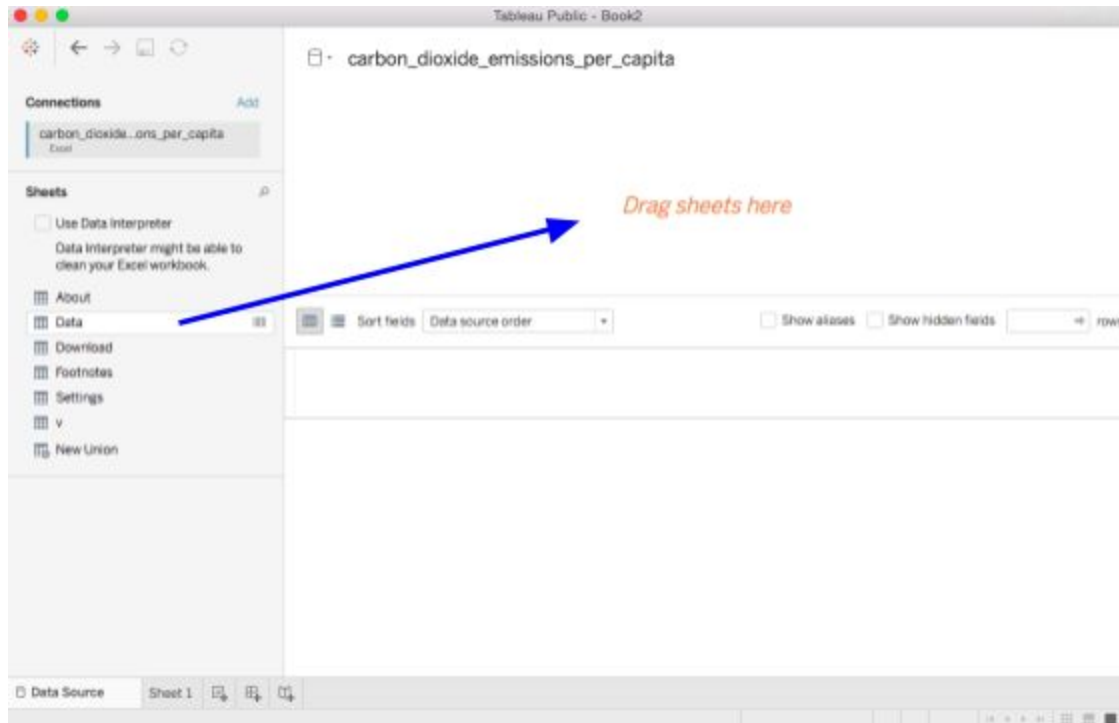


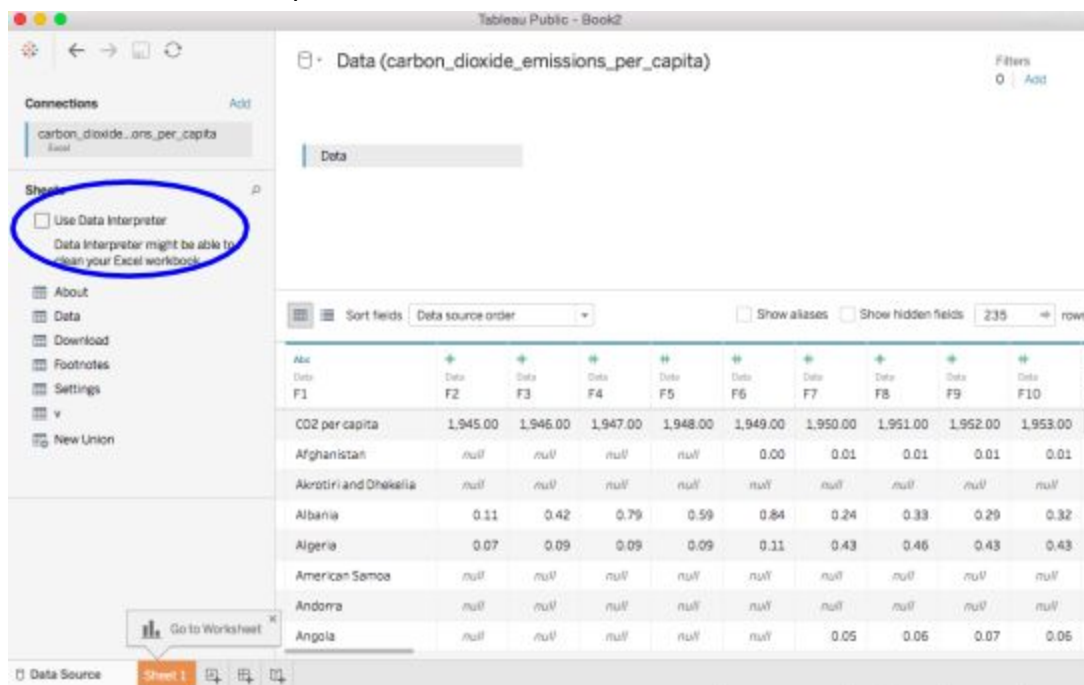
Teaching with Tableau Instructions

Connect to the data: [carbon_dioxide_emissions_per_capita.xls](#)

Drag Data sheet to “Drag sheets here” region



Select “Use Data Interpreter”



Pivot the Years columns. Select all Years columns. Hold down Shift to select multiple columns. CTRL-Click (Right click) and select Pivot. Pivoting data makes it easier to work with.

The screenshot shows the Tableau Public interface with a data source named 'Data (carbon_dioxide_emissions_per_capita)'. The data is displayed in a table with columns for Country, Year, and Amount. A right-click context menu is open over the year columns, showing options: Rename, Copy Values, Hide, Create Calculated Field..., Pivot (highlighted), and Merge Mismatched Fields. The table shows data for various countries from 1945 to 1954.

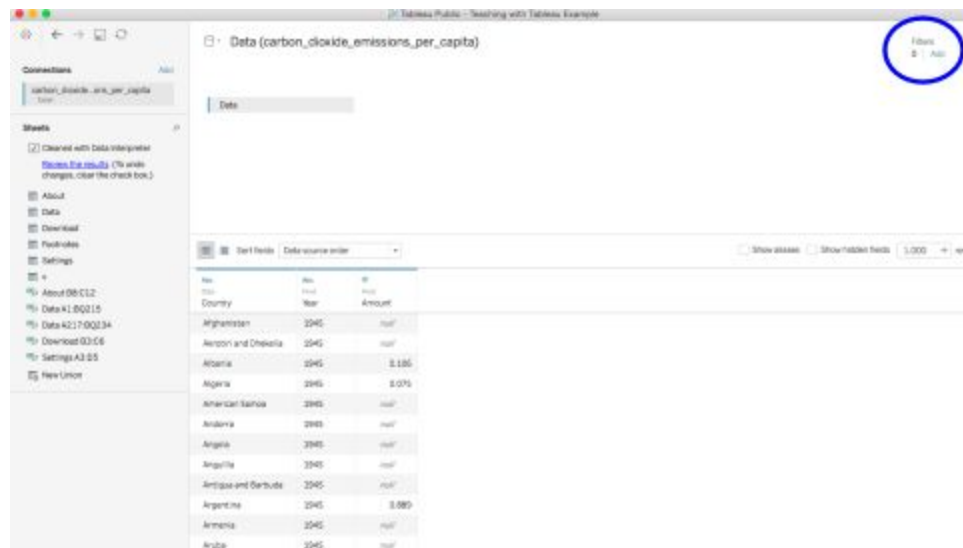
Country	1945	1948	1949	1950	1951	1952	1953	1954
Afghanistan	null	null	0.002	0.0103	0.0111	0.0109	0.0124	0.0122
Akrotiri and Dhekelia	null	null	null	null	null	null	null	null
Albania	0.16	0.5906	0.840	0.2444	0.3253	0.2947	0.3181	0.3751
Algeria	0.0743	0.0941	0.105	0.4327	0.4619	0.4260	0.4293	0.4369
American Samoa	null	null	null	null	null	null	null	null
Andorra	null	null	null	null	null	null	null	null
Angola	null	null	null	0.0451	0.0591	0.0725	0.0628	0.0781
Anguilla	null	null	null	null	null	null	null	null

Rename columns to Country, Year, and Amount

The screenshot shows the Tableau Public interface with the same data source. The columns have been renamed to 'Country', 'Year', and 'Amount'. The 'Year' column is now a pivot table, showing the 'Pivot.Amount' for each country. The table shows data for various countries for the year 2000.

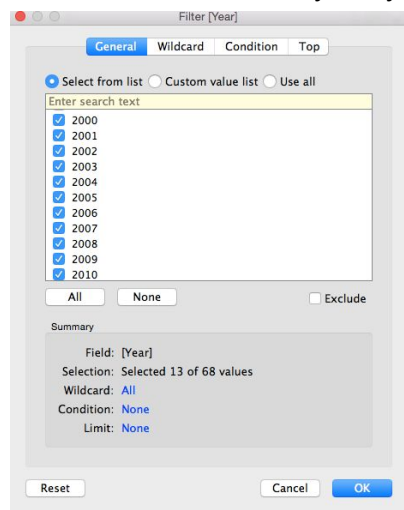
Country	Year	Pivot.Amount
Afghanistan	2000	0.9836
Albania	2000	2.8795
Algeria	2000	8.1123
Andorra	2000	0.6851
Angola	2000	2.9816
Anguilla	2000	4.4384
Antigua and Barbuda	2000	3.8197
Argentina	2000	

Click Add under Filters to add data filters.



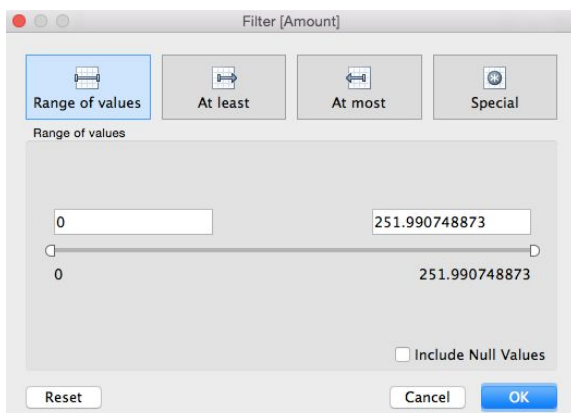
Select Year from menu

Check the boxes for only the years in the 2000s. Click OK.



Add a new filter based on Amount. Leave as-is. Make sure “Include Null Values” is unchecked.

This will filter out all Null values.



Go to Sheet 1 by clicking on Sheet 1 button at the bottom of the screen

The screenshot shows the Tableau Public interface. On the left, the 'Connections' pane lists 'carbon_dioxide_emissions_per_capita' as an Excel file. Below it, the 'Sheets' pane shows a list of sheets, including 'About', 'Data', 'Download', 'Footnotes', 'Settings', and 'v'. The 'Data' sheet is selected. The main view displays a table of data for the year 2000, sorted by 'Data source order'. The table has three columns: 'Country', 'Year', and 'Amount'. The data is as follows:

Country	Year	Amount
Afghanistan	2000	0.0342
Albania	2000	0.9836
Algeria	2000	2.8795
Andorra	2000	8.1123
Angola	2000	0.6851
Anguilla	2000	2.9816
Antigua and Barbuda	2000	4.4384
Argentina	2000	3.8197

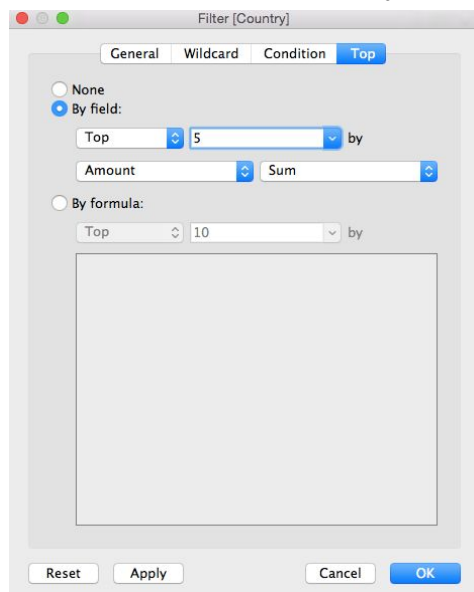
At the bottom of the screen, the 'Data Source' tab is active, and the 'Sheet 1' button is highlighted with a blue circle.

PROCEED TO NEXT PAGE

Create a chart showing the 5 countries with the highest CO2 emissions per capita



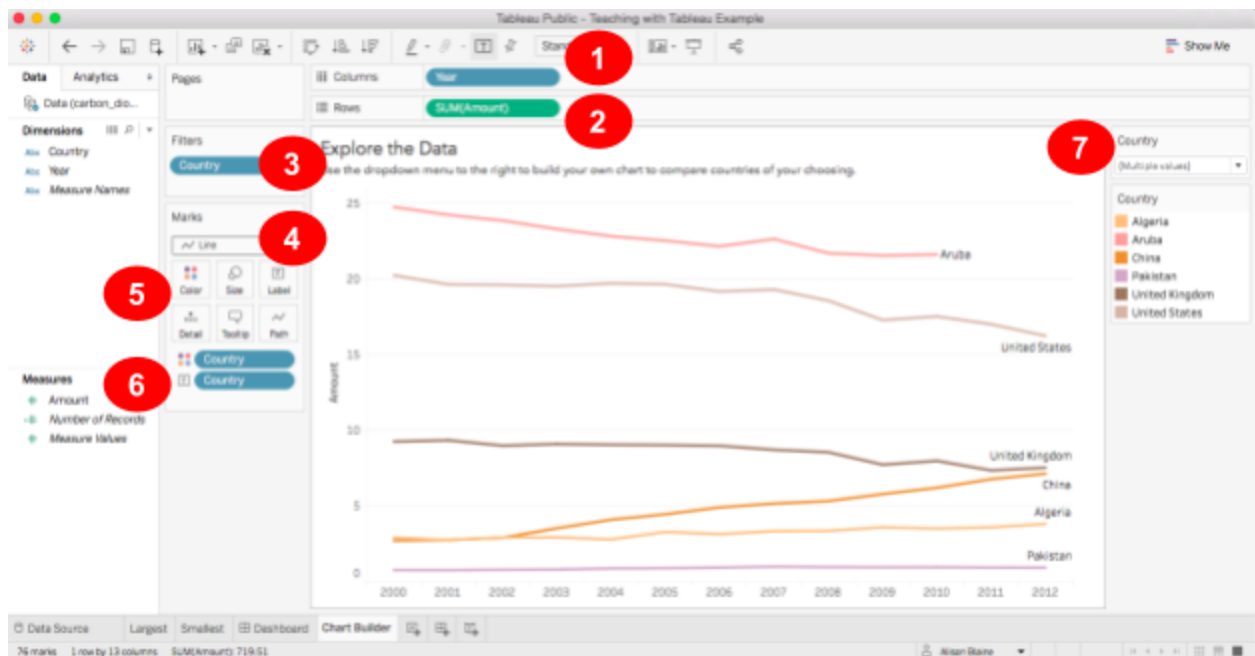
1. Drag Year to Columns (This is your X-axis)
2. Drag Amount to Rows (This is your Y-axis)
3. Change chart style to Line
4. Drag Country to Color. Select **Filter** then **Add**
5. In Filter menu, select **Top 5 by Amount Sum**



6. Drag Country to Label. To edit labels, click Label button and select preferences.

CHALLENGE: Now repeat the steps on this page, only create a new chart for the **5 lowest carbon-emitting countries per capita**.

Create an interactive chart for users to select their own countries to compare.



Helpful hints:

Step 3: Drag Country to Filter. No countries should be selected. Click OK. Now, click the blue pill dropdown arrow. Select Show Filter.

Step 7: Click on arrow dropdown for the Country filter and select **Multiple Values (dropdown)**

Style guidelines

- Choose colors that are easy to differentiate when comparing categories.
- Select non-default fonts for readability. Consider using sans-serif for small text.
- Label or annotate data points you most want viewers to see

PROCEED TO NEXT PAGE



Bring all charts together in a dashboard.

Tableau Public - Teaching with Tableau Example

Dashboard Layout

Device Preview

Size min 420x560 - max 650x8...

Sheets

- Largest
- Smallest
- Chart Builder

Objects

- Horizontal
- Vertical
- Image
- Web Page
- Tiled
- Floating

Drop sheets here

Click here to re-size

Sheets can be dragged onto the dashboard and re-positioned

Drag any of these objects onto your dashboard

Use "Floating" setting if you want a custom position for your chart

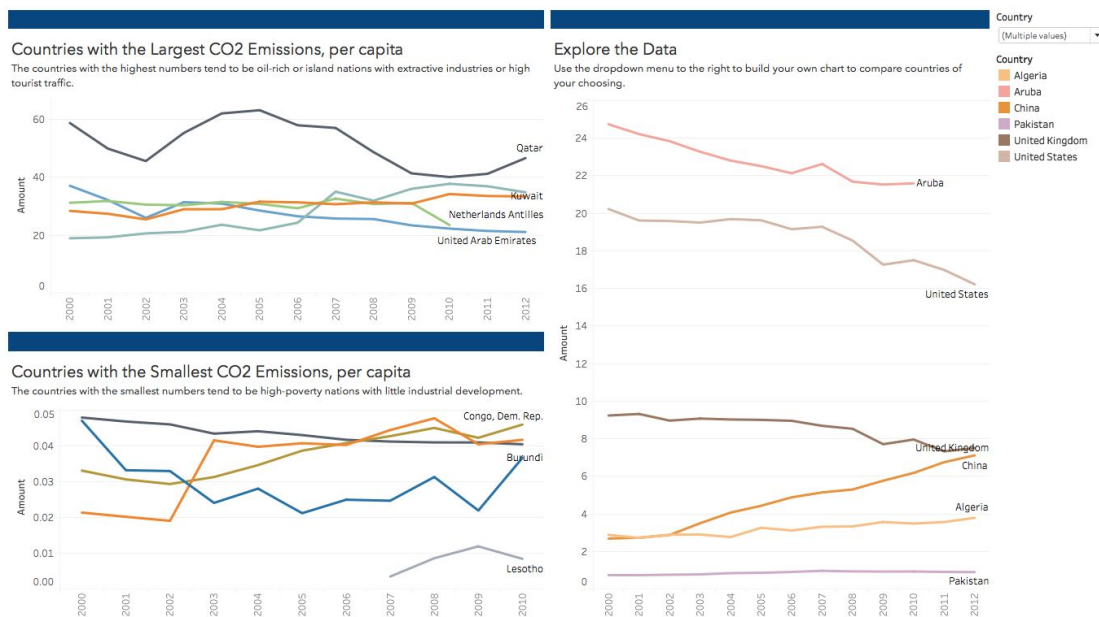
Click here to re-size

Sheets can be dragged onto the dashboard and re-positioned

Drag any of these objects onto your dashboard

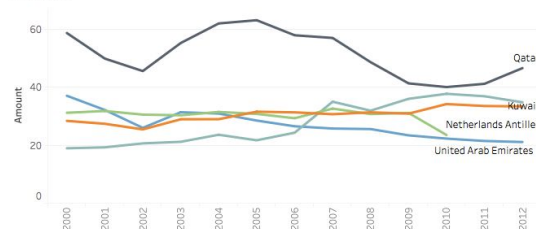
Use "Floating" setting if you want a custom position for your chart

Example:



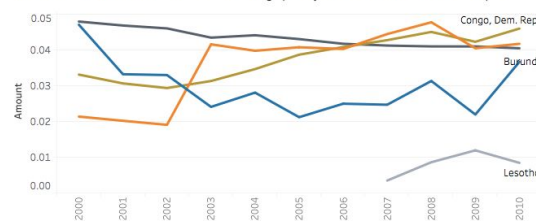
Countries with the Largest CO2 Emissions, per capita

The countries with the highest numbers tend to be oil-rich or island nations with extractive industries or high tourist traffic.



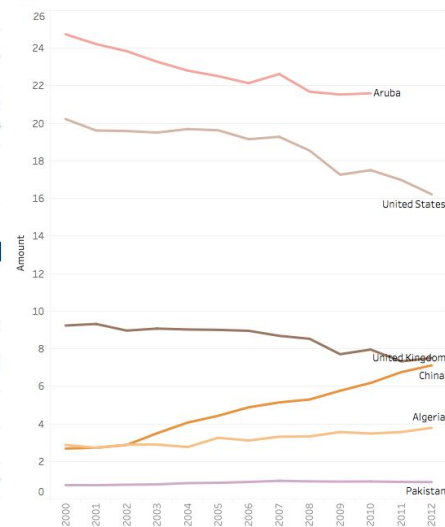
Countries with the Smallest CO2 Emissions, per capita

The countries with the smallest numbers tend to be high-poverty nations with little industrial development.



Explore the Data

Use the dropdown menu to the right to build your own chart to compare countries of your choosing.



Country

(Multiple values)

Country

Algeria

Aruba

China

 Pakistan
 United Kingdom

■ United Kingdom
■ United States

Figure 1