile.
6. ArcMap builds a relationship file between the shapefile and the data file. To see the data, open the attribute table by right-clicking on the shapefile and select **Open Attribute Table**.

The table now has attributes from both the shapefile and the data table. The data can be used to create thematic maps for other analyses. Multiple files can be joined to the shapefile.

7. To remove the join, right-click the shapefile and select **Joins and Relates**.
8. Select **Remove Joins** and select the join to be removed or select **Remove All Joins**.