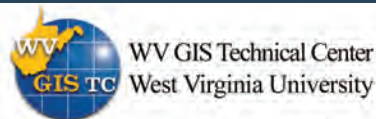# USDA CARBONSCAPES
Quick Start User Guide

A national look at carbon landscapes and a central location for USDA Carbon inventory, modeling and mapping of terrestrial biosphere carbon
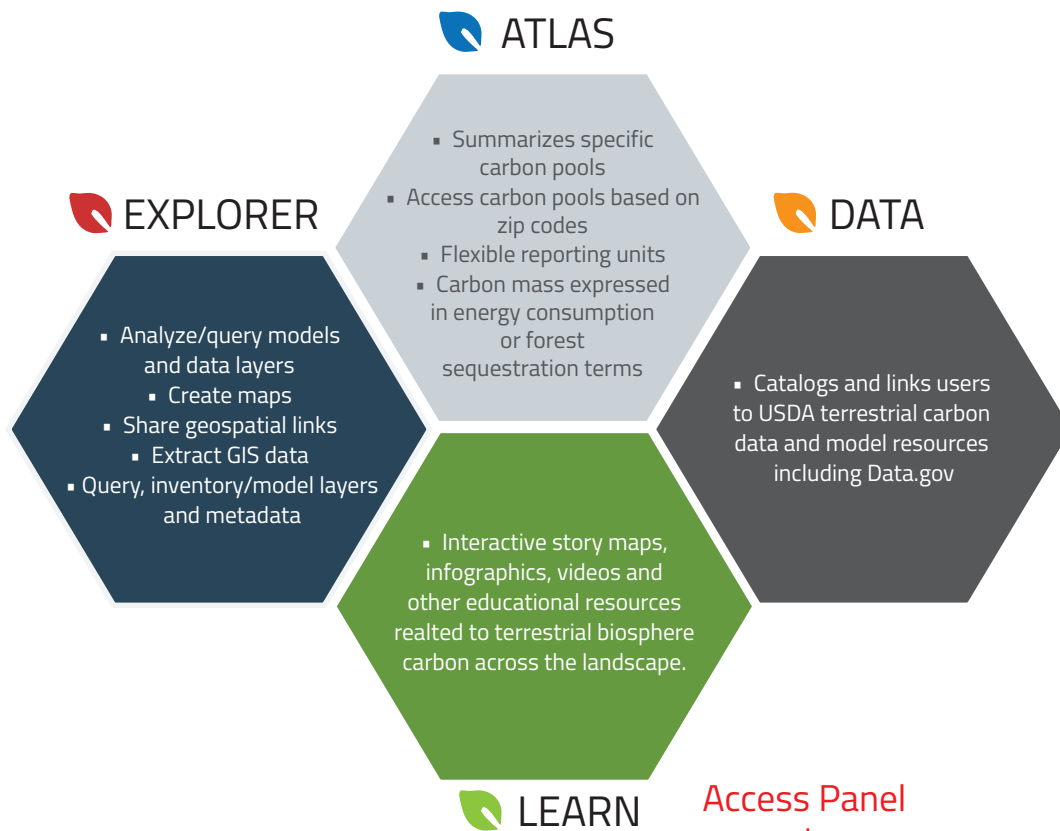
ATLAS

DATA

EXPLORER

LEARN

www.CarbonScapes.org

USDA

West Virginia University.
DIVISION OF PLANT AND SOIL SCIENCES

WV GIS Technical Center
West Virginia University

09/13/2015

About CarbonScapes

The goal of USDA CarbonScapes is to provide a useful and easy to navigate web map application to educate and answer questions for stakeholders about USDA inventory, modeling, and mapping of terrestrial biosphere carbon across the landscape. CarbonScapes is comprised of three application (ATLAS, EXPLORER, DATA, and LEARN). CarbonScapes is a product of a partnership between USDA and West Virginia University

ATLAS

- Summarizes specific carbon pools
- Access carbon pools based on zip codes
- Flexible reporting units
- Carbon mass expressed in energy consumption or forest sequestration terms

EXPLORER

- Analyze/query models and data layers
- Create maps
- Share geospatial links
- Extract GIS data
- Query, inventory/model layers and metadata

DATA

- Catalogs and links users to USDA terrestrial carbon data and model resources including Data.gov

LEARN

- Interactive story maps, infographics, videos and other educational resources realted to terrestrial biosphere carbon across the landscape.

Getting Started

To get started, launch desired application by using the top access pannel or use the icons to navigate to CarbonScapes ATLAS, CarbonScapes EXPLORER, CarbonScapes DATA, and CarbonScapes LEARN launch pages
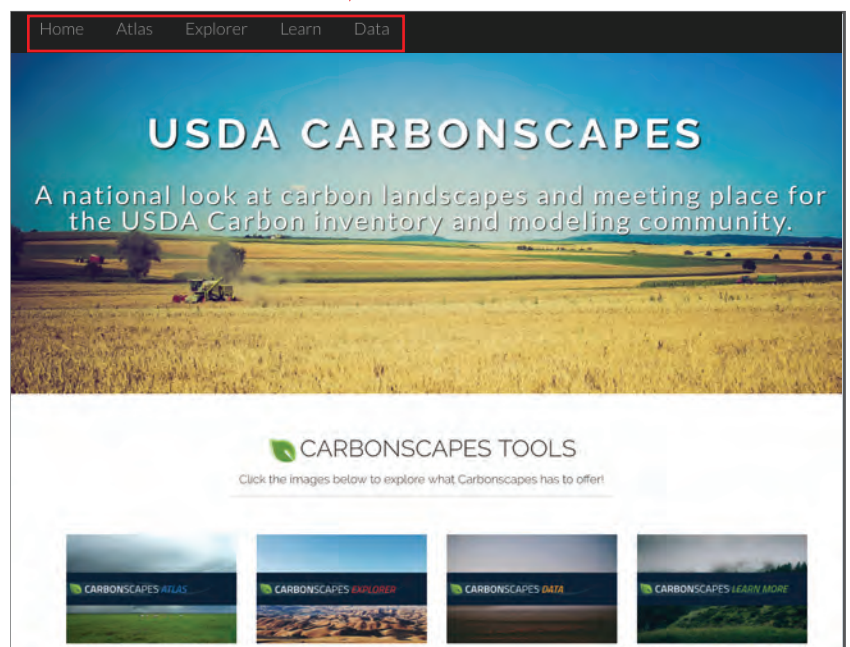
Access Panel
↓

Navigate to Launch Page →

Figure 1: CarbonScapes launch page

CarbonScapes *ATLAS*

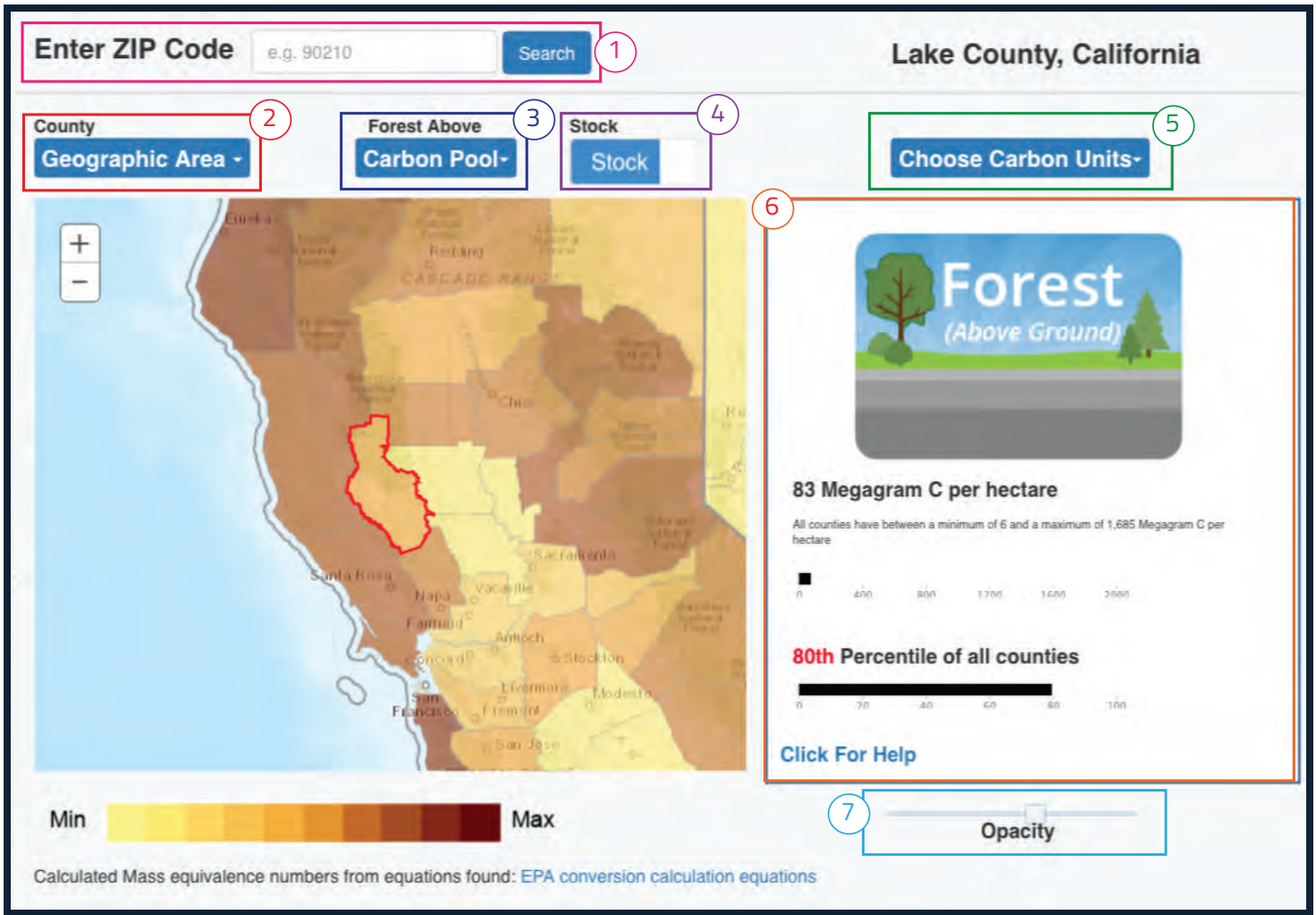Summarizes specific carbon pools in the landscape for carbon stock/mass

Figure 2: CarbonScapes ATLAS Stock

Enter Zip Code (1) or **Select Geographic Area (2)** to find area of interest

Custom map by choosing **Carbon Pool (3)**, switching display from Carbon stock to mass by clicking **Stock/Mass Slider (4)**, and by selecting **Carbon Units (5)**

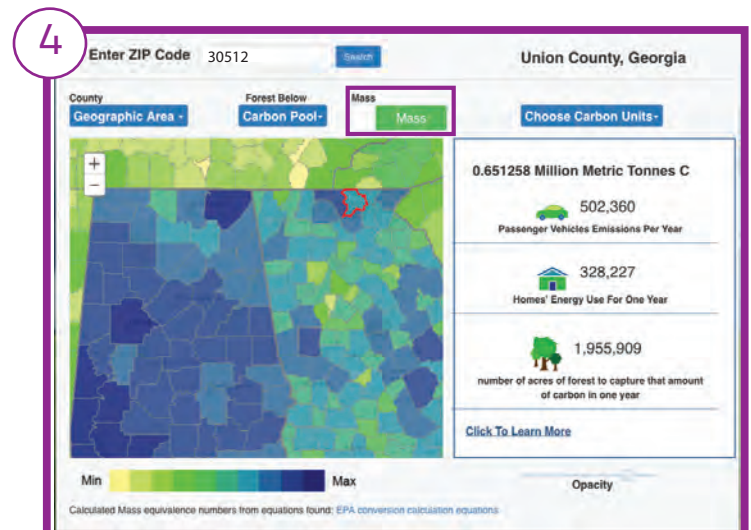View results in the **Result Panel (6),** change map opacity by moving **Opacity Slider (7).**

Figure 3: CarbonScapes ATLAS Mass

CarbonScapes *EXPLORER*

Provides advanced users more in-depth tools to visualize and analyze carbon models and data inventory layers
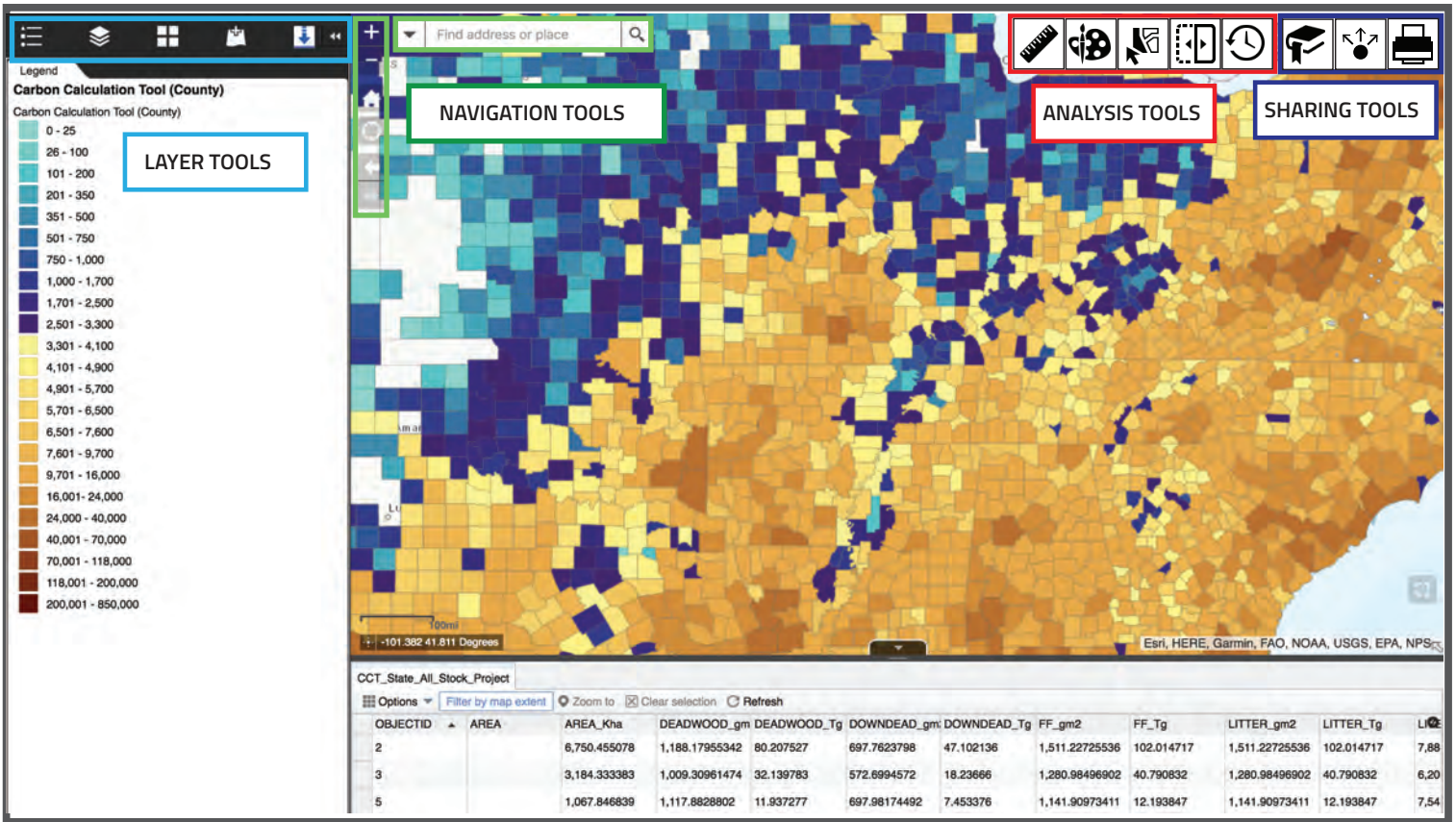
Figure 4: CarbonScapes EXPLORER Interface

Layer Tools

Legend: Defines active layer features

Layers: Select layer to display on map

Basemap: Select basemap from street, imagery, terrain, topographic and more

Add Data: Add addional data to map from list of prelinked layers or upload layer from URL or shapefile, CSV, GPX, or geoJSON

Download Date: Download selected data in various feature and raster formats

Navigation Tools

Zoom In

Zoom Out

Full Extent

Current Location

Go back to previous view

Move forward to previous view

Search: Find address or place

Analysis Tools

Measurment: Measure a specific area

Draw: Select layer to display on map

Select Feature by Geometry: Select by rectangle, polygon, circle, or line

Swipe: Compare two different layers

Time Slider: Visualize temporal changes in a data layer

Sharing Tools

Bookmark

Share: Share link to current app or get link to embed view in website

Print

CarbonScapes *DATA*

Catalogs and links users to USDA terrestrial carbon data and model resources

*Figure 5: CarbonScapes DATA Interface*

Data includes carbon data inventory layers and models including:

- Carbon Calculation by County and State
- Gridded Soil Survey Geographic Database (GSSURGO)
- Forest Inventory Analysis (FIA)
- Cropland Change
- Crop Data Layer
- PRISM Climate Data
- MODEL-COMET FARM

Discover the connection and the importance of soil carbon , its role in the carbon cylce, how soil carbon effets climate conditions and the impact of human activity on soil carbon storage through interactive story maps, infographics, videos, and other resources.

Temperature and Soil Carbon Content

In general, the cooler the temperature, the more carbon content in the soil. In the map to the right, blue to purple areas represent cooler temperatures and orange to red areas indicate warmer ones. As we move to the more northern parts of the US, the soils tend to have more carbon content than those in the more southern parts of the US.
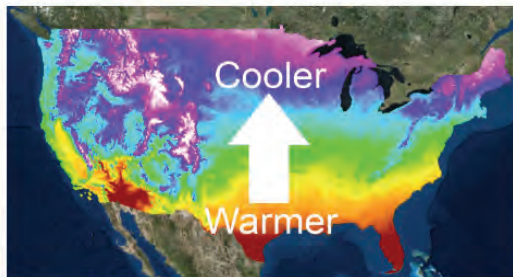
temp.jpg
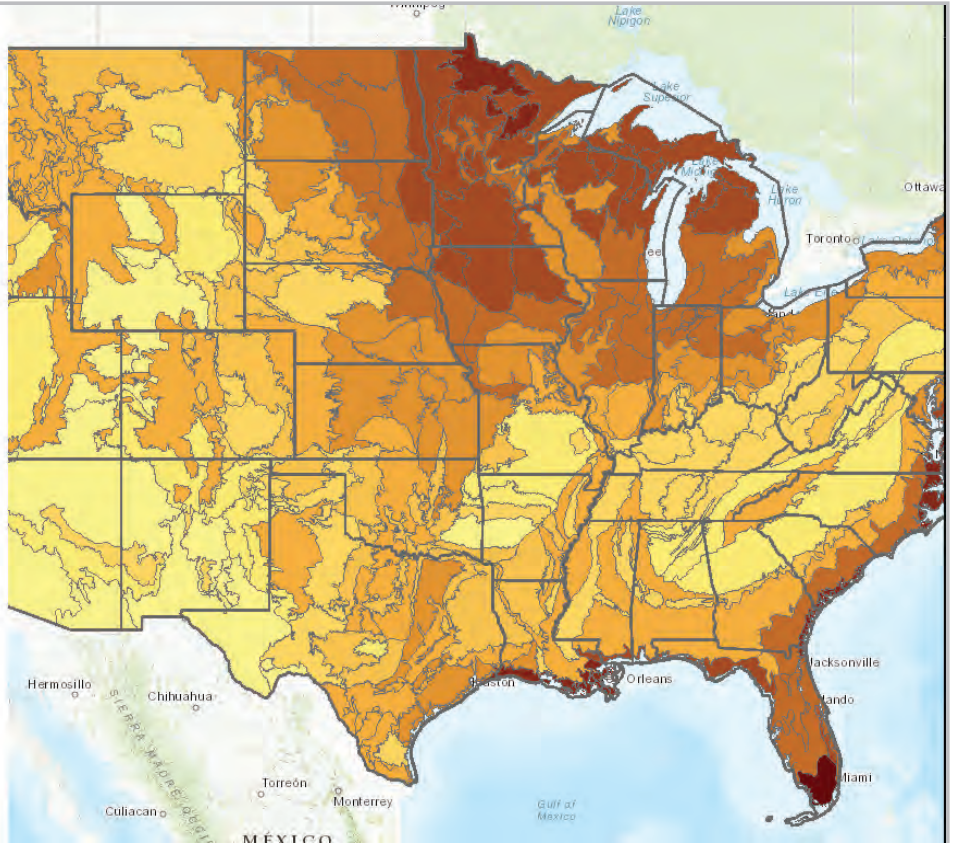
Percipitation and Soil Carbon Content

In general, the wetter the area, the more carbon content in the soil. In the map to the right, the green and blue areas show

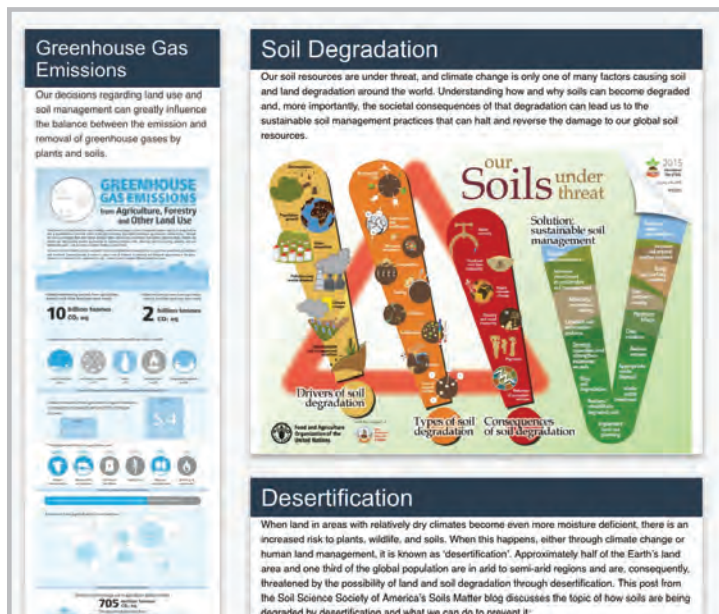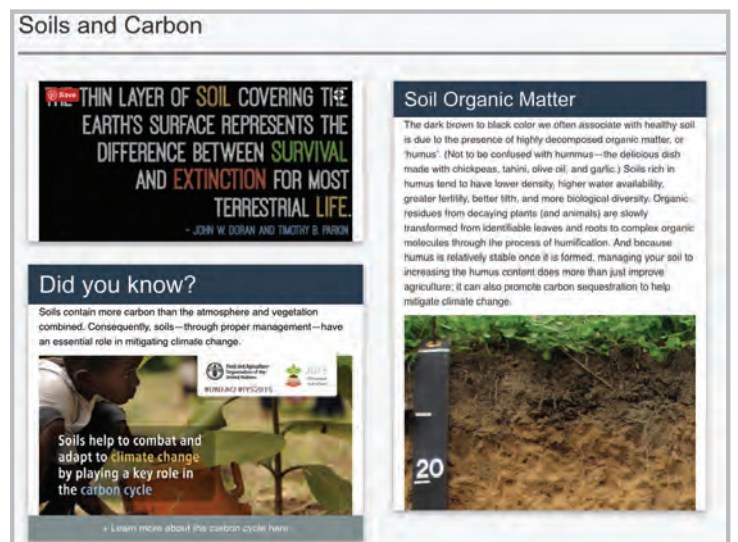Figure 6: CarbonScapes LEARN Story Map

Figure 7: CarbonScapes LEARN education

Figure 8: CarbonScapes LEARN interface