

Visualizing Socioeconomic Data in the Classroom with the CHANGE Viewer

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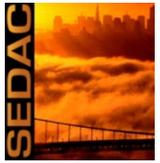
SUMMER 2015 MEETING OF THE
FEDERATION OF EARTH SCIENCE INFORMATION PARTNERS
Pacific Grove, California, 14-17 July 2015

ESIP Education Workshop
Thursday 16 July 2015, 9:30 a.m.





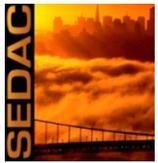
CHANGE Viewer Activities



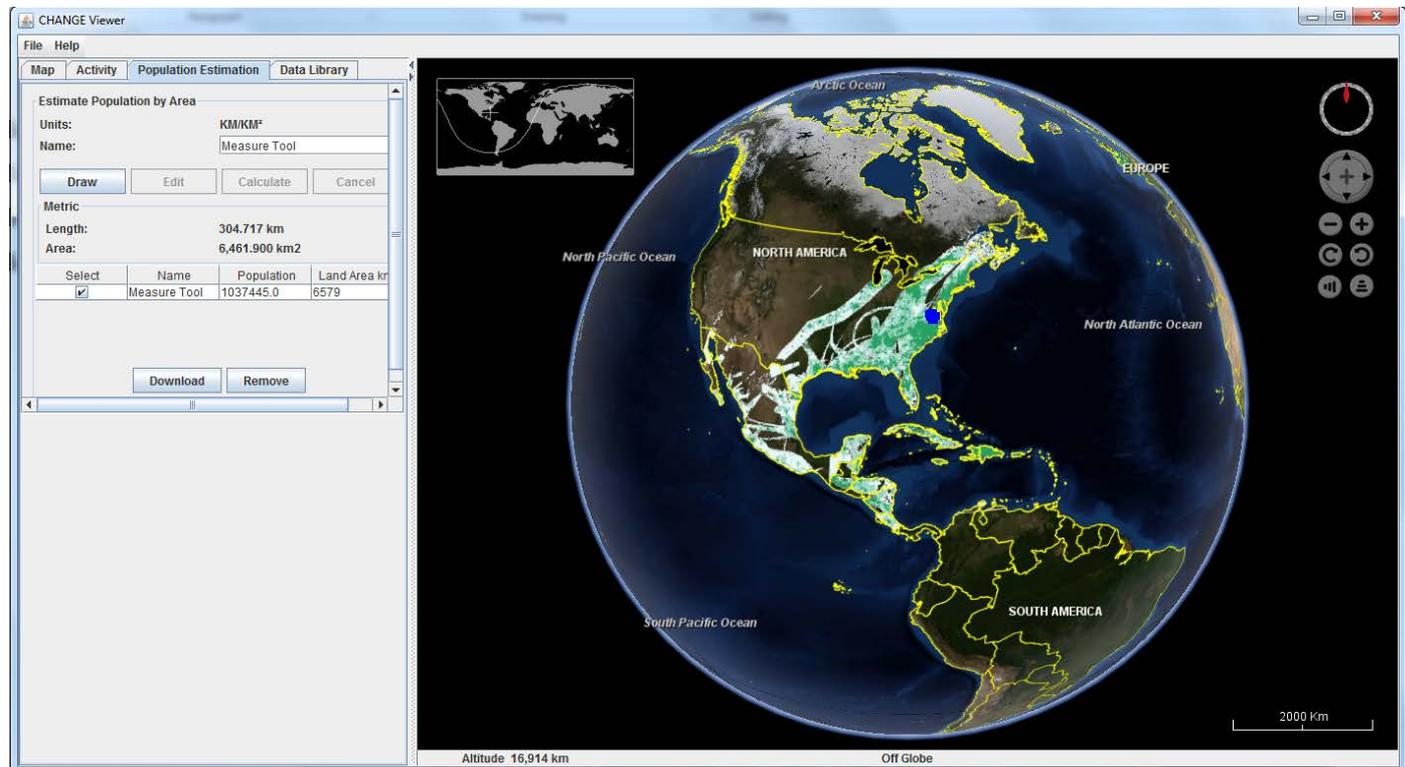
- Introduction
- Description
- Installation
- Orientation
- Data selection
- Analysis
- Measurement



Climate and Health ANalysis for Global Education Viewer (CHANGE Viewer)



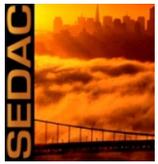
- Enables access, analysis, and visualization of Earth science data
 - Data obtained from the NASA Socioeconomic Data and Applications Center (SEDAC) & other sources.
 - Description and download link: <http://www.ciesin.columbia.edu/gcce/>



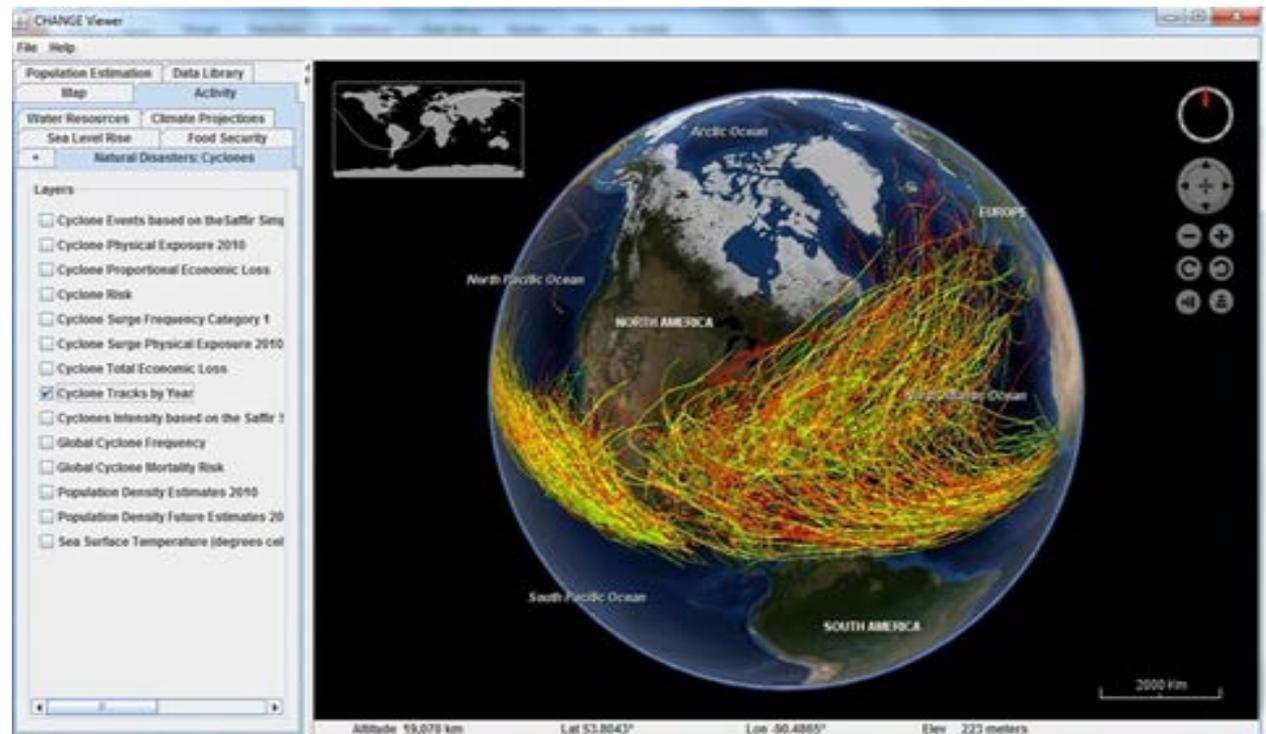
Developed by CIESIN, Columbia University, and IAGT, Cayuga Community College, with support from the NASA Innovations in Climate Education Initiative.



Accessing, Measuring, and Analyzing Economic Loss from Cyclones with the CHANGE Viewer

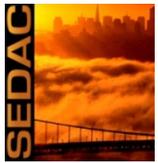


- Free web-based educational tool
- Runs on Windows and Mac computers.
- Requires a modern graphics card with up-to-date driver, Java Runtime Environment 1.6.0 or later, 2GB RAM, 30MB available hard disk space, and an internet connection.

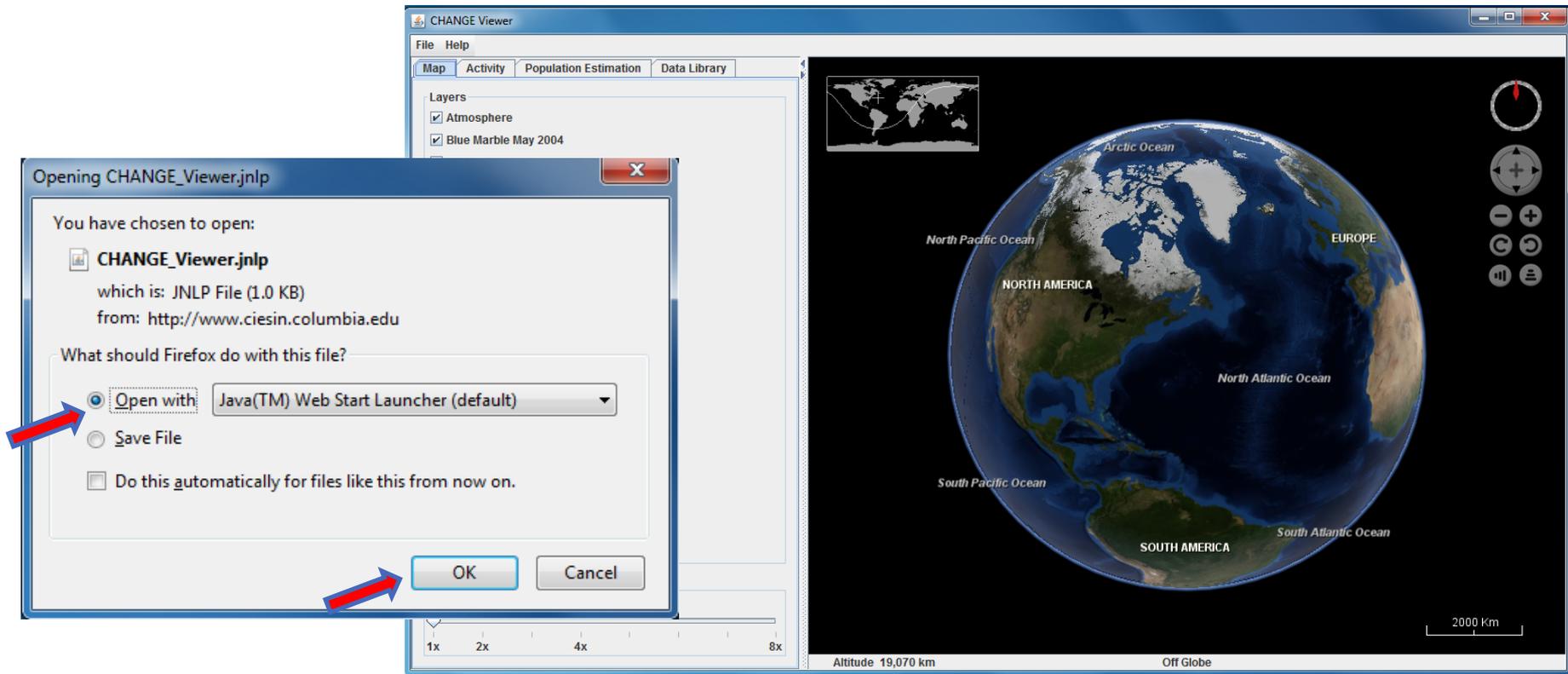




Installing the CHANGE Viewer

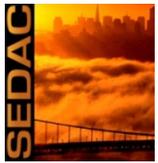


- Use a computer browser to access the <http://www.ciesin.columbia.edu/gcce/> URL.
- On the CHANGE Viewer web page, click on the image or the CHANGE Viewer installation link.
- In the dialog box that appears, click on Open with Java radio button and the OK button.
- The CHANGE Viewer window and globe will appear within a few seconds.

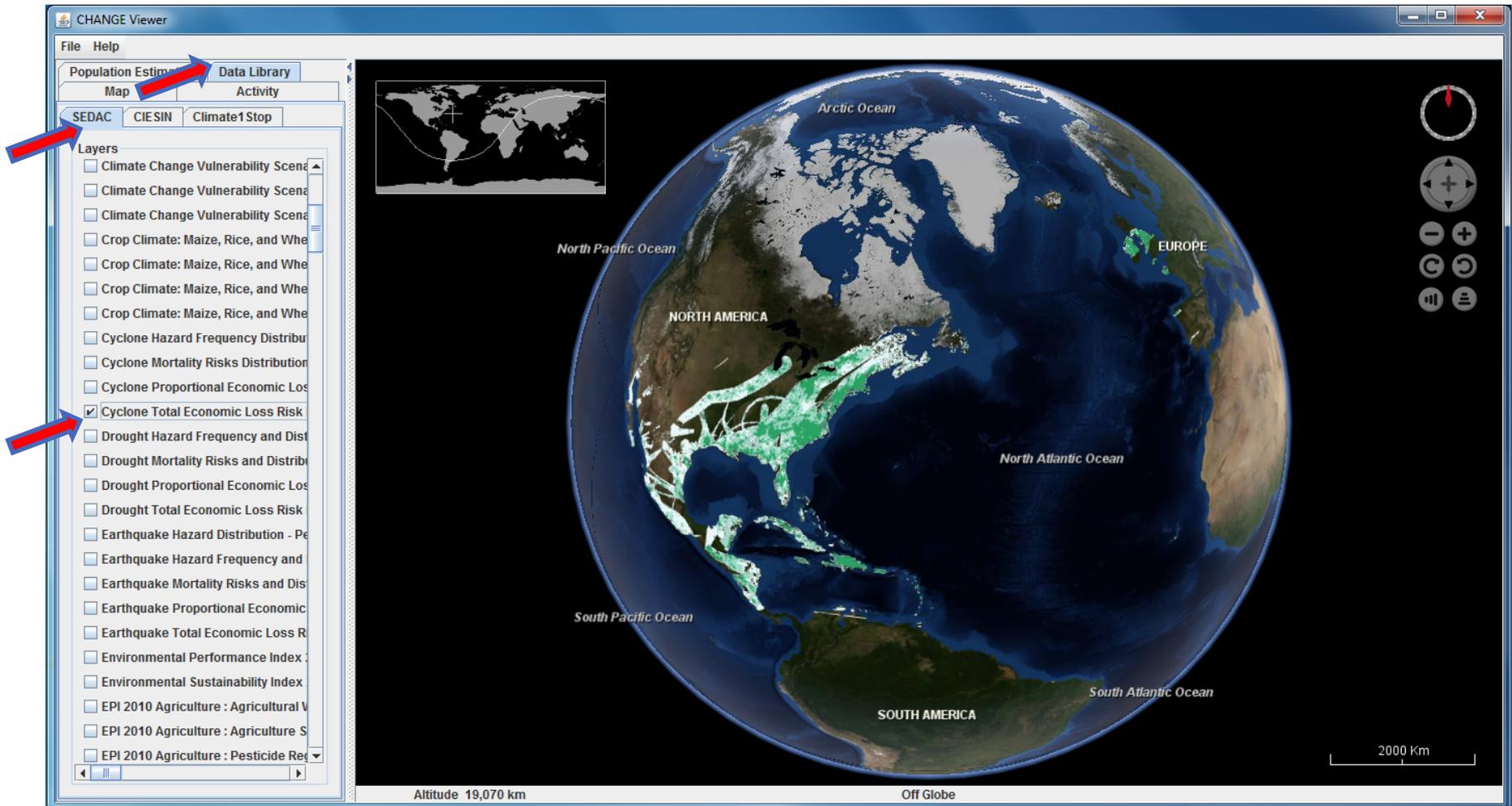




Accessing Data on Economic Loss Risk from Cyclones

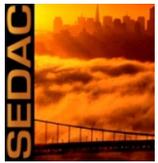


- Click on the **Data Library** Tab and then click on the **SEDAC** tab.
- Click on the Layer: **Cyclone Total Economic Loss Risk**.

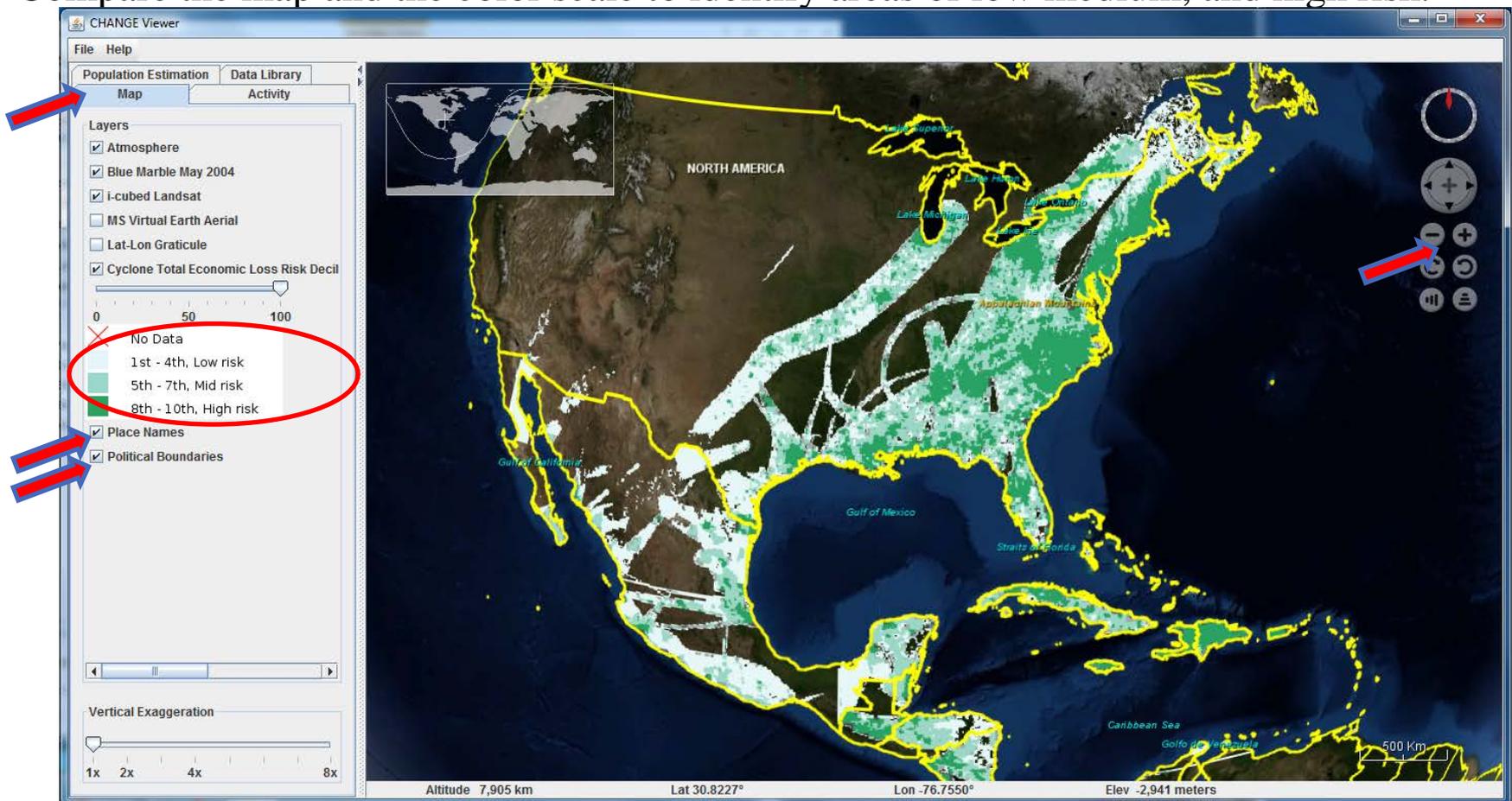




Analyzing Economic Loss Risk from Cyclones for a Continent

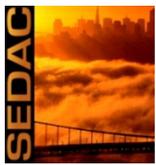


- Click on the **Map** tab. Click on the radio buttons: **Place Names & Political Boundaries**.
- Click on North America to rotate the globe and click the + sign to zoom in.
- Compare the map and the color scale to identify areas of low medium, and high risk.





Measuring Economic Loss Risk from Cyclones for a Location



- Click the + sign. Click on the Mid-Atlantic region of the United States to find Richmond, Virginia, on the map. Click on the **Population Estimation** tab and the **Draw** button.
- Click around the dark green area surrounding Richmond to draw a polygon around the area of high risk.

CHANGE Viewer

File Help

Map Activity Population Estimation Data Library

Estimate Population by Area

Units: KM/KM²

Name: Measure Tool

Draw Edit Calculate Cancel

Metric

Length: 304.717 km

Area: 6,461.900 km²

Select	Name	Population	Land Area km ²
<input checked="" type="checkbox"/>	Measure Tool	1037445.0	6579

Download Remove

Altitude 588 km Off Globe

50 Km

Richmond

Baltimore

Arlington Alexandria

East Hampton Newport News Norfolk Virginia Beach

Blue arrows point to the 'Draw' button and the polygon on the map. A red arrow points to the 'Calculate' button. A red circle highlights the 'Population' value in the table.

- Click **Calculate** to estimate the population around Richmond at high risk of economic loss from cyclones.