**What a Waste Shiny App**

Allison Bailey, Lizzy Schattle, Becca Reynolds

1. **App Summary:**

This app will show landfill locations worldwide, waste use as a percentage of population and GDP by country, and sorted percentage of waste by country. SuperFund site data will be used to demonstrate communities that may be affected by harmful contamination as a result of landfill management. By visualizing the relationships between countries and waste, the app aims to show how specific countries are contributing to global waste and how this may affect public health.

1. **Data:**

* [Country\_level\_data\_msw.csv](https://github.com/beccareynolds/esm_244_term_project_1/blob/master/country_level_data_msw.csv)
  + Variables: Country name, MSW composition percentage(Glass, Metal, Food, Plastic, etc), GDP, Population
  + Tidy Format: Yes
  + Observations: 218
* [Global\_waste\_index\_2019.csv](https://github.com/beccareynolds/esm_244_term_project_1/blob/master/global_waste_index_2019.csv)
  + Variables: country name, waste generated, annually per capita (kg), landfill, open dump, global index score
  + Tidy Format: No
  + Observations: 37
* [Landfill.csv](https://github.com/beccareynolds/esm_244_term_project_1/blob/master/landfill.csv)
  + Variables: landfill name, city, state, lat/long, landfill status (open/closed), LFG collected, waste in place, ownership
  + Tidy Format: No
  + Observations: 3,364
* [Superfund.csv](https://github.com/beccareynolds/esm_244_term_project_1/blob/master/superfund.csv)
  + Variables: site name, city, state, zip code, site type, native american interest, site status, human exposure, groundwater, etc
  + Tidy Format: No
  + Observations: 13,000

1. **Citations:**

Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0 : A Global Snapshot of Solid Waste Management to 2050. Urban Development;. Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/30317 License: CC BY 3.0 IGO.

“References,” Sensoneo. [Online]. Available:<https://sensoneo.com/references/>. [Accessed: 03-Feb-2020].

*Search Superfund Site Information*. (n.d.). Retrieved February 3, 2020, from<https://cumulis.epa.gov/supercpad/CurSites/srchrslt.cfm?start=1>

We have a question regarding how to properly cite the last two sources. There is no main “citation” listed for either source, instead there are references to other websites without citations. WWAD?

1. **Widgets & Outputs:**

**Widget/Output 1:**

We’ll have a world map showing all the open and closed landfills. The widget will involve using a select box to choose a country in the world or state in the U.S. as inputs. The outputs will snap to a map of the selected region and the landfills in that region.

**Widget/Output 2:**

A check box for different waste products (compost, landfill, glass recycling, paper recycling, metal recycling, etc.), and a select box for the user's country and/or state of choice. The outputs will show an interactive graph of the total volume of selected waste products by that state/country in comparison with other countries/states that the user could specify (or none) compared to to the top global producers of those waste products.

**Widget/Output 3:**

A select box to choose a state on the map to bring up as an output. Users can then use a checkbox group to select different SuperFund site research topics to determine where these issues are occuring in their state of choice.

1. **Sketch Your User Interface:**



