Updating Red Cross CARTO Diaspora Mapping Tool

This is a readme for adding additional information to the Red Cross diaspora mapping tool. It covers all the types of data that may need to be inserted. The two main types of information that are anticipated to be added are additional resources for the resource tab, and adding an additional population group. The second operation is fairly complicated and time-intensive.

1. Updating the Resources Tab:

Updating the resources tab requires adding a row with the information for the additional embassy or community resource you wish to add to the document. There are a wide variety of resources for each diaspora group that are not included in the map, and finding them is accomplished through a relatively easy google search. Once the resource is identified, its information can be inserted into the CARTO online resources database. Once it is added to the data sheet, it will be included in the resources map. Inserting a row is as simple as going to the data sources tab and clicking the **embassies_resources_v3** data set. Once the data set is open, click the insert-row button and fill out the information for the additional resource. It is very important to ensure that all of the columns are filled out for the additional data, especially the coordinates column. To find the coordinates for the additional resource you are adding, use a tool like https://www.gps-coordinates.net/. For reference: **Latitude = Y, Longitude = X.**

2 and 3: Adding a new population map (More Difficult):

Adding countries to the tool is a bit more difficult. It requires basic HTML knowledge, management of large datasets, and familiarity with the CARTO system. Updating it can be broke into two parts: adding an additional tab to the website, and adding an additional map to the CARTO library.

In order to create a new tab with an additional population group, four steps must be taken. The first (2A) is to create a new dataset with your population. The second (2B) is to upload the place data and create a map featuring the population, in the same stye as the previous maps. The final step (2C) is to include the state-level layer and the fire data layer. Finally, in step 3, the HTML tabs can be updated and the whole application can be packaged.

2A. Uploading your new population data

To begin, data featuring the new population must be uploaded to CARTO. This requires pulling the data from the same source – the American Community Survey 2016 5-Year Place Data. This data is divided by metropolitan area, and the ACS_FBC_2016 data sheet on the RedCross CARTO page already features these locations geocoded. Therefor, the easiest way of inserting new population data is to download this data sheet as a copy, and to add the

additional column with the new populations data. This data can be pulled from the ACS database using excel, SQL, or any preferred method for extracting data columns. The ACS database can be requested from the RedCross, or it can be downloaded from the ACS website directly. For reference, the correct database is called **ACS_2016_5YR_PLACE.gdb.** The column with the data inside of the database can be joined to the **ACS_FBC_2016** copy sheet you have downloaded by joining the columns identifying the unique ID of each place – **placefp**. Create a new sheet combining all the data, and remove unnecessary columns (ones that are not featured in the template you have downloaded from CARTO.) Once the duplicate columns have been removed, rename the column featuring your new populations data after the country that population is focused on.

This newly created data table should be fairly large, and should be uploaded to the RedCrosses CARTO page. Use a name that indicates the file is a modified copy – e.g. **ACS_FBC_2016_Copy_Burkina** The above described section is the most complex part of the process, and may require some trial and error depending on any issues encountered with the data. This also requires manipulating very large files and may not be possible on older computers.

Follow the same steps as above for the State data. The source for the state data comes from the American community survey as well. The data from the **ACS_2016_5YR_PLACE.gdb** can be simplified by state by sorting the information by state code – labeled at **statefp**. Create a new table with the sum of the population for each state, and join that with a copy of **ACS_FBC_STATE** from the RedCross CARTO site. The columns to be joined are called **statefp**.

The next step is creating the CARTO Map with the data.

2B. Creating a map on CARTO with the place data

The map should be created to match the other, already functioning CARTO maps. This is best accomplished by using one of them as a template. Once the template is open, rename it as a different map indicating which diaspora group you are highlighting. Select the dataset featuring your population group for the first layer. This should reset the whole map, and each stylizing option will need to be reselected. The most straightforward way to do this is to enter CSS codes, and switch out the name of the column indicating each country for the name of the column indicating your populations data set.

See Below:

PLACE DATA STYLING

Style	Popup (Click)	Legend

#layer {
  marker-line-width: 1;
  marker-line-color: #ffffff;
  marker-line-opacity: 0;
  marker-width:
ramp([**your_population_column_name**], range(0, 30), headtails(7));
  marker-fill: #eb2135;
  marker-fill-opacity: 0.9;
  marker-allow-overlap: true;
}
	<div class="CDB-infowindow CDB-infowindow--dark js-infowindow" style="background:#2E3C43">
	  <div class="CDB-infowindow-close js-close"></div>
	  <div class="CDB-infowindow-container">
	    <div class="CDB-infowindow-bg">
	      <div class="CDB-infowindow-inner js-inner">
	        <ul class="CDB-infowindow-list js-content">
	
	      </div>
	    </div>
	    <div class="CDB-hook">
	      <div class="CDB-hook-inner"></div>
	    </div>
	  </div>
	</div>
		
		
		  <li class="Legend-categoryListItem u-flex u-alignCenter">
		
		
		
		    <p class="Legend-categoryTitle CDB-Text CDB-Size-small u-upperCase u-ellipsis" title=""></p>
		
		
		

To create the Widgets, click on the widget column. One widget will display the data as a **histogram**, using the maroon color ramp. The other will display the data as a **formula**, using the **SUM** operation on the column with your population data. Name the first widget population explorer, and the second visible [population name.]

2C. Fire and State Data tabs

To create the state data tab, follow the same steps for importing the data outlined above for the place-level data. There are no widgets associated with this data set. The CSS codes for each of the style levels follows:

STATE DATA STYLING

Style	Popup (Hover)	Legend (No Custom CSS)

#layer {
  polygon-fill: ramp([**your_population_column_name**], (#f7f7f7, #d9d9d9, #bdbdbd, #969696, #737373, #525252, #252525), quantiles);
  polygon-opacity: 0.84;
}
#layer::outline {
  line-width: 1;
  line-color: #FFFFFF;
  line-opacity: 0.5;
}
	<div class="CDB-Tooltip CDB-Tooltip--isDark">
	  <ul class="CDB-Tooltip-list">
	    <li class="CDB-Tooltip-listItem">
	      <h3 class="CDB-Tooltip-listTitle">State</h3>
	      <h4 class="CDB-Tooltip-listText">{{name}}</h4>
	
	    <li class="CDB-Tooltip-listItem">
	      <h3 class="CDB-Tooltip-listTitle">vietnam pop</h3>
	      <h4 class="CDB-Tooltip-listText">{{vietnam}}</h4>
	
	
	</div>
		[[Legend]]

For the Fire Data Tab, the data set already exists. Select the **firecounties_v4** data table to display, and enter the following custom CSS:

FIRE COUNTIES STYLING

Style	Popup (Click)	Legend (No Custom CSS)

#layer {
  polygon-fill:
ramp([fcountint], black, 7,
quantiles);
  polygon-opacity: 1;
}
#layer::outline {
  line-width: 0.5;
  line-color: #FFF;
  line-opacity: 1;
}
	<div class="CDB-infowindow
	CDB-infowindow--light js-
	infowindow">
	  <div class="CDB-
	infowindow-close js-
	close"></div>
	  <div class="CDB-
	infowindow-container">
	    <div class="CDB-
	infowindow-bg">
	      <div class="CDB-
	infowindow-inner js-inner">
	        <ul class="CDB-
	infowindow-list js-content">
	          <li class="CDB-
	infowindow-listItem">
	            <h5 class="CDB-
	infowindow-
	subtitle">firecount</h5>
	            <h4 class="CDB-
	infowindow-
	title">{{firecount}}</h4>
	
	      </div>
	    </div>
	    <div class="CDB-hook">
	      <div class="CDB-hook-
	inner"></div>
	    </div>
	  </div>
	</div>
		[[Legend]]

Once all this is done, the map should resemble the other, already existing diaspora maps. Click the publish button, and copy the embedding code from the share tab. Paste it in the code specified in the next section of the readme.

3. Updating the HTML Tabs

The final step is to update the tabs contained within the larger application. These will allow everything to link back and create a final product that includes your additional data. To update the HTML tabs, first create a new [countryname].html text file. Copy and paste the following code into the file:

```
<html>
 <head>
  <title>AmCross Diaspora Geographic Profiler</title>
  <meta name="viewport" content="initial-scale=1.0, user-scalable=no" />
  <meta http-equiv="content-type" content="text/html; charset=UTF-8"/>
  <link rel="stylesheet" href="diaspora.css">
  <link rel="shortcut icon" href="http://cartodb.com/assets/favicon.ico" />
  <style> html, body, #map { height:100%; padding:0; margin:0 } </style>
  <link rel="stylesheet" href="http://libs.cartocdn.com/cartodb.js/v3/themes/css/cartodb.css" />
    <meta name="viewport" content="width=device-width, initial-scale=1">

</head>
<body>


<div id="bannerimage">
   </div>


<hr>
<div class="topnav">
 <a class= "home" href="resources.html">Resources/Data</a>
 <a class="active" href="phillipines.html">Philippines</a>
 <a href="burma.html">Myanmar</a>
 <a href="bangladesh.html">Bangladesh</a>
 <a href="vietnam.html">Vietnam</a>
 <a href="indonesia.html">Indonesia</a>
 <a href="nepal.html">Nepal</a>
 <a href="elsalvador.html">El Salvador</a>
 <a href="columbia.html">Colombia</a>
 <a href="honduras.html">Honduras</a>
 <a href="haiti.html">Haiti</a>
</div>
   <hr>

    <div class="over"> Use the <a href="https://carto.com/learn/guides/widgets/exploring-widgets/"
style="color: black;">Carto Widgets</a> to explore the data further. The "Visible Population" Widget
represents the total number of recorded individuals visible inside the map frame at the current zoom
level. The "Population Explorer" allows for sorting and selecting the population data of this diaspora via
different buckets, each representing the total number of points with the selected value range. Use the
zoom button to see even more detail on this tool, and to select ranges on the map.
</div>
    <div><iframe width="100%" height="80%" frameborder="0"
src="https://redcross.carto.com/builder/e755a1a3-3aef-4029-9870-c49a461c9aa0/embed"
allowfullscreen webkitallowfullscreen mozallowfullscreen oallowfullscreen msallowfullscreen
&amp;wmode=transparent></iframe></div>

 </body>
</html>
```

Once this code has been copied, you add some code to customize it to fit your new country tab. Make the changes highlighted below:

```html
<html>
 <head>
  <title>AmCross Diaspora Geographic Profiler</title>
  <meta name="viewport" content="initial-scale=1.0, user-scalable=no" />
  <meta http-equiv="content-type" content="text/html; charset=UTF-8"/>
  <link rel="stylesheet" href="diaspora.css">
  <link rel="shortcut icon" href="http://cartodb.com/assets/favicon.ico" />
  <style> html, body, #map { height:100%; padding:0; margin:0 } </style>
  <link rel="stylesheet" href="http://libs.cartocdn.com/cartodb.js/v3/themes/css/cartodb.css" />
    <meta name="viewport" content="width=device-width, initial-scale=1">

</head>
<body>


<div id="bannerimage">
   </div>

<hr>
<div class="topnav">
 <a class= "home" href="resources.html">Resources/Data</a>
 <a href="phillipines.html">Philippines</a>
 <a href="burma.html">Myanmar</a>
 <a href="bangladesh.html">Bangladesh</a>
 <a href="vietnam.html">Vietnam</a>
 <a href="indonesia.html">Indonesia</a>
 <a href="nepal.html">Nepal</a>
 <a href="elsalvador.html">El Salvador</a>
 <a href="columbia.html">Colombia</a>
 <a href="honduras.html">Honduras</a>
 <a class="active" href="(countryfilename.html)">(countryname)<a/>
 <a href="haiti.html">Haiti</a>
</div>

   <hr>

    <div class="over"> Use the <a href="https://carto.com/learn/guides/widgets/exploring-widgets/" style="color: black;">Carto Widgets</a> to explore the data further. The "Visible Population" Widget represents the total number of recorded individuals visible inside the map frame at the current zoom level. The "Population Explorer" allows for sorting and selecting the population data of this diaspora via different buckets, each representing the total number of points with the selected value range. Use the zoom button to see even more detail on this tool, and to select ranges on the map.
</div>
    <div><iframe width="100%" height="80%" frameborder="0" src="https://redcross.carto.com/builder/(codefromCARTO)/embed" allowfullscreen webkitallowfullscreen mozallowfullscreen oallowfullscreen msallowfullscreen &amp;wmode=transparent></iframe></div>

 </body>
</html>
```

You'll notice a few spots have brackets highlighting what to insert. Please note that when inserting your customizations, do not include the parentheses. A brief guide to the inserts:

(Countryfilename.html) = The name of the file for this tab – which you are currently creating. Make sure to include the .html at the end of the filename!
(Countryname) = The name you want the viewer of the website to see when they open this tab
(codefromCARTO) = The embedding code generated by the CARTO website when you finished your map

Once this is finished, this file should work fine. It can be tested by being opened in any web browser.

3B. Updating the other tabs .html files

The final step is to add a link to this tab to all of the other tabs. To do this, you need to go into the code for each of the other tabs and add the following once again:

```
<div class="topnav">
  <a class= "home" href="resources.html">Resources/Data</a>
  <a href="phillipines.html">Philippines</a>
  <a href="burma.html">Myanmar</a>
  <a href="bangladesh.html">Bangladesh</a>
  <a href="vietnam.html">Vietnam</a>
  <a href="indonesia.html">Indonesia</a>
  <a href="nepal.html">Nepal</a>
  <a class="active" href="elsalvador.html">El Salvador</a>
  <a href="columbia.html">Colombia</a>
  <a href="honduras.html">Honduras</a>
  <a href="(countryfilename.html)">(countryname)<a/>
  <a href="haiti.html">Haiti</a>
</div>
```

The only difference between this insert and the one on the home tab of the new country is the lack of the class="active" after the "<a". The class = active denotes which tab is active, and needs to only be on the currently active country for any individual tab. For example, the above code is a sample of the tab menu for the country of El Salvador, which is tagged as active.

Once every other country.html file AND the resources.html file have been updated, the files are done. They can be uploaded to gitbhub or passed off to the appropriate management authorities.

For any questions, please contact coreytdickinson@gmail.com.