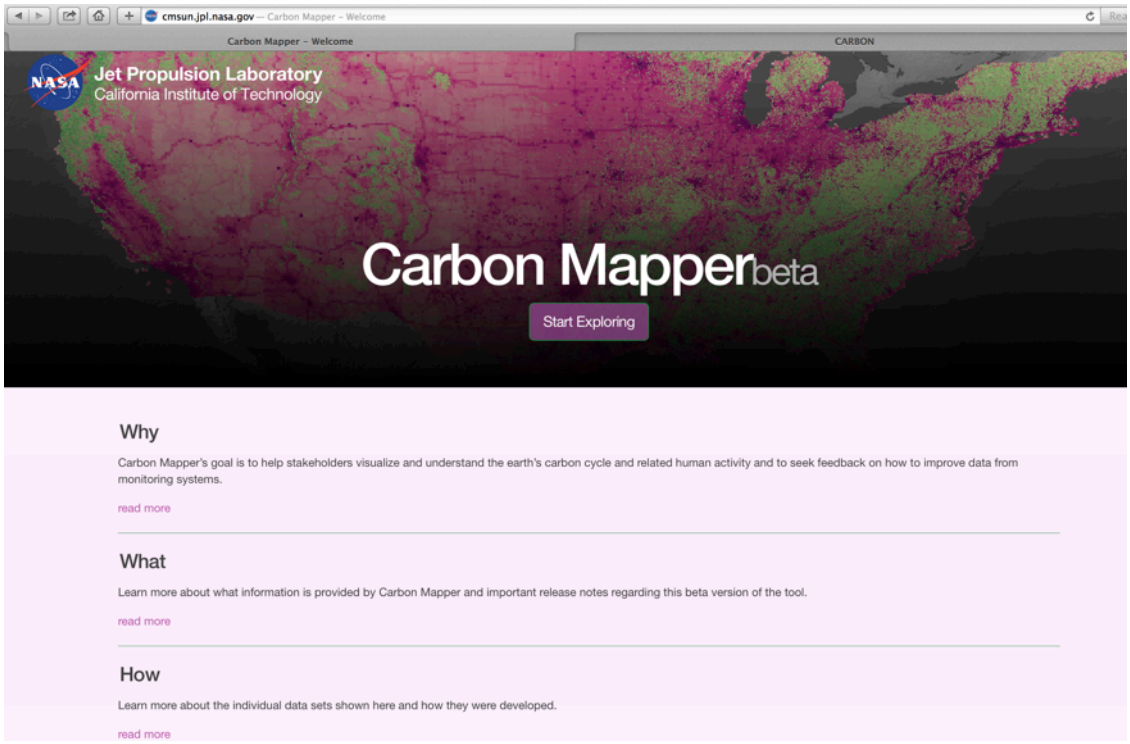
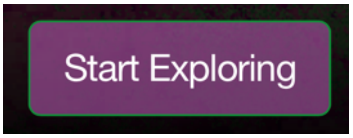
Carbon Mapper quick start hints

1. **Home page** https://cmsun.jpl.nasa.gov

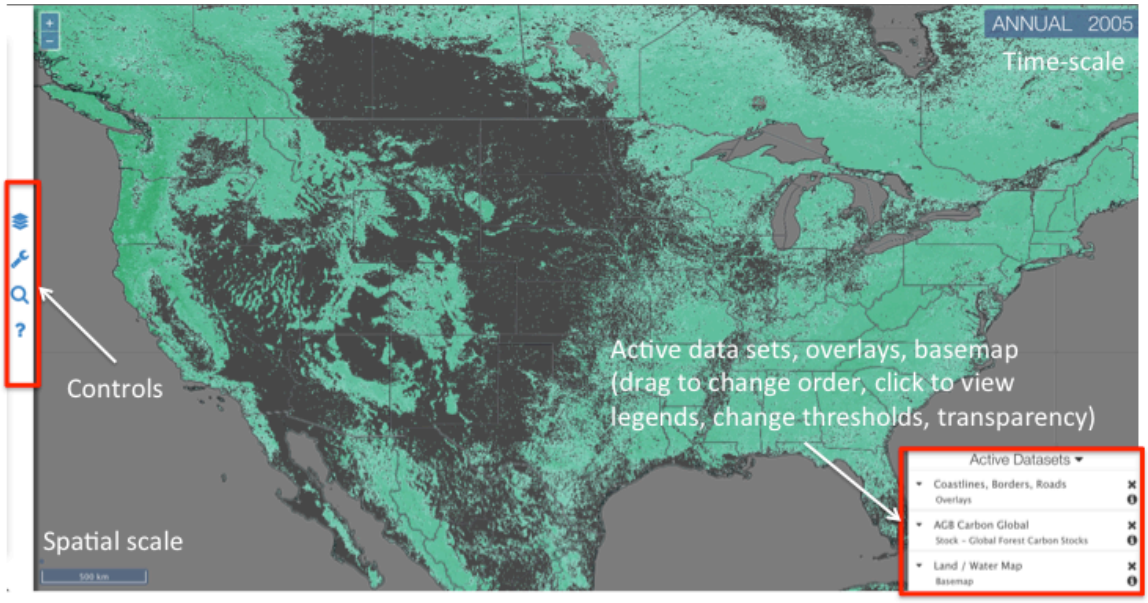


First time visitors, please read Why, What, and How information (goals, scope, **Release Notes**, and contact information for the individual data sets) before you…



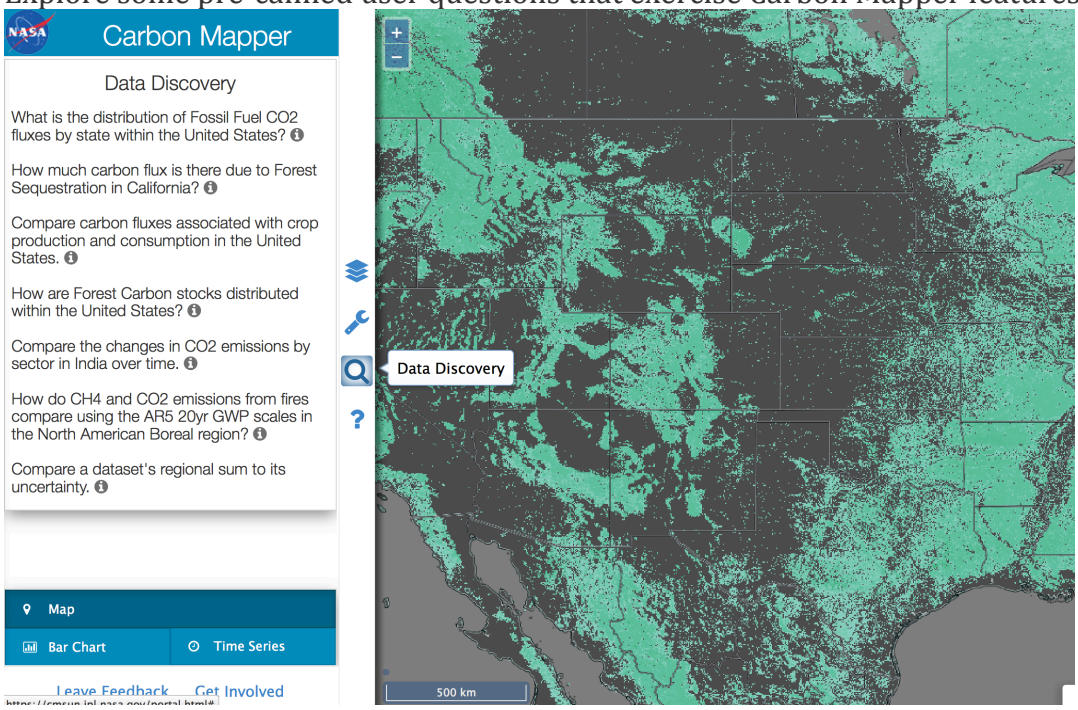
2. **Map View**

The default view is a global 1 km gridded data product showing *Forest Above Ground Biomass carbon stocks.*

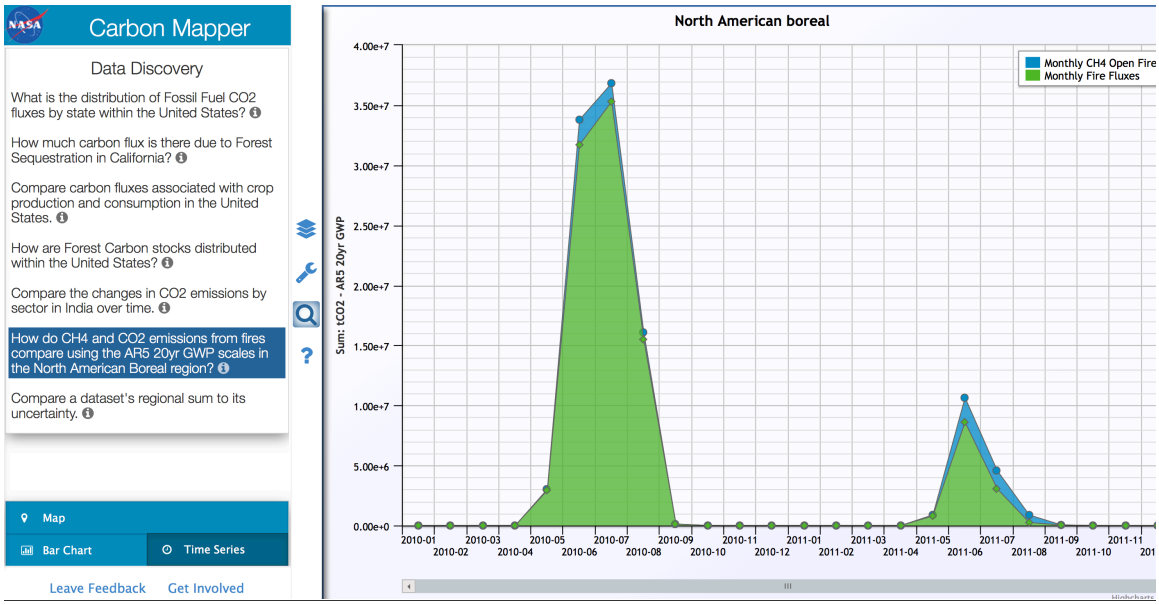


3. Take a quick tour by clicking the **Data Discovery** icon

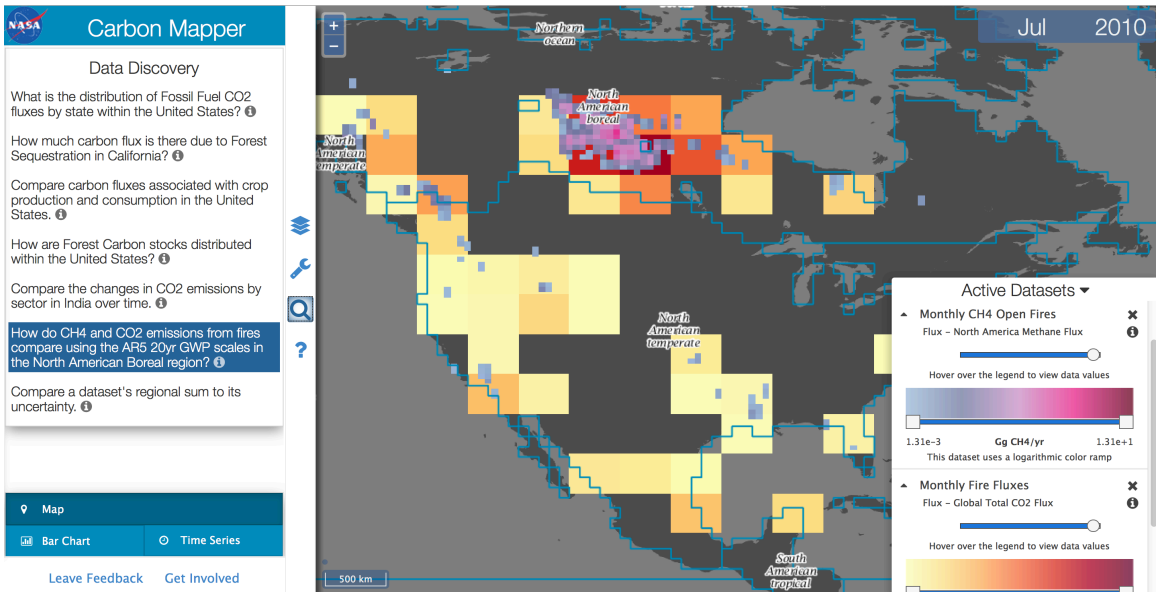
Explore some pre-canned user questions that exercise Carbon Mapper features



Try viewing monthly CO_2 and CH_4 fluxes from fires in the North American Boreal region for 2010-2011 (Time Series view; units tCO2e, AR5 GWP-20) using two completely different remote sensing data sets

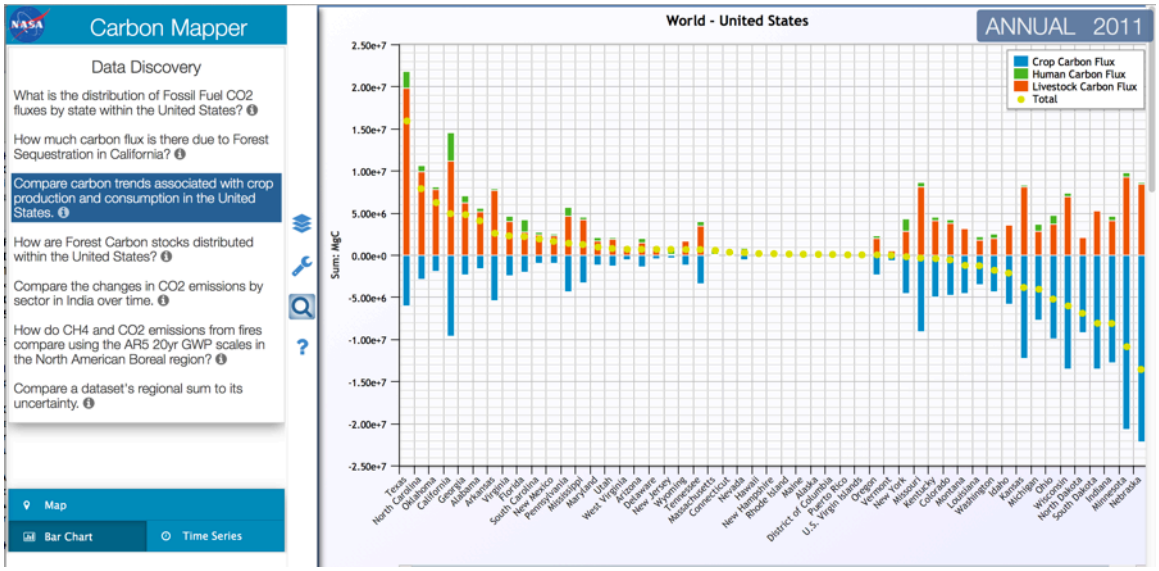


Switch to Map view to see the good spatial overlap of CO_2 and CH_4 fire fluxes in Canada (July 2010) despite the different resolutions and data types



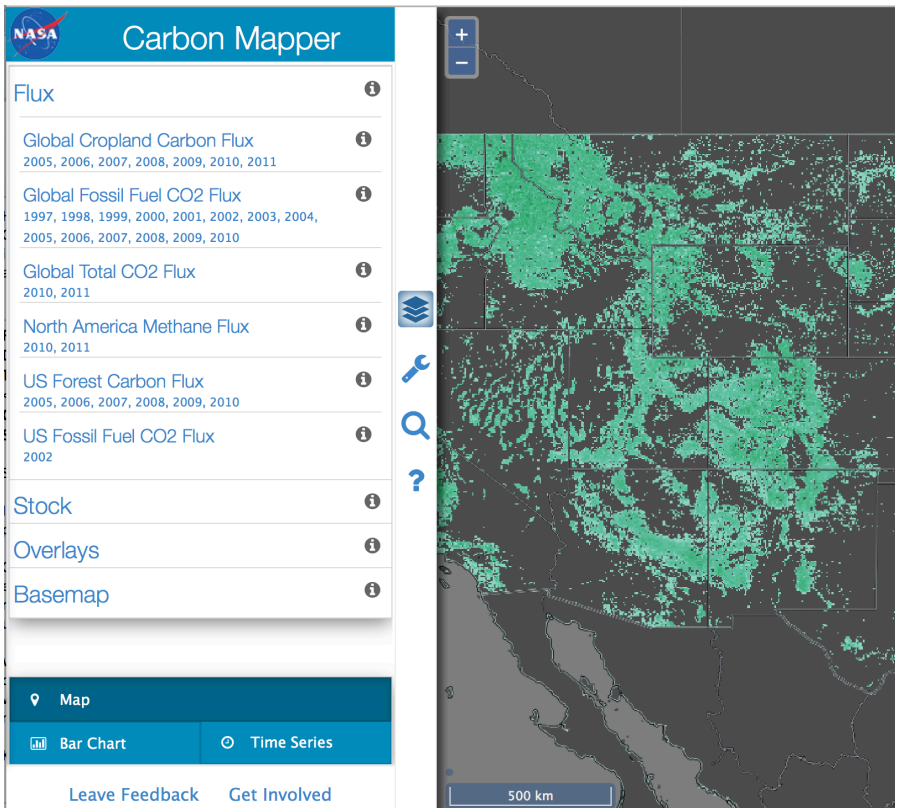
Click on the information icons ⓘ to learn more about the individual data sets and/or the Data Discovery steps involved in generating these views.

Or, compare the balance of cropland carbon fluxes in the US by state for 2011.



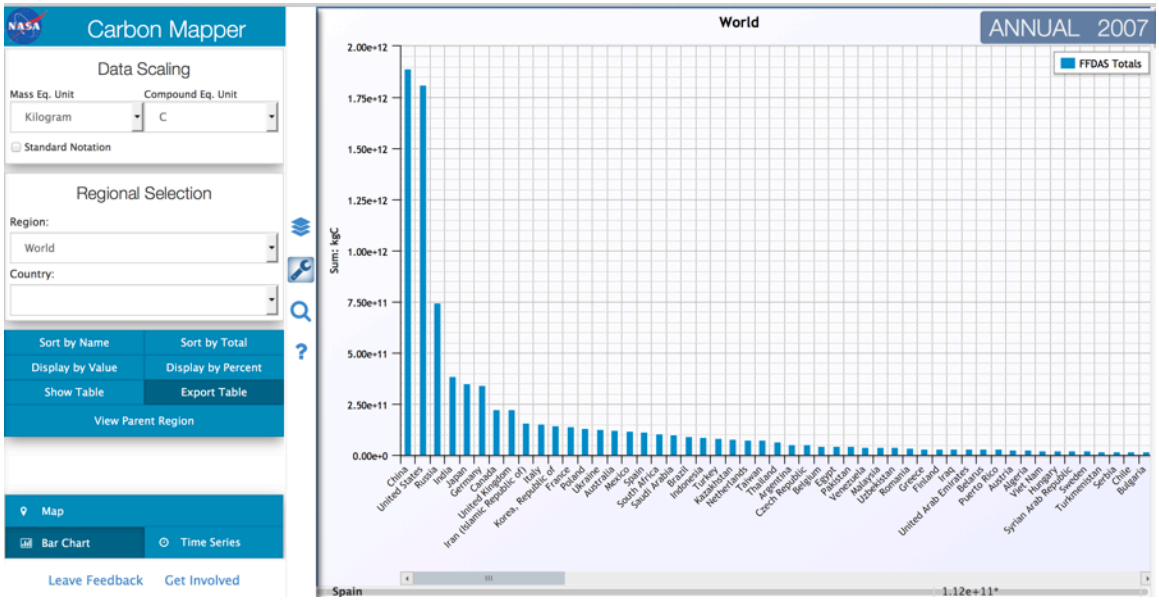
4. Click on the **Show Tutorial** icon ? to learn more about Carbon Mapper features.

5. Click on the **Dataset Selection** icon to browse and select different Fluxes, Stocks, Overlays and Base-maps.

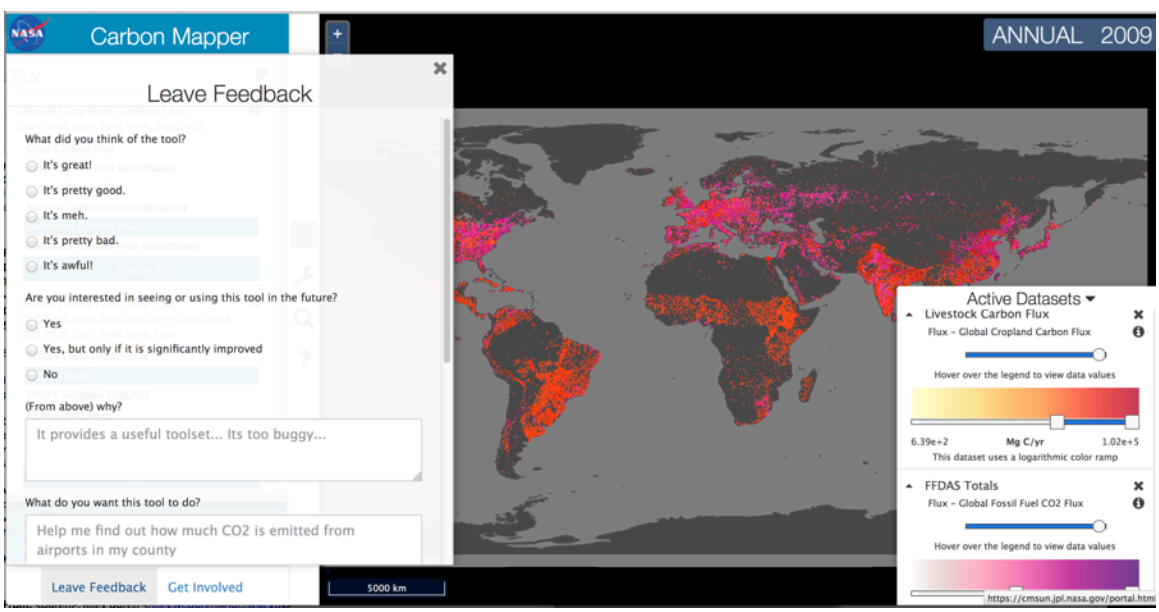


6. Click on the **View Tools** icon to change data units or scaling, explore histograms (Map view only) or – while in Bar Chart or Time Series view - generate regional summary charts and tables; depending on dataset resolution: country, state, county or the 22 "TRANSCOM" regions

The following example illustrates the "Compare Sub-regions" feature for fossil fuel CO_2 emissions by country for 2007 (FFDAS). From here users can sort by name or totals, switch between bar chart and table views, export tables in Excel format, etc.



7. After spending some time exploring please **Leave Feedback**



8. **Other hints** (we'll add an FAQ page to the website shortly)

If you want to return to the default view and settings click the Carbon Mapper icon

Many of the data sets can be compared on the same map, bar chart and time series views but some examples of where they cannot be readily compared:

- Carbon fluxes and stocks are fundamentally different quantities (the tool automatically switches off incompatible layers when switching)
- Some of the data products overlap in time – others do not. If for example you have a layer selected that only spans 2010-2011 and you try to select a data product limited to 2002 you'll see a warning symbol ⚠ - clicking it will snap to 2002 and the new data layer (while disabling the previous layer).
- Most of the beta version data products have annual temporal resolution but a few have monthly resolution; products with different temporal resolutions can currently be mapped (but be wary of the different quantities; also, chart and time-series views will be skewed)
- Global Primary Productivity (GPP) data product derived from satellite Solar Irradiance Fluorescence is included to demonstrate an emerging tool for attributing ecosystem fluxes however the product here is not presented with the normal atmospheric flux convention

The different data sets use different base units – to change units and scaling use the View Tools icon 🔧 (just keep in mind in some cases the differences between some fluxes and sectors can be several orders of magnitude so this can cause problems with the chart views even though we use log plots for many of the map views)

The spatial resolution of these beta version data sets ranges from 100 meters (US forest biomass stocks and fluxes) to over 500 kilometers (atmospheric CO_2 fluxes, biomass burning CO_2 fluxes, GPP). Carbon Mapper extracts regional summaries as fine as county-level in the US and country level elsewhere. Clearly the coarser resolution data sets are not amendable to fine-scale regional summaries. For this reason, we also offer summary data for TRANSCOM (11 terrestrial and 11 ocean) regions – outlines of which can be selected as an Overlays option.

This should be enough to get you started – have fun!

Acknowledgements

The Carbon Mapper was developed as part of the "Understanding User Needs for Carbon Monitoring Information" project under NASA's Carbon Monitoring System (CMS) program (carbon.nasa.gov).

The Carbon Mapper team thanks colleagues on the Understanding User Needs project particularly our collaborators at the US Environmental Protection Agency, US State Department, US Forest Service, US Department of Energy, California Air Resources Board, Resources For the Future, the Rhodium Group and the Council on Environmental Quality.